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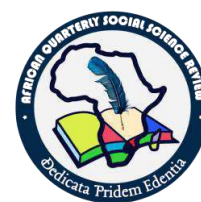
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Analysis of errors in English verb forms from academic essays by trainees at one of Rwanda Polytechnic (RP) Colleges

Moses Mitari^{1*}
Patrick Ujwiga Anguru²
Venant Ndayisaba³
Valerien Bimenyimana⁴
Jean Paul Sinzibagirwa⁵

^{1*}mosesmitari@gmail.com

²pujwiguru@gmail.com

³vendays123@gmail.com

⁴bimenyimanavalerie@gmail.com

⁵sinzibagejanpaul@gmail.com

¹<https://orcid.org/0009-0006-3633-4936>

²<https://orcid.org/0000-0002-0578-8162>

⁴<https://orcid.org/0009-0006-4042-7131>

^{1,3,4}Rwanda Polytechnic (RP) - Gishari, Kitabi, Colleges, ²University of Rwanda, ⁵Easter African University Rwanda, Nyagatare Campus, ^{1,2,3,4,5}Rwanda

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ABSTRACT

The study of grammatical error-making in academic writing has been an important activity in research, especially for students learning English as a second language. This research paper sought to identify and interpret grammatical errors in verb forms from students' academic writing tasks. Different grammatical theories were explored, including that of Chomsky's Transformational-Generative Grammar (TGG) and Halliday's Systemic Functional Grammar (SFG), among others. The study employed a descriptive research design with a mixed-method research design where the data collected were analysed using both quantitative and qualitative methods. The specific objective was to reveal the common grammatical errors made by students in their writings. From 20 teachers and 260 students, by using the Yamane formula, 15 teachers and 133 students were reached to participate in the study sample. Data analysis methods employed were document analysis, deductive thematic analysis, and descriptive statistics. The findings revealed that year-one engineering students at RP Gishari College make grammatical errors in all five English verb forms in their writings. Particularly, it was found that many students make errors in the third person singular form of the present simple (58.78%), whereas the errors in the past participle form were the least (6.10%). This scientific proof of error-making can be used by language educators to help trainees to improve their writing skills. Finally, the study recommended teachers and future researchers develop different teaching techniques that can help students to minimise error-making while writing academically.

Keywords: Error Making, Grammatical Theories, Second Language, Verb Forms

I. INTRODUCTION

Fluency in English speaking and writing poses a pervasive challenge for university students when English is taught as a foreign language, affecting their communication skills and academic performance. Universities struggle to traverse the language landscape (Tembasi, 2022). This was an article's title that discusses the difficulties facing Rwanda higher education institutions with regard to students' academic English proficiency. In this example, it is claimed that numerous students enrol at universities with weak command of the English language. Indeed, poor proficiency in this language among students impacts their overall success at the job market and daily communication activities. Colleges and universities grade students' written work as part of the assessment process, which requires students to have a sufficient and competent command of English, especially in writing. As it is argued by Suhaili and Mohama (2021), technical and vocational education and training (TVET) students' English language competence makes them market themselves during the job search process.



Globally, numerous researchers have discussed problems with students' writing skills in English. In his study carried out on first-year university students in a South African university, Magaba (2023) found that students' struggles in academic work are mainly reflected in their poor writing skills in English. On the other hand, university students at one Islamic university in Indonesia exhibited writing difficulties related to incorrect use of English verb tenses (Febriani, 2022). Verb forms or tenses are very crucial in academic writing, especially in academic research writing. For example, in academic writing in engineering fields, the use of simple past and present perfect forms makes students discuss other authors' work and action which started in the past and continued up to the present respectively (Okuyama, 2020). However, Alinsunod (2014) confirmed that some engineering students may have writing difficulties in relation to incorrect use of verb tenses and the assessment of their own writing has been proposed as one of the solutions.

Studies conducted in different countries have revealed that students do not produce good written documents because students face significant obstacles in writing English. For example, engineering students in Palestine exhibit syntactic errors when writing essays (Alsher, 2021). It is equally claimed that students make these grammatical errors most often as a result of poor learning. The main cause highlighted in this study is that students have not experienced high potential practical writing experiences to date. This is why, Dhanapal and Agab (2023) reported that, in their study carried out on Saudi Arabia university students, grammatical errors are frequently committed in students' written pieces of documents. On the other hand, a study conducted in Ghana revealed that, students commit English writing errors related to subject-verb agreement among many others (Amuzu & Asinyor, 2016). As it is explained, gap opens up on subject-verb agreement in their mother tongue while communicating their ideas to peers in English. In a similar study in Saudi Arabia, subject-verb agreement errors dominated university students' expressions with singular subject errors and made them fail to correctly use the verb forms, such as the third person singular verb form (Alahmadi, 2019).

The results from one research in Spain, on subject-verb agreement errors in the third person singular verb form conducted by Pérez (2021), show that, the most common error type committed by students is misformation, followed by misordering and addition. For instance, there is a subject-verb agreement issue in this study where the precision of the phrase was impacted by the use of an improper verb form in the third person singular present simple. For the purpose of producing accurate English written documents, all verbs in the language, with the exception of the verb to be, have five alternative forms. Past tense, past participle, present participle, third-person singular, and base or regular form are among them. The sentence's subject and context will determine when to utilize each form. Writing in English requires the ability to arrange and organise one's ideas in a way that often includes the correction of mechanical and grammatical errors, especially those related to verb forms.

Students' writing difficulties in English are a common problem that is reported by all research studies conducted in various regions across the world (Sajid & Siddiqui, 2015). For example, in the study conducted by Watcharapunyawong and Usaha (2012), it was found that singular/plural form and subject-verb agreement are common errors made by students in English writing. Nevertheless, a study carried out in a technical university in South Africa discovered that students' issues with academic writing are a result of their linguistic and general literacy backgrounds, their attitudes toward academic writing, and their preference for middle-class literacy practices (Pineteh, 2013). These findings inform the reader that, students' different learning experiences can develop their differences in academic writing. However, it is imperative to know the real causes of students' poor writing skills in English because and as a result, university students may come from different schools where learning experiences are different.

In the Rwandan context, few studies have tackled the students' writing skills. For example, in the study conducted on first-year students at the former National University of Rwanda regarding academic writing skills, one of the comments on students' texts is about incorrect use of tenses and that there is an influence of Kinyarwanda on English (Twagilimana, 2017). On the other hand, Mironko (2013) argues that students in Rwandan higher learning institutions struggle in using English because it is a second and additional language to their mother tongue, Kinyarwanda. Although these studies tried to indicate that Rwandan students have problems in academic writing using English, they did not go further into the matter to describe which language areas pose a challenge to students in their written assignments, Continuous Assessment Tests and examinations. Thus, grammatical errors in verb forms may originate from the persistence of students' poor writing skills because virtually no sustainable solutions have been undertaken to curb the issue; hence, further studies which would address the problem are needed in Rwanda. Therefore, the objective of this study is to identify common grammatical errors in verb forms from engineering students' academic writing tasks.

1.1 Research Objective

- i. To identify common grammatical errors in verb forms from students' academic writing tasks
- ii. To interpret the identified grammatical errors in informative way



II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Grammatical Theories

The study of linguistics employs a wide range of theories to help explain the basic working and structure of language, especially in grammar. That being considered, research on grammatical errors in English, in order to be successful, requires certain underlying theories. Theories such as Transformational-Generative Grammar (TGG) by Noam Chomsky, Systemic Functional Grammar (SFG) by Halliday, and Lexical Functional Grammar (LFG) by Bresnan and his group do generate the essential idea of grammar. Additional important theories about linguistic construction include Valency Grammar, Role and Reference Grammar, and Relational Grammar.

First of all, TGG revolutionized the domain of linguistics, suggesting application of transformational rules to way a sentence is basically built in order to generate its structure (Mitari et al., 2024). Syntactical and grammatical analysis has been deeply impacted by TGG with its different revisions. As far as English grammar errors are concerned, TGG displays tremendous acumens in the basic elements of sentences. These errors generally occur when people poorly apply transformational rules, occasioning sentences which exhibit surface structures that don't agree with their underlying structures. As an example, the conversion from passive to active sentences can be so challenging that the resultant sentences are grammatically unacceptable.

Second, LFG stands alone by distinguishing syntax from semantics. It thoroughly differentiates between the functions of words and groups of words, connecting them with both grammatical functions and semantic roles (Falk, 2001). LFG stresses the useful harmonization of structural and meaningful components, when examining English grammatical errors. Errors usually emerge from the discrepancy between these two sides, and the resulting sentences are grammatically inconsistent. One example of such errors is a sentence containing a transitive verb while a direct object is missing.

Third, Michael Halliday's SFG highlights the utilitarian feature of language, categorizing it into the domains of ideational, interpersonal, and textual functions (Aarts, 2006). Addressing grammar mistakes in English, SFG suggests using a verb that exactly renders the envisioned function. It stipulates that errors are made when unsuitable verbs are used, causing difficulties in interactive communication or gaps in organizing one's speech. These limitations may result into the production of grammatical constructions that are unable to competently express the intended messages.

There are many other theories that support the central point of the present research. Valency Grammar, which is one of them, explores the complex relations linking verbs to their arguments, both subjects and objects being covered (Mitari et al., 2024). As far as English is concerned, verb-related errors typically originate from deviations from the necessary requirements that verbs possess regarding their valency. Such deviations result in cases in which complements of verbs are either left out albeit needed, or included when unnecessary. Furthermore, the theory by Robert Van Valin known as Role and Reference Grammar examines the relationships which occur within the field of grammar and how they contribute to sentence building (Aarts, 2006). It is the inaccurate formation of these relationships which causes language construction errors. These kinds of errors appear as disparities between the thematic roles that are given to arguments and what the verb's valency requires.

Additionally, Perlmutter and Postal proposed Relational Grammar which researches into the growing interaction between the sentence structure which belongs to syntax and its meaning which is the domain of semantics (Aarts, 2006). Errors emerge when this interaction and its associated structures are not precisely interpreted. Subsequently, the envisioned message is not exactly transmitted.

Basically, as this research shows, various theories in grammar offer helpful tools that are used to investigate why errors in verb forms are made. They provide an elaborate basis for identifying and explaining those errors, taking into consideration such aspects like syntax, semantics, valency, and communicative function. By exploiting this theoretical foundation, language scholars can quite surely understand why errors in verb forms occur and try to use the language better than before.

2.2 Empirical Review

2.2.1 Verb Forms in Academic Writing

A verb form is a way to mold or change a verb to make it more appropriate for the context of an action that is happening right now. The five verb forms in English include root verbs, third-person singular, present forms of verbs, present participles, simple past, and past participles. But for some students—especially those who are learning English as a second language—following the rules of grammar when writing is not always an ideal habit.



2.2.2 Grammatical Errors in the Root Verb or Infinitive Form

Grammatical errors about infinitival forms are reported in many studies found in the literature. For example, in the study conducted to uncover common errors of using gerundial and infinitival forms for EFL learners at one university in Saudi Arabia, it was found that some students could use gerund as an infinitive form (Jama, 2022). According to this author, one of the factors that can lead to students' problems in grammatical errors in writing was stated as the lack of enough real time to practice on writing skills. However, in this same study, it was claimed that students were good at using the infinitive form.

The root form of the verb refers to its original form without any alteration or inflection. From the verb's root form, all subsequent forms are constructed. Note that this is not the case for all verbs. Verbs that are conjugated to indicate different forms of the verb only change when they are in their root form. It's not always the case that there are only a few possible ways to conjugate irregular verbs. To indicate the simple present tense, root verbs are widely utilized. The following examples show you how to employ the root verb in sentences.

Root verb examples: I enjoy watching movies with my pals (Root verb – love). Every day, I complete my schoolwork before six o'clock. (Root verb – finish). You have a great playing style. (Play is the root verb.) You are stunning. (Basic verb: be) The verbs "love," "finish," "play," and "are" are examples of root verbs because they are utilized in their original forms in the aforementioned cases.

2.2.3 Third Person Singular Present Form

One of the challenging grammar rules for learners of English as a second or foreign language is the usage of the third person singular in speaking and writing. This verb form in English grammar is frequently used when talking about people or things. They frequently don't add anything to the conversation. The third person singular inflection in English is one of the first grammatical rules that teachers teach to L2 English learners at the primary level, hence it is regarded as an introduction topic for second/foreign language learners. Although some teachers may assume that the acquisition of the third person singular is easy for students, different studies report some difficulties that students may face when English is their second or foreign language.

Ma (2022) discusses different difficulties in the acquisition of the third person singular form pertaining to the grammatical rules that Chinese students usually violate. In this discussion, the neglect of irregular verb inflection and the instability of suffix- s in oral expressions are pointed out. Moreover, according to this author, the negative transfer of mother tongue influences the verb inflection and the order of acquisition of grammatical morphemes. All of these may lead to students' grammatical errors in the third person singular form as some studies have figured it out. The third person singular is helpful in academic writing like when writing up research papers. It suggested that teachers and educators need to formulate appropriate syllabus and pay attention to the negative transfer of the mother tongue.

The authors of a case study investigating the use of the third person singular in Turkish English written register identified two primary challenges faced by students: internalizing a grammatical feature and being able to use it correctly in conversation (Hamamci & Hamamci, 2018). In a separate Spanish study analyzing subject-verb agreement problems in third person singular verb form, 39 students' grammatical faults were found to be in 2 omission, 3 addition, 25 misformation, and 9 misordering of classes (Pérez, 2021). These errors were detected using the surface approach taxonomy. Examples for every type of grammatical faults have been supplied by the study's author. Using it needlessly in the sentence ". which it means," is one instance in a different category. Additionally, "the majority of us agree" also uses the verb "be" in its augmentation. On the other side, mistakes such as misplaced items, incorrect (to)-infinitive structures, and disagreements with grammatical person and number were put in the misformation group. In case of category misordering, mistakes

2.2.4 The Present Participle Form of the Verb

An active action can be expressed using the verb form of the present participle. The suffix "ing" is always used to finish present participles. They can be used as an adjective or as a verb in a phrase. Students may also produce grammatical errors in this verb form. For example, in their study, Ismani and Simamora (2021) found that students have difficulties to use the present participle in replacing relative pronouns. The problem in using the present participle has also been observed in the study conducted on eleventh grade students in Indonesia (Irawan & Syafi'i, 2021). In this study, while students were using present participle in translating simple dialog, it was found that they produced errors such that 56.3% were in misformation category, 23.9% in omission, and 18.3% in addition and 1.4% were in misordering category.

In actuality, the present participle form is created by appending an 'ing' to the base form or root verb. In certain cases, the final consonant in a monosyllabic word that contains a short vowel is doubled and the suffix "ing" is added. For most verbs ending in a silent 'e,' the 'ing' is introduced and the 'e' removed. Some verbs retain the 'e' in their



base form even when they are changed to the present participle form. This verb form, in the continuous/progressive tenses, implies that the action is still in progress. It is also used to change verbs that describe actions into nouns.

Table 1
Examples of Present Participle Form

	Base form	Present participle form
Inflection of irregular verbs with double consonants	Dig	Digging
	Put	Putting
	Get	Getting
	Pet	Petting
Inflection of regular verbs	Cry	Crying
	Try	Trying
	Read	Reading
	Write	Writing

Source: Lee (2018)

2.2.5 The Use of Simple Past Form of a Verb

The verb is shown in its simple past form when it refers to an earlier activity. In order to produce it, the root verb is frequently added to with an "ed" or "d" (for verbs ending in "e"). Verbs that deviate from the norm are called irregular verbs.

Making grammatical errors in simple past form is also another problem which is discussed by many researchers in the literature. In the study conducted at a junior high school in Indonesia by Nopinawati et al. (2020), investigating students' grammatical errors in using simple past tense, it was found that the past form errors were in all four categories including omission (19.17%), addition (26.02%), misformation (27.39%) and misordering (27.39%). Although there was a classification of these grammatical errors in this study, authors did not clearly indicate the typical errors produced by students. This could not suffice the need of readers and researchers for knowing exactly how students were making these errors.

On the other hand, in the error analysis study conducted on informatic engineering students in Indonesia in the academic year 2018/2019, some typical grammatical errors in simple past tense verb forms were detailed and the intervention to reduce them explained (Tembasi, 2022). The preliminary results of this study, which used a pre-test and post-test methodology, indicated that one error that was caused was when ordinary verbs were suffixed with -ed or -d. Secondly, errors were produced in using irregular verb forms of simple past tense. The third problem occurred on the use of "did" in negative sentences. Lastly, students showed that their grammatical knowledge about the use of the verb "to be" was low.

Table 2
Examples of Simple Past Forms

	Base form	Simple past form
Inflection of regular verbs	Cheat	Cheated
	Dodge	Dodged
	Jump	Jumped
Inflection of verbs that take the same form as the base form	Read	Read
	Cut	Cut
	Put	Put
	Let	Let
Inflection of irregular verbs	Run	Ran
	Sit	Sat
	Sing	Sang
	Throw	Threw
	Fly	Flew

Source: Fitria (2021)

2.2.6 Past Participle Form of the Verb

In academic writing, the use of past participles for both regular verbs and irregular verbs is also a challenging grammatical practice for students. There are studies which have discussed the writing difficulties faced by students. It is stated that students may be unable to differentiate if some verbs are regular or not and thus consider a regular verb as an irregular or an irregular verb as a regular which can result in forming a wrong past participle within a sentence



(Fengjie et al., 2016). Major contributing factors to these issues, according to Fengjie et al. (2016), are disparities in cultural origins, interference from mother tongues, and insufficient and disorganized knowledge of English. According to Yunita et al. (2017), students struggle with employing the past participle form of verbs, which leads to grammatical issues when building the passive voice. In this study, among students' grammatical problems in constructing the passive voice, 46% (highest) were the problems in the use of past participle verbs.

Similarly, Ismani and Simamora (2021) also found that students mostly commit grammatical errors in using past participles when used as adjectives and adverbs (63.73%) compared to perfect participle (33.52%) and present participle (22.52%). In fact, for non-native English speakers (and occasionally even for native speakers), past participles might be a bit confusing because they are the most crucial component of a passive construction aside from the verb "be." The past participle form may or may not be the same as the past tense form, and it may or may not be regularly created, which is why.

2.3 Grammatical Errors Analysis in Academic Writings

A method called error analysis is employed to locate errors in a language learner's work, assess if the faults are systematic, and attempt to determine the underlying causes of the problems. While accuracy is just one aspect of learner language, when native speakers of the target language (TL) hear learner language, they are prone to perceive errors made by learners as being very obvious. While second language learners frequently make mistakes that never occur to native speakers, native speakers occasionally make inadvertent "performance" errors (such as verbal blunders).

Error analysis is an essential component of learning second and foreign languages as well as practical linguistics. Error analysis reveals the origins of grammatical errors and categorises them in their forms (Zhu, 2019). There is also a methodical approach to analyzing students' errors. Actually, making mistakes is a necessary part of the learning process when it comes to language acquisition. Besides providing a systematic way of identifying, summarizing, and expounding upon pupils' shortcomings, they could also provide an understanding of the intricate procedures involved in language acquisition. Error analysis is a useful tool for improving understanding of the acquisition of a second language and foreign languages.

Especially in written communication in English, the error analysis has proved its relevance. This is what is reported in many studies. The application of grammatical error analysis can help language teachers improve their language teaching strategies and methodologies and thus help their learners (Sarkar & Dave, 2022). In fact, there are a lot of benefits of conducting error analysis for both teachers during teaching and learning, and researchers in different contexts, in order to examine different theories or create other theories which can upgrade the English acquisition of a foreign language.

III. METHODOLOGY

3.1 Study Approach

This study has used a mixed research approach, which combines quantitative and qualitative research approaches due to the nature of the stated objectives and the nature of the research questions. A mixed-method approach enables the researcher to look at the research problem both deeply and broadly. In this instance, quantitative data helped to widen the problem while qualitative data contributed to make it more complex.

3.2 Study Design

Social research requires a design or structure before data collection or analysis begins. The function of the research design is to ensure that the knowledge gained allows the original question to be answered as clearly as possible. Therefore, the current study employed descriptive research design with mixed method research design where the data collected were analysed using both quantitative and qualitative methods.

3.3 Target Population

The target population for the current study included year-one engineering students in the electrical and electronic department and civil engineering department for the academic year of 2022/2023 and their teachers in technical and general courses. The total number of these students and teachers is two hundred and sixty (260). These included 92 students in the option of electrical technology, 52 in the option of electronics and telecommunication technology as well as 96 students in construction technology and 20 teachers. Moreover, these teachers are those who teach social sciences and languages.



3.4 Sample and Sampling Procedures

To get the sample size, the Taro Yamane formula was used at a confidence level of 95%. It is expressed as:

$$n = \frac{N}{1+N(e)^2}$$

Where

n stands for the sample size

N stands for the population size and

e stands for the estimated sampling error.

Taro Yamane's formula is advantageous for accurately determining sample sizes in finite populations, optimizing resource allocation and reducing costs. However, its limited applicability makes it less suitable for very large populations or when the population size is unknown, where Cochran's formula is more appropriate.

In the current study:

$$n = \frac{260}{1+260(0.05)^2} = 157.58.$$

In this case, the sampling error at 95% confidence level is $e = 0.05$. Thus, considering that the target population size was 240, the calculation gave $n = 157.58$ and the sample size was approximated to $n = 158$. This means that the study has recruited 138 students.

3.5 Data Collection Techniques and Instruments

The current study used two categories of instruments to collect both quantitative and qualitative data. The first instrument was an essay writing test administered to the students in order to probe and classify the engineering students' common grammatical errors in verb forms. Before the test, students were asked three questions about their identification including age range, gender and study field. The essay writing test was designed with three topics, one of which students could choose:

"My first day at the university"

"My life at the university"

"Using mobile phone in my daily activities as a university student"

The essay was between 250 and 300 words and it was in the paper-pencil format. The researcher believed that students could use at least one of the six verb forms in their writing.

3.6 Data Processing and Analysis Techniques

Students' written papers were collected and carefully stored in a safe place for further processing whereas teachers' responses, with their direct analysis, were stored using Google forms. To respond to the first and second research questions, the document analysis techniques were used. In this document analysis, careful categorization of tense, agreement, and use difficulties was done in order to systematically check students' writings for verb form errors. Using a uniform coding scheme, the researcher made a rubric based on the standard five verb forms and grammatical errors classification was used to identify grammatical errors in verb forms made in written essays by engineering students. This rubric was developed by consulting the literature about grammatical errors and their classification.

Conversely, the teachers' responses were subjected to analysis employing descriptive statistics, encompassing the calculation of percentages of response on Likert scale ratings. In addition, a deductive thematic analysis approach was employed to examine the qualitative responses from teachers, with themes developed based on the variables elucidated in the literature review.

3.7 Ethical Considerations

The research process adhered to ethical principles and established procedures, beginning with the acquisition of necessary authorizations and permissions (Mitari et al., 2024). Throughout the research journey, ethical standards were rigorously maintained, aligning with the principles outlined in the Belmont report (Nagai et al., 2022): beneficence, which maximizes benefits, justice, which minimizes harms while safeguarding participants' welfare and guaranteeing a fair distribution of benefits and costs, and respect for persons, which acknowledges autonomy and informed consent. The research process ensured ethical recruitment of participants, avoided coercion, and maintained confidentiality of responses, reflecting a commitment to ethical conduct and conscientious research methodologies (Ginting et. al, 2022).



IV. FINDINGS & DISCUSSION

4.1 Engineering Students' Grammatical Errors in Verb Forms

The aim of this study was to know which grammatical errors in verb forms are mostly encountered in engineering students' academic writing tasks. The study involved 131 first-year engineering students who took a one-page essay writing test on three optional topics: "My first day at university", "Life at university" and "Use of telephone in daily activities as a university student". Through the document analysis techniques, the researcher identified and revealed the common students' grammatical errors in verb forms. Results from students' essays are presented in Tables 1 and 2.

Table 1

Frequency of Grammatical Errors in Verb Forms from Students' Essays

Verb form error category	Error frequency	Percentage
Root verb (infinitive)	11	8.40%
The third person of singular (presents the form of a verb)	77	58.78%
Present participle (when -ing form is used as a verb)	20	15.27%
Simple past (irregular and irregular verbs)	15	11.45%
Past participle	8	6.10%
Total	131	100%

From the above table titled frequency of grammatical errors in verb forms from students. The table classifies the identified errors into various verb forms and gives both frequency and percentage distribution. The most prevalent type of errors that consist of a significant extent of 58.78% of the total errors, is that of the third person singular verb form. This indicates that students at RP Gishari College often struggle with Subject-Verb-Agreement (SVA) in the present tense where they do not add "s" on verbs while the personal pronoun or subject is *she, he, it*, or their substitutes.

Another type of errors found is on the use of the root verb (infinitive) which accounts 8.40% of the total errors. It is about failing to write the correct verb form in context or misusing verbs in their base form. The error that is at the percentage of 15.27 is related to present participle (when -ing form is used as a verb). These errors involve the incorrect usage of continuous verb forms or confusion between verbs and gerunds. The category of past simple errors with both irregular and regular verbs recurs at 11.45% of the total errors. These errors involve issues like using incorrect verb conjugation in the past tense or difficulties in differentiating regular from irregular past tense verb forms. Finally, past participle form errors amount to the percentage of 6.10 of the total errors. They are related to the incorrect use of past participle forms or failing to apply correctly rules of regular and irregular verbs.

Table 2

Sample Examples of Grammatical Errors in Verb Forms found in Students' Essays

Verb form error category	Examples of grammatical errors in verb forms
Root verb (infinitive)	...someone who are not neared by you the student will success different modules...
The third person of singular (presents the form of a verb)	... telephone also have more important to university student... ... It help to obtain or to get new information... ...truly, telephone assist me in in my daily program...
Present participle (when -ing form is used as a verb)	... it is help me to know all information of my college... ... it can support me for to know a news for outside of school... ...I studies a new curriculum....
Simple past (irregular and irregular verbs)	... when I was get in university of course... ... in everything you done....
Past participle	...I think different to the things I have see... ... I do research about modules I have took that day... ... all something that has not understand well... ... the question which is complexity was be simplified...

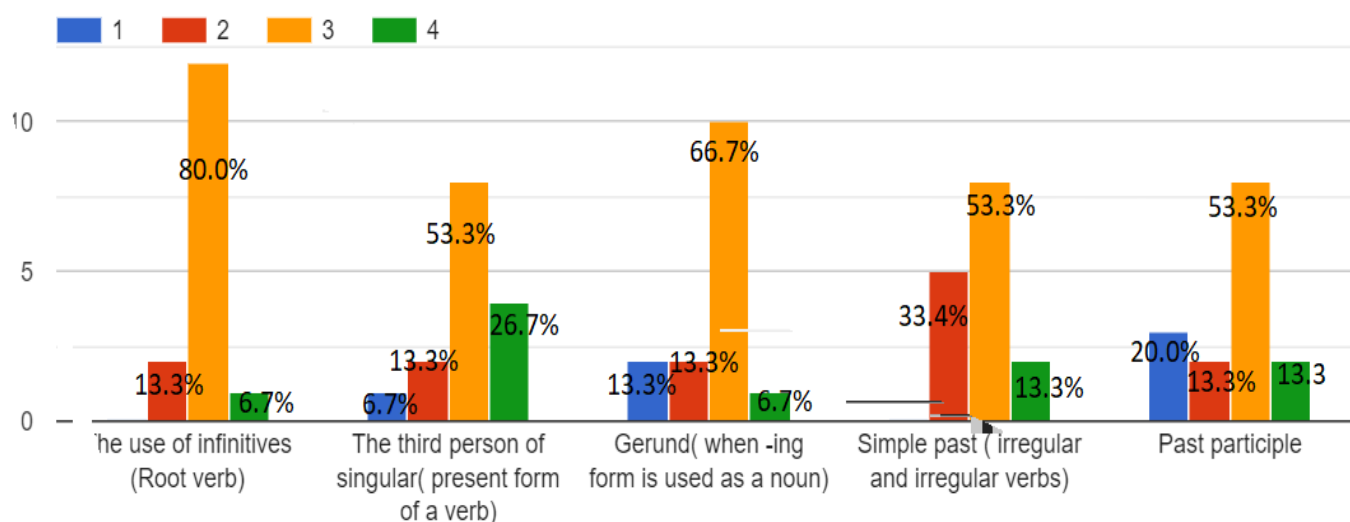


Figure 1

Teachers' Views on Grammatical Errors Committed by Engineering Students

Source: Primary data, 2023

From Figure 1, there are some similarities that can link teachers' responses and students' essay test results. Firstly, looking at the point "always=4" in Figure 1, it is seen that 4 teachers out of 15 (26.7%) confirmed that engineering students commit errors in the third person singular form which is the highest number compared to other verb forms. This matches with the highest percentage observed (58.78%) in this verb form in students' essay test. Secondly, for the students' grammatical errors in the past participle where the results from the test showed that it is the least grammatical error committed, from teachers' responses, 3 teachers (20.0%) (highest) said that students never make this kind of error. However, looking at the Likert point "sometimes=3" it can be observed that 12 out of 15 teachers (80.0%) (highest) confirmed that students sometimes commit the errors in the use of the root verb compared to 8 teachers out of 15 (53.3%) who observed that students sometimes commit errors in the third person singular form and 10 out of 15 (66.7%) who confirmed the same in the present participle form.

4.2 Teachers' qualitative responses on grammatical errors in verb forms

In the field of language education, teachers' insights are crucial for improving students' academic writing skills. This study focuses on teachers' perspectives regarding grammatical errors in verb forms to enhance the academic writing proficiency of engineering students, providing valuable insights from experienced educators. The data were analysed through the deductive thematic analysis basing on the literature review and the corresponding results are presented in the following themes.

4.2.1 Engineering students' grammatical errors

To answer this question "Which grammatical errors in verb forms are mostly encountered in engineering students' academic writing tasks?" one open question was added to the Likert scale questions for the sake of getting more insights in the common grammatical errors made by students. In this case, the researcher asked the participating teachers to provide other students' grammatical errors that they observe in academic writing tasks when they are conducting assessments. Teachers' responses to this question have been collected and grouped under theme one which was formed in line with the literature review on grammatical errors in verb forms.

Almost all fifteen teachers (15) who responded have given, in details, other grammatical errors which were or were not mentioned in the Likert scale questions by the researcher. Only one teacher did not provide additional errors and said: "none". The responses from five teachers have reflected the grammatical errors in relation to the prescribed verb forms. For example, one teacher said: "3rd person" which is related to the third person singular form. Another one said: "Sometimes they confuse simple past and past participle forms of irregular verbs". The same idea was expressed by other two teachers saying: "The use perfect tenses is a problem among learners" and "They use past and future". On the other hand, the grammatical error in subject-verb agreement was raised by another teacher saying: "In writing, my students also commit subject-verb agreement mistakes and tense-related errors".



Teachers' responses regarding the students' grammatical errors in verb forms did not provide deeper information which could reveal their classification. However, these teachers indicated other grammatical errors in academic writing tasks which can be linked to some theoretical classification of grammatical errors. For example, one teacher mentioned students' errors in sentence formation including sentences without verbs, misplacement and repetition of words. In this case, the category of misordering, addition and omission can be thought to be occurring. Although this is important to note, it was not in the scope of the study and thus it is held undiscussed. Other errors talked about included students' errors in punctuation and grammatical errors in the use of the passive and active voice. Another teacher also talked about errors in the use of articles and prepositions, confusing adjectives with adverbs and confusing nouns and verbs in the formation of sentences.

These results show that students' grammatical errors in verb forms are encountered in all five verb forms and there is no exception for which is frequently committed. However, students' confusion between simple past and past participle forms has been greatly emphasised by three respondents. Moreover, in teachers' responses, grammatical errors which are not directly falling in the five verb forms are observed. Nevertheless, these highlighted errors may be influenced by the errors in verb forms. For example, the construction of passive and active voices and the sentence formation may have direct ties with verbal forms and tenses.

4.3 Discussion

4.3.1 Engineering Students' Grammatical Errors in Verb Forms

The main findings showed that year-one engineering students at RP Gishari College commit grammatical errors in all five verb forms. In total, the data from students' essays showed that among 133 essays evaluated, 131 grammatical errors in verb forms were uncovered 77 grammatical errors in the third-person singular form (58.78%) were the most encountered. Grammatical errors in the use of present participle were the second (15.27%) whereas the last errors were in the use of past participle form (6.10%). Linking these results to the teachers' responses, a little similarity was observed with some teachers confirming that students always commit errors in the use of the third-person singular form whereas others confirmed that students never make grammatical errors in the use of the past participle form.

For example, the simple past and present participle verb forms were found among the students' common verb form errors in their written tasks, where the simple past form scored a percentage of 28.9% in the second place, whereas, the errors in the construction of the present continuous tense scored 8.43% in the third place among 8 verb tenses errors recorded (Mayaratri, 2020). On the other hand, the grammatical errors in the use of the third-person singular is reported in many studies as a dominating grammatical problem for students learning English as the second or foreign language (Hamamci & Hamamci, 2018; Ma, 2022; Pérez, 2021). These studies are consistent with the current study in which the grammatical errors in the third-person singular scored the first percentage.

To some extent, the findings on the engineering students' common grammatical errors in verb forms are consistent with the findings in the previous studies about students' grammatical errors in verb forms. The engineering students' grammatical errors in verb forms uncovered in the context of RP Gishari College are well fitting in the current literature in EFL contexts. The types of grammatical errors in verb forms recorded resemble those in studies consulted in the literature. Based on the error analysis theory, this identification of engineering students' grammatical errors is one step to the process of eradicating these errors.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study attempted to answer these research questions through the content analysis of engineering students' essays and descriptive statistics. The findings revealed that year-one engineering students at RP Gishari College make grammatical errors in all five English verb forms in their writings. Particularly, it was found that many students make errors in the third person singular form (58.78%) whereas the errors in the past participle form were the least (6.10%). This shows the effort that students are making to learn English grammar. This scientific proof of error making can be based on by language educators to help trainees to improve their writing skills.

5.2 Recommendation

This study aimed to identify and analyse grammatical errors in English verb forms to improve engineering students' academic writing skills at RP Gishari College. Based on the findings of the current research, the following recommendations are given.



Firstly, teachers of English are recommended to find effective and efficient teaching and learning approaches to writing skills, which can allow them to uncover students' difficulties in the use of verb forms and provide adequate feedback to students.

Secondly, Directors of Academic Services (DAS) are recommended to avail enough teaching and learning resources that teachers and students can use during writing activities. Moreover, establishing regular competitions in writing skills at both college level and intercollege level will help motivate engineering students to improve their academic writing skills.

Lastly, future researchers are recommended to expand the research to wider contexts in Rwanda in order to have the general picture of students' grammatical errors in verb forms. Moreover, researchers can carry out experimental studies on the teaching strategies which can efficiently minimise the engineering students' grammatical errors in verb forms.

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Everyday WhatsApp realities in Tanzania: How communication practices shape interpersonal relationships

Janeth Migamba¹
Edmund Zakayo²
Mwajabu Mashinde³

¹jmigamba@irdp.ac.tz

Institute of Rural Development Planning, Tanzania

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ABSTRACT

WhatsApp has gained great attention among the public in both developed and developing countries; the study aimed to assess how communication practices shape interpersonal relationships. The study employed the family communication patterns theory. This study employed a cross-sectional design, combining statistical and descriptive methods to achieve comprehensive and consistent results. Specifically examining the practice of family communication through WhatsApp and the effects of WhatsApp on enhancing interpersonal relationships. The study included all household heads aged 18 and above, including those who do not live with all their family members, such as children, parents, spouses, or siblings, but who use WhatsApp regularly to communicate with them, whereby 153 respondents were sampled using a formula for an unknown population. Data were collected using a designed questionnaire administered to heads of households and checklists for key informants. Data were analyzed using quantitative and qualitative methods to examine WhatsApp use in household communication practices comprehensively. The study indicates that the majority of the respondents had been using WhatsApp for four to ten years. Furthermore, daily engagement with family on WhatsApp was high, whereby the majority of the respondents reported communicating with relatives daily. Regarding daily WhatsApp time with family, most spent between 10 and 30 minutes per day. In addition, the average responses of the respondents ranged from 3.02 to 3.42, indicating a medium to high level of agreement regarding the contribution of WhatsApp to family relationships. Thus, the study concludes that WhatsApp has become an important tool for family communication among many Tanzanian households, especially among young and middle-aged people who are accustomed to technology. The platform has successfully reduced travel expenses, bridged geographical gaps, and facilitated frequent communication with emotional support. The study recommends that families should continue using WhatsApp to strengthen and maintain emotional connections and bonds, facilitate coordination of family activities, and use video, voice, and photo features to make their communication more authentic.

Keywords: Communication, Family, Interpersonal Relationships, WhatsApp

I. INTRODUCTION

WhatsApp has gained great attention among the public in both developed and developing countries. With over 3.1 billion monthly active users in 2025, WhatsApp has established itself as a fundamental, indispensable, widely used and highly effective tool in various societies for fast, secure, and efficient communication (Shewale, 2025). WhatsApp's widespread adoption is due to its easy-to-use design, high security through end-to-end encryption of communications, and its ability to handle a variety of content types such as text, images, audio, and video. These features have made WhatsApp a favorite tool for families for close and frequent communication. As the most popular instant messaging application used by many people around the world (Rafique et al., 2023; Sulistiani & Al-Amin, 2025). WhatsApp, as a digital platform with broadcast messaging, gives users the ability to send a single message to many people at the same time, which greatly helps in distributing information quickly, efficiently and in a balanced manner. Its great popularity among users is due to its unique capabilities that include sending text messages, making voice calls, making video calls, as well as sending messages to a large group of people at the same time without interruption, making it an ideal tool for modern communication (Kumar & Sharma, 2020).

WhatsApp has become the dominant messaging platform in Africa, with countries such as Nigeria, South Africa and Ghana reporting usage rates exceeding 90% among internet users (Yazi, 2025). The platform's low data usage and ability to connect directly to mobile networks have made WhatsApp a great choice, especially in areas with weak digital infrastructure. To a large extent, it has enabled families to maintain relationships, stay in touch, and simplify daily communication even in technologically challenging environments. However, alongside these benefits, WhatsApp is also changing the dynamics of family relationships by affecting the way people communicate, share emotions, and build



social closeness (Taipale & Farinosi, 2018). Nowadays, many young people cannot wait for two or three hours without checking or updating their status and posting pictures on social media platforms like WhatsApp, even if doing so interferes with other important activities such as studies and career development. Excessive WhatsApp use can lead to a person losing control over how they use the app, which can have a significant impact on their personal, social and even professional lives (Kumar & Sharma, 2020). WhatsApp usage in family communication varies significantly between developing and developed countries, shaped by infrastructure, socioeconomic conditions, cultural norms, and digital literacy. In developing countries, WhatsApp is often the primary communication tool due to its affordability, low data consumption, and compatibility with basic smartphones. In eight middle-income countries, including Kenya, Nigeria, and India, a median of 73% of adults use WhatsApp, while reaching 90% in Brazil (Poushter, 2024). In contrast, only 29% of adults in the United States use WhatsApp, where SMS, iMessage, and other platforms are more prevalent (Poushter, 2024). In Tanzania, WhatsApp ranks as the most used social media platform, with significant penetration among youth and urban populations (Kemp, 2025). It has gained popularity in Tanzania ahead of other social media tools. WhatsApp is Tanzania's third most data-consuming social media platform, following YouTube and Facebook. It is also used for family group chats to coordinate events, to share updates, and to maintain emotional bonds (Issa & Makubi, 2024). In this context, the question arises of how WhatsApp is used in everyday family communication and its impacts, therefore, the study aims at addressing this question.

1.1 Statement of the Problem

In recent years, cities in Tanzania have experienced increased movement of people from rural areas in search of economic opportunities and social needs (Namkesa, 2024). This migration has led many to live apart from their families, resulting in issues such as mental health problems, loneliness, a reduced social support network, social isolation, loss of daily family interactions, weakening family bonds, emotional stress, and decreased participation in family events (Cebotari & Dito, 2021; Annor et al., 2024; Al-Azzeh & Diab, 2025). With smartphone penetration rising to 35.99% in December from 33.85% recorded in September 2024, and internet subscriptions reaching 48.0 million in December 2024 compared to 41.4 million in September 2025 (Tanzania Communications Regulatory Authority [TCRA], 2024), more people are using social media platforms, including WhatsApp, to communicate with others and families as alternatives. WhatsApp has gained popularity in Tanzania over other social media tools. It also enables users to interact by generating, sharing, and exchanging information and opinions within virtual communities and networks (Issa & Makubi, 2024). Despite these advancements and achievements, no studies in Tanzania have explored how WhatsApp has shaped interpersonal relationships; existing studies have been conducted in other countries. Therefore, this study aims to assess how WhatsApp is used in everyday family communication and its impact on personal relationships, emotional closeness, conflict resolution, and overall family cohesion.

1.2 Research Objective

The study assesses how WhatsApp is used in everyday family communication and affects personal relationships, emotional closeness, conflict resolution, and overall family cohesion.

- i. Examines the practice of family communication through WhatsApp
- ii. Examine the effects of WhatsApp on enhancing interpersonal relationships

II. LITERATURE REVIEW

2.1 Theoretical Review

The study employs the family communication patterns theory, which originates from the work of McLeod and Chaffee (1972). They proposed that individuals develop shared social realities through communication and orientation. Since interpersonal communication includes both relational and content elements, they identified two corresponding communicative dimensions. Socio-orientation refers to the tendency to focus on social positioning and emphasises deference to maintain harmonious relationships. Meanwhile, concept-orientation describes the prioritisation of analysing arguments based on their merits, regardless of the speaker's status (Price, 2023). Family Communication Patterns Theory (FCP) is used to understand how families utilise WhatsApp to communicate and influence social relationships among their members. This theory suggests that families are structured around different communication styles based on conversation and conformity orientation. Families with a strong conversational orientation encourage deep discussion, open communication, and emotional cooperation, which WhatsApp can enhance by facilitating frequent communication, messages, and sharing photos and videos. On the other hand, families with a conformity orientation emphasise shared values, obedience, and conflict avoidance, where WhatsApp can be used as a tool to issue orders or control communication without room for open discussion. Therefore, the theory provides a basis for examining how family communication styles influence WhatsApp use, and how such use alters emotional closeness, conflict resolution, and family cohesion in the Tanzanian context.



2.2 Empirical Review

Given the widespread adoption of WhatsApp for social and family communication, recent empirical studies have offered diverse insights into everyday WhatsApp realities, particularly regarding how family communication practices influence interpersonal relationships. In Pakistan, Rafique et al. (2023) found a significant association between the frequency of WhatsApp usage and interpersonal communication skills and interpersonal relationships among university students. Also, they demonstrated the benefits of WhatsApp in promoting connectedness and enabling smooth communication between students. Text messaging, voice notes, and multimedia sharing are just a few of the platform's many communication modes that have been recognized for improving the depth and speed of collaboration. In Zambia, Pindayi, (2017) stated that as a communicative space, WhatsApp is a social media platform that is shaping or affecting the lives of African citizens. In United Arab Emirates, Ali & Kootbodien (2017) found WhatsApp can be considered as an effective interpersonal communication medium. However, there are a range of various perceptions with regards to the replacement of face-to-face communication, but it is ultimately used as an addition to, not replacement of face-to-face communication. In India, Kiran and Srivastava (2020) found that, various innovations and advancements in technological field have paved the way for faster and better way of living, WhatsApp is one of such advancement that has drastically altered the way youngsters communicate with each other. The dependency on WhatsApp has led to a number of social, physical and psychological problems among youngsters.

In addition, in Ghana, Haagsman (2023) adds that WhatsApp strengthens long-distance relationships through agency-driven communication. Barros (2023) agrees that WhatsApp maintains long-distance connections and ritual co-presence while acknowledging ambivalence, reflecting our evidence that WhatsApp preserves long-distance ties. In Nigeria, Omipidan and Sanusi (2024) found that, broadcast messages on WhatsApp are significant change that presents both chances and difficulties for preserving and strengthening family ties, emergence of digital communication platforms like WhatsApp has revolutionized conventional means of family communication. In Finland, Taipale & Farinosi (2018) revealed that broadcast messaging can help families, in particular, stay connected and expedite communication, but it also changes the dynamics of family relationships. Likewise, in Indonesia, Imanuela et al. (2023) found that the existence of social interaction media such as the WhatsApp application is certainly quite capable of bringing about a change. Initially, each individual encounters a limitation in interacting, but now, various easy accesses can be reached by each user.

Although WhatsApp has become an important tool for family and social communication around the world, most existing research has focused on students and young people, especially in contexts outside Africa. Research conducted in countries such as Zambia, Nigeria and Kenya has shown the opportunities and challenges of using WhatsApp to maintain family relationships, but it is not yet clear whether these findings are directly relevant to Tanzanian families. Furthermore, previous studies have ignored the emotional, relational and intergenerational effects. This situation highlights the importance of conducting in-depth research that focuses on the Tanzanian context to assess how WhatsApp is used in everyday family communication and how it affects personal relationships, emotional closeness, conflict resolution, and family cohesion in general.

This study contributes significantly to the literature on digital communication and family issues by presenting empirical evidence that focuses on the Tanzanian context. The results provide practical insights for families, policymakers, and communication professionals by demonstrating how WhatsApp helps build trust, openness, emotional support, conflict resolution, and celebrate family successes, while also identifying challenges such as misinformation or overreliance. By demonstrating the reality of WhatsApp use in everyday family life, this study contributes to international debates about digital media, social relationships, and the broader impacts of communication technologies, and lays the foundation for comparative research in other developing countries.

III. METHODOLOGY

3.1 Study Area

The study was conducted in Mbagala Kuu Ward, located in Temeke District, Dar es Salaam City. The ward was purposefully selected because it is among the densely populated peri-urban areas of the city and is characterised by large households and a vast network of extended families. Mbagala Kuu has a mix of low, middle, and high-income households, with many of its residents engaged in informal employment such as small businesses and formal employment in various sectors. This environment offers a good opportunity to examine family communication dynamics, primarily through technology such as WhatsApp, in communities with vibrant and multi-generational family structures.



3.2 Study Design

This study employed a cross-sectional design, combining statistical and descriptive methods to achieve comprehensive and consistent results. The cross-sectional approach enables data collection from numerous respondents simultaneously, avoiding the need for long-term follow-up. It is a straightforward, cost-effective, and efficient method, especially suitable in a densely populated urban environment like Mbagala Kuu. This design is appropriate for exploring the relationship between WhatsApp use and various aspects of family relationships, such as emotional closeness, conflict resolution, and daily communication. Additionally, it allows for integrating both statistical and descriptive (quantitative and qualitative) methods, thereby improving the validity and richness of the findings by accurately reflecting the realities of WhatsApp use within Tanzanian families.

3.3 Sampling

The study included all household heads aged 18 and above, including those who do not live with all their family members, such as children, parents, spouses, or siblings, but who use WhatsApp regularly to communicate with them. To ensure a balanced sample, the study employed systematic sampling, selecting household heads from small geographical clusters of five households each, based on the official administrative boundaries of the respective ward. Then, 30 respondents were chosen in four clusters, and 33 respondents were selected in one cluster, according to the cluster size, although three respondents had been chosen during the pilot study. Similarly, purposive sampling was used to select key informants, such as community leaders and telecommunications service providers, who provided technical information that other respondents could not offer. As outlined below, the total sample size was 153 respondents, calculated using Cochran's (1963) formula for an unknown population.

$$n = \frac{z^2 p(1-p)}{e^2}$$

Where;

n = Sample size

P = proportional of mechanical

$z_{\frac{\alpha}{2}}$ = Critical value of 95%

e = Marginal error

q = (1-p)

Hence;

$$n = \frac{1.96^2 \times 0.5(1-0.5)}{(0.0792)^2} = 153$$

3.4 Data Collection

Mixed-method data collection techniques were used to ensure breadth and depth in understanding the effects of WhatsApp use on social communication within families. Quantitative data were collected through a designed questionnaire administered to heads of households who use WhatsApp to communicate with their relatives. The questionnaire aimed to collect demographic information such as age, marital status, gender, and WhatsApp usage patterns and perceptions about its impact on family relationships. To increase the reliability and validity of the research instrument, the questionnaire was pre-tested on 10 respondents, and necessary modifications were made before starting formal data collection. Qualitative data were collected through in-depth interviews with key informants to complement the quantitative component. The semi-structured interview guide allowed flexibility in probing emerging issues while remaining focused on the study objectives. This approach provided insights into WhatsApp's broader social implications, including opportunities and potential challenges in maintaining interpersonal relationships.

Before data collection began, respondents were invited to participate by answering questions and were informed of the study's objectives. Respondents were entirely voluntary, and informed consent was obtained in accordance with research ethics procedures. Participants were assured confidentiality and anonymity, and respondents' responses were not recorded. To improve data quality and minimise bias, enumerators were trained on interviewing techniques, research ethics, and proper use of the instruments. The combination of methods enabled triangulation of findings, thereby increasing the validity, credibility, and depth of the study's conclusions.

3.5 Data Analysis

Data were analysed using quantitative and qualitative methods to examine WhatsApp use in household communication practices comprehensively. Quantitative data from the questionnaires were coded and analysed using IBM SPSS Statistics version 27. Descriptive statistics such as percentages, frequencies, means, and standard deviations were used to summarise socio-demographic characteristics, usage patterns, and perceptions of WhatsApp's effects. The internal consistency of the questionnaire items was assessed using Cronbach's Alpha, which produced a coefficient of



0.971 across the 20 items, indicating excellent reliability. This value significantly exceeds the commonly accepted threshold of 0.70 for acceptable reliability and even surpasses the 0.90 benchmark, demonstrating outstanding consistency (Tavakol & Dennick, 2011). The coefficients' similarity for raw and standardised items further supports the scale's robustness. These findings suggest that the items in the instrument reliably measure the underlying construct of WhatsApp use and its impact on interpersonal relationships, thereby enhancing confidence in the quality and stability of the data for further analysis.

Inferential statistical tests, such as Firth logistic regression, were employed to examine associations between demographic variables and satisfaction level, with significance set at $p < 0.05$. In parallel, qualitative interview data were transcribed, translated where necessary, and analysed thematically. This process allowed the identification of key themes that highlighted both the opportunities and the challenges. Finally, findings from both were integrated through triangulation, whereby statistical results were interpreted alongside qualitative narratives to provide a more nuanced and credible account of the role of WhatsApp in shaping interpersonal relationships within households.

Manual proofreading and automated language consistency checks, such as Grammarly, were carried out to ensure the final document's accuracy and readability. This process reduced grammatical errors and enhanced clarity without altering the substantive content of the study.

IV. FINDINGS & DISCUSSION

4.1 Social Demographic Characteristics of the Respondents

Table 1 presents the findings of the respondents' social demographic characteristics.

Table 1

Social Demographic Characteristics of the Respondents

Variable	Category	Frequency	Percent
Age	18-24	37	24.2
	25-35	83	54.2
	36-59	29	19.0
	60+	4	2.6
Sex	Male	70	45.8
	Female	83	54.2
Marital status	Divorced/Separated	3	2.0
	Married	95	62.1
	Single	55	35.9
	Total	153	100.0
Education level	No formal education	5	3.3
	Postgraduate	15	9.8
	Primary	5	3.3
	Secondary	30	19.6
	Tertiary (College/University)	98	64.0
Occupation	Employed (formal)	22	14.4
	Retired	4	2.6
	Self-employed	103	67.3
	Unemployed	24	15.7
Transport fare	Less than 10,000	24	15.7
	11,000 to 20,000	2	1.3
	21,000 to 30,000	5	3.3
	31,000 to 40,000	41	26.8
	41,000 to 50,000	24	15.7
	51,000+	57	37.2

The findings in Table 1 show that the majority of the respondents (54.2%) were aged between 25 and 35 years, followed by 24.2% who ranged between 18–24 age group, and only 2.6% had above 60 years. This highlights that WhatsApp use for family communication is mostly driven by younger and middle-aged adults who are generally more active in using mobile applications and adopting technology. Concerning sex, the majority of the respondents were



females (54.2%) compared to males (45.8%). The near balance between men and women implies that WhatsApp is a widely adopted communication tool across males and females. However, studies have highlighted that women often spend more time at home compared to men due to men's greater involvement in paid work (Gershuny & Sullivan, 2017; Kan et al., 2011). This means that their involvement in social media like WhatsApp is higher compared to men. Regarding marital status, most of the respondents were married (62.1%), followed by respondents who were single (35.9%) and a few who were divorced or separated (2.0%). Married respondents are more likely to communicate frequently with their families to maintain relationships and kinship networks.

In education, findings revealed that the majority of the respondents (64%) had a tertiary education level, and only 3.3% had no formal education. In terms of occupation, the majority of the respondents were self-employed (67.3%), followed by unemployed (15.7%) and formally employed (14.4%), and only 2.6% retired. This indicates that there are limited formal job opportunities. In addition, on respect to household transport expenditure, findings emphasise the role of WhatsApp in bridging the physical distance. About 37.2% of the respondents reported spending more than TZS 51,000 on transport fares, 26.8% between TZS 31,000 to 40,000, while 15.7% reported spending less than TZS 10,000. High transport costs indicate the economic barriers to frequent visits, signifying the role of WhatsApp in timely family communication and sustaining closeness.

4.1.1 Practice of Family Communication through WhatsApp

Table 2 presents the practice of family communication through WhatsApp, it shows that the majority of the respondents had been using WhatsApp for four to ten years, while 37.9% reported spending 4 to 6 years and 34.0% using it for 7 to 10 years, while only 7.8% had used it for more than ten years. This implies that WhatsApp has been a primary channel for maintaining family ties over the past decade, enabling consistent communication despite busy schedules or physical distance. Also, daily engagement with family on WhatsApp was high, whereby 86.3% of respondents reported communicating with relatives daily, and 13.7% used the platform occasionally (between 1 and 4 times per week). Regarding daily WhatsApp time with family, the most spent between 10 and 30 minutes per day (34.0%), followed by 33% of respondents who spent between 31 and 60 minutes, and 17% spent more than one hour on family interactions. These findings show that while individual interactions may be brief, their frequency contributes substantially to sustaining emotional closeness and timely family coordination.

The study findings above emphasise the need to use WhatsApp in various interventions like family-based outreach, counselling, or support programmes through WhatsApp, particularly in low-infrastructure settings where face-to-face visits are challenging. The high daily engagement rates, with 86.3% of respondents communicating with their family via WhatsApp every day and most spending between 10 and over 60 minutes on these interactions, support similar trends observed during the COVID-19 pandemic. During that period, it was found that instant messaging was vital for maintaining family well-being and personal happiness amidst social restrictions (Gong et al., 2022). In the African context, the findings support other studies that emphasise WhatsApp's role in facilitating daily communication, especially in middle-income countries where it is often the primary platform for staying connected (Poushter, 2024). These findings support the idea that frequent and daily exchanges via WhatsApp are vital for family coordination and emotional closeness, effectively acting as a digital lifeline across distances and social contexts. Practically, this indicates the potential of WhatsApp as a channel for family-focused interventions (e.g., counselling, health updates), given its integration into daily routines. However, it also raises questions about how message frequency affects interaction quality and digital dependence.

Concerning mostly contents shared, the majority of the respondents (81.7%) revealed to share text messages, followed by videos (6.5%), photos (5.9%), and voice notes (3.3%), with only slight use of documents and emojis/stickers (1.3% each). This highlights that family communication mainly depends on direct text exchanges, using multimedia to supplement engagement and show emotions. About family group size, 30.7% of the respondents had 6 to 10 members, while 21.6% belonged to both 11 to 20 and 21 to 50 member groups, and 7.8% were in very large groups (51+ members). This pattern indicates that WhatsApp supports both close and extended family networks, allowing meaningful exchanges without overwhelming members.

The findings above align with recent evidence that family oriented WhatsApp groups in low- and middle-income settings privilege short, reviewable text for clarity and asynchronous convenience (Skeen et al., 2023; Nekoolaltak et al., 2024). In Sub-Saharan Africa specifically, despite gradual improvements, data-affordability challenges continue to influence user behaviour towards text over data-heavy media (GSMA, 2023). Also, a study by Alkobi and Khvorostianov (2024) indicates that WhatsApp functions as a "technological extension" of routine kin interaction, where succinct text updates remain central, with multimedia used selectively to enrich affective mark milestones (Alkobi & Khvorostianov, 2024). Garimella et al. (2025) supports that WhatsApp content reveals that images and videos circulate widely in public or semi-public groups. Therefore, for daily family communication, WhatsApp is a simple text channel facilitating quick check-ins, logistical management, and ongoing emotional support. At the same time, more elaborate media are used as supplementary tools when expressive subtlety is needed.

**Table 2***Practice of Family Communication through WhatsApp*

		Frequency	Percent
Duration of WhatsApp Use	1–3 years	31	20.3
	4–6 years	58	37.9
	7–10 years	52	34.0
	More than 10 years	12	7.8
WhatsApp Use with Family	Daily	132	86.3
	Occasionally (1–4 times a week)	21	13.7
Daily WhatsApp Time with Family	10–30 minutes	52	34.0
	1–2 hours	24	15.7
	31–60 minutes	25	16.3
	31–60 minutes	26	17.0
	More than 1 hour	26	17.0
	Mostly Contents shared		
	Documents	2	1.3
	Emoji/stickers	2	1.3
	Photos	9	5.9
	Text messages	125	81.7
	Videos	10	6.5
	Voice notes	5	3.3
Family Group Size	1–5 members	28	18.3
	6–10 members	47	30.7
	11–20 members	33	21.6
	21–50 members	33	21.6
	51+ members	12	7.8
Satisfaction level	Very Low	8	5.2
	Low	5	3.3
	Moderate	34	22.2
	High	73	47.7
	Very High	33	21.6

Additionally, the study found that satisfaction with WhatsApp for family communication was remarkably high, about 47.7% of respondents reported high satisfaction, 21.6% very high satisfaction and only 8.5% expressed low or very low satisfaction. These results show that WhatsApp is effectively in facilitating convenient, timely and emotionally supportive household interactions. The study also used the first logistic regression analysis to examine whether social demographic characteristics influenced satisfaction with WhatsApp for family communication. The results showed that no variables such as age, occupation, sex, education, or marital status were statistically significant predictors of satisfaction. This finding is particularly noteworthy, as it indicates that satisfaction with WhatsApp remains consistent across demographic groups, suggesting that the platform effectively supports family communication regardless of users' social backgrounds.

Our finding supports recent research showing that instant messaging with family is positively linked to personal happiness, largely independent of user demographics when communication quality is high (Gong et al., 2022). Additionally, a study by Alkobi and Khvorostianov (2024) highlights that WhatsApp as a daily tool for maintaining closeness, not limited to specific demographic groups. The fact that satisfaction with WhatsApp for family communication is unaffected by variables such as age, education, sex, occupation, or marital status supports the study by Kamdjoug et al. (2022), which found that satisfaction with WhatsApp use depends not on demographic characteristics but on users' perceptions of its usefulness, security, ease of use, connectivity, and enjoyment. This suggests that satisfaction is driven by platform features like immediacy, low cost, and emotional resonance rather than demographic factors.

4.1.2 Effects of WhatsApp on Enhancing Interpersonal Relationships

Table 3 presents that WhatsApp has contributed significantly to strengthening family relationships in various ways. The average responses of the respondents ranged from 3.02 to 3.42, indicating a medium to high level of



agreement regarding the contribution of WhatsApp to family relationships. Regarding family closeness, maintaining long-distance relationships ($M=3.42$) and closeness to distant family ($M=3.41$) had the highest averages, indicating that WhatsApp has become an important tool in uniting families and facilitating communication for geographically separated relatives. Regarding emotional support, the results show that receiving emotional support ($M=3.26$) and words of encouragement ($M=3.24$) significantly increase family cohesion and comfort, thus confirming that WhatsApp is a platform for emotional support among family members. Furthermore, the results indicate that in conflict resolution, issues of resolving misunderstandings ($M=3.19$) and resolving conflicts ($M=3.08$) have received medium levels, which indicates that family challenges cannot yet be addressed effectively through WhatsApp communication alone, but require more in-depth methods such as face-to-face conversations. Similarly, regarding the emotional environment, the aspect of a better emotional environment ($M=3.02$) has received the lowest average, meaning that although WhatsApp facilitates communication and solidarity, its contribution to improving overall feelings within the family is limited and cannot replace direct friendship and emotional solidarity in person. Therefore, the overall results indicate that WhatsApp is an important tool in building solidarity, closeness, and emotional support within the family. However, it still has limitations in resolving conflict challenges and improving overall emotional well-being.

Table 3*Effects of WhatsApp on Enhancing Interpersonal Relationships*

Statement	Mean	Std. Dev.	SD (%)	D (%)	N (%)	A (%)	SA (%)
Emotional connection with family	3.33	1.399	17.0%	12.4%	14.4%	33.3%	22.9%
Increased interaction frequency	3.32	1.341	15.7%	13.1%	13.1%	39.9%	18.3%
Closeness to distant family	3.41	1.311	14.4%	9.8%	16.3%	39.2%	20.3%
Resolving misunderstandings	3.19	1.281	15.0%	13.1%	25.5%	30.7%	15.7%
Easier conflict resolution	3.08	1.292	17.6%	14.4%	21.6%	34.6%	11.8%
Reduced post-conflict tension	3.1	1.263	12.4%	22.9%	20.9%	29.4%	14.4%
Receiving emotional support	3.26	1.261	13.7%	15.0%	15.7%	42.5%	13.1%
Expressing emotional support	3.17	1.234	15.0%	13.1%	22.2%	39.2%	10.5%
Feeling cared for	3.19	1.336	16.3%	15.0%	19.0%	32.7%	17.0%
Maintaining long-distance ties	3.42	1.336	15.0%	9.2%	16.3%	37.3%	22.2%
Disconnection without WhatsApp	3.16	1.374	18.3%	13.7%	19.6%	30.1%	18.3%
Staying updated on family matters	3.28	1.32	15.0%	14.4%	15.0%	38.6%	17.0%
Improved trust and openness	3.1	1.245	13.1%	20.9%	21.6%	32.0%	12.4%
Comfort sharing personal issues	3.12	1.292	15.0%	19.6%	17.0%	35.3%	13.1%
Increased family transparency	3.08	1.267	16.3%	17.0%	18.3%	38.6%	9.8%
Positive interactions	3.21	1.27	15.7%	11.8%	21.6%	37.9%	13.1%
Improved emotional climate	3.02	1.172	15.7%	13.1%	32.0%	32.0%	7.2%
Receiving encouragement	3.24	1.22	13.1%	13.7%	20.9%	40.5%	11.8%
Sending support messages	3.22	1.197	11.1%	19.0%	17.6%	41.8%	10.5%
Celebrating family milestones	3.14	1.259	16.3%	13.7%	19.0%	41.2%	9.8%

*Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A) and Strongly Agree (SA)

Furthermore, community leaders and telecommunications providers provided insights into the use of WhatsApp for family communication. A telecom key informant noted that WhatsApp has become the dominant platform, accounting for a large share of mobile internet traffic through voice calls, text messages, and video chats. Affordable social media bundles have made WhatsApp the preferred communication channel, leading to a decline in traditional SMS and voice calls. Usage tends to peak in the mornings and evenings, reflecting when families are most active. Despite the app's end-to-end encryption, privacy and security risks persist, particularly where devices are shared or users have limited digital literacy.

Similarly, community leaders revealed that families rely heavily on WhatsApp groups to coordinate ceremonies, announcements, and other family matters, noting that the platform has become an essential tool for maintaining connections across households. However, they also highlighted that in many cases, young people and a significant portion of community members spend considerable time casually chatting on WhatsApp, sometimes distracting them from other responsibilities. Leaders noted that while the app enhances family coordination, excessive use can reduce face-to-face interactions and limit meaningful household engagement.

In line with these findings, Healy et al. (2023) in Kenya support that youth living with HIV find WhatsApp groups essential for emotional companionship, helping to alleviate isolation. Haagsman (2023) in Ghana adds that WhatsApp strengthens long-distance relationships through agency-driven communication. Folayan (2023) in Nigeria also revealed that WhatsApp has been used for conflict resolution in formal Nigerian groups, confirming its ability to manage misunderstandings. Tammissalo et al. (2024) align with findings that social media contact with family correlates with greater happiness, consistent with our results on frequency and support. Barros (2023) agrees that WhatsApp



maintains long-distance connections and ritual co-presence while acknowledging ambivalence, reflecting our evidence that WhatsApp preserves long-distance ties. Additionally, Gazit et al. (2025) reveal that participation in family WhatsApp groups among older adults is linked to more positive daily emotional experiences and well-being benefits. Echoing the findings of Heywood et al. (2024), WhatsApp can aid conflict management: formal group and community settings in Africa have used WhatsApp to resolve misunderstandings and coordinate responses. Malhotra (2024) and Traeger-Soudry et al. (2025) add that family or parent WhatsApp groups may generate boundary breaches, overload, or misinformation pressures unless norms are explicit. Fischer et al. (2025) and Janssen et al. (2025) highlight that online family messaging typically supplements offline interaction. Lastly, Frischlich et al. (2025) support that WhatsApp enables timely support and conflict de-escalation, while establishing group norms (e.g., verification of forwarded news, reply expectations, quiet hours) and privacy-conscious practices to minimise overload and misinterpretation.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study concludes that WhatsApp has become an important tool for family communication among many Tanzanian households, especially among young and middle-aged people who are accustomed to technology. The platform has successfully reduced travel costs, bridged geographical gaps, and facilitated frequent communication with emotional support. As such, the level of satisfaction with the use of WhatsApp is high and consistent across various socio-demographic groups, which confirms the broad appeal of this platform for family communication. In addition to helping household members communicate, WhatsApp has been proven to improve family relationships by strengthening emotional bonds, helping to resolve conflicts, providing emotional support, and promoting openness and trust within the family. The platform also strengthens solidarity between immediate and distant families, facilitating meaningful family participation. This situation clearly shows that WhatsApp has significantly changed modern family dynamics. Overall, WhatsApp has proven to be a catalyst for family cohesion, closeness, and well-being, and thus continues to be a fundamental tool in maintaining family relationships in this digital age.

5.2 Recommendations

Based on the findings, the study recommends the following: - Families should continue using WhatsApp to strengthen and maintain emotional connections and bonds, facilitate coordination of family activities, and use video, voice, and photo features to make their communication more authentic. App developers should continue to ensure better privacy protections to increase user trust and safety. Policymakers and social actors need to encourage and invest in digital literacy and safe mobile app use to ensure families experience WhatsApp's benefits while avoiding challenges like misinformation and overreliance. The study recommends further studies on the effectiveness of WhatsApp platforms in coordinating and organising events.

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The impact of Kenya-Egypt defence cooperation on Nile Basin internecine conflicts

Emmanuel Lotu Ptiony¹

Dr. Susan Namaemba Kimokoti²

Rev. Dr. Elijah Onyango Standslause Odhiambo^{3*}

*³eodhiambo@buc.ac.ke

^{1,2}Masinde Muliro University of Science and Technology, ³Bomet University College, ^{1,2,3}Kenya

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ABSTRACT

Power asymmetries frequently compound basin politics, raising the question of how to manage with riparian hegemony, such as those in the Rhine, Tigris-Euphrates, Turkey, Egypt, India, and China, in addition to Nigeria or South Africa. These hydro hegemony often refuse to be drawn into mutual multilateral basin fora, preferring to deal with weaker partners individually on a bilateral basis. Despite the coexistence of security collaborations, basin-internecine conflicts have continued unabated, thus raising significant concerns. The concurrent existence of defense cooperation initiatives and water-related tensions between Kenya and Egypt poses challenges in balancing security interests and resolving disputes over shared water resources. The objective of this study was to assess the impact of Kenya-Egypt defense cooperation on Nile Basin internecine conflict. The study was underpinned by structural realism theory, securitization theory, and conflict theory. It was guided by descriptive research design. The study areas were Nairobi, Kenya, and Cairo, Egypt. The total sample size was 225, drawn from a target population of Kenya Defence Forces and Egypt Defence Forces at Berenice military base in Egypt; officials from the Ministry of Defense; officials from the Ministry of Foreign Affairs in Nairobi and Cairo, Egypt; the Egypt military attaché in Kenya; officials from the International Peace Support Training Centre; Kenya's High Commissioner in Cairo, Egypt; and Kenya attachés in Cairo, Egypt. Both purposive and convenience sampling were used. Both primary and secondary data collection were used. Data was analyzed both quantitatively and qualitatively. Study findings indicated that the Kenya-Egypt defense cooperation is viewed as an element of a much greater strategy aiming at bolstering the security architecture of the region. Its cooperation with Kenya has been both a solution to the conflict through joint peace efforts, addressing environmental concerns, shared mutual state interests, and regional stability and a causal factor to the Nile internecine conflict through promoting Egyptian hegemony and creating diplomatic hubs. The study recommends that both countries, on a sustainable basis, adopt a dyadic approach in consolidating and coordinating their strategies, devoid of either national interest obscuring the collective security endeavor.

Keywords: Bilateral Relations, Basin Interdependence Conflicts, Defense Cooperation, Internecine Conflicts, Nile Basin

I. INTRODUCTION

The Euphrates–Tigris basin has been suffering for decades from political instability and mismanagement. The tension over the water allocation that was on the negotiating table since the 1960s ended with no substantial agreement between the riparian countries (Iraq, Turkey and Syria). The importance of basins in international relations is tied to issues of scarcity and security, which are primary considerations that states take into account when conducting their foreign policies. Basin politics are frequently compounded by power asymmetries, begging the question of how to manage with riparian hegemony for example Turkey, Egypt, India and China, in addition Nigeria or South Africa (Hanasz, 2014). These hydro hegemony often refuse to be drawn into mutual multilateral basin fora, preferring to deal with weaker partners individually on a bilateral basis (Herrer, 2022). Power relations between riparians largely dictate the control over water resources that each riparian use. Indeed, even the upstream downstream dynamic is predicated on power; those upstream use water to get more power, and that downstream use power to get more water.

The large number of riparian nations in the region complicates the procedures of multilateral cooperation and negotiation of discovering common ground for reaching agreement on collective action, norms or guidelines (Hanasz, 2014). Investments in water management are at the core of any society's ability for economic development and improvement of the well-being of its citizens. Consequently, states pursue defence cooperation to deter any act of interference or any form of aggression. Water cooperation can be seen as a political extension of water cooperation that is useful in situations where defence cooperation is at a stalemate with competing interests and different political agendas (Keskinen *et al.*, 2014).



The intersection of defense cooperation and basin interdependence conflicts highlights the interconnectedness between security, geopolitics, and resource management. The African continent has varied architecture in defense cooperation systems, which were influenced by a historical, geostrategic, and security background. The post colonial heritage, regional disputes and the urge to seek regional stability have contributed to the cooperative initiatives in commerce of defense offered by African states.

Civil wars in Africa can be attributed to the use of the same water resource in Transboundary Rivers, lakes, and groundwater (Swain, 2011). Populations as well as climatic changes and inefficient water facilities cause the continent to have substantial water-related issues. Water war is common in the Nile Basin, in the Congo River Basin, and in the Horn of Africa. Conflicts usually surround access to water on agricultural activities, hydroelectric power generation and household use. Moreover, the development of dams and water diversion projects may cause the conflict among nations dealing with the same resources (Swain, 2011).

In the past, Kagwanja (2007) asserted that Kenya and Egypt have collaborated in the defense sector with an aim of improving their defense capabilities, security and mitigating the challenges experienced in the region. The form this collaboration takes is bilateral agreements and joint military exercise, information sharing, and defense technology exchange. Even though both nations have geopolitical interests and security concerns, usually, they cooperate with each other in the domain of fighting terrorism, regional stability, and sea safety in the region of the Red Sea and the Horn of Africa. Nevertheless, Suarez (2011) argued that because of the combined interests, the peculiarities of mutual viewing of regional interactions, including the Nile Basin geopolitics and the construction of the Grand Ethiopian Renaissance Dam (GERD), the defense cooperation of Kenya with Egypt could be limited in scope and density.

Kenya Basin internecine conflicts with Egypt have basically been centered on the Nile River which is a source of necessary water between the two neighbors. Dams and water projects created by various countries alongside the upper Nile basin especially the GERD, by Ethiopia raise serious implications to the downstream countries especially Egypt. Egypt depends immensely on the Nile as its water source, and any development to the flow of the Nile as a result of upstream projects is likely to affect Egypt in terms of its water accessibility. Kenya, which is also found in the Nile Basin, has issues pertaining to water-related matters and interests in utilizing their water resources as a source of development.

1.1 Statement of the problem

According to Tawfik (2020), the Nile Basin has been a region marked by historical and geopolitical complexities, leading to occasional tensions and conflicts among riparian states. The Nile River Conflict has been fueled by the construction of the Grand Ethiopian Renaissance Dam (GERD). This project has raised concerns, particularly between Ethiopia, which sees the dam as crucial for its development, and downstream nations like Egypt, which fear potential disruptions to their water supply. Historically, Kenya and Egypt have engaged in defense cooperation to address various regional security challenges Kenya and Egypt have participated in joint military exercises aimed at enhancing their capabilities to respond to security threats. These exercises fostered interoperability and knowledge-sharing between the armed forces of both countries. Despite the collaborative efforts, challenges persist, especially in the context of the Nile Basin conflicts. The Kenya-Egypt defence cooperation faces challenges due to the ongoing tensions surrounding the GERD. As a downstream nation, Egypt's concerns about water security impact its regional engagements, potentially affecting its collaborative efforts with Kenya (Kagwanja, 2007).

While several studies have been done on Prospects of Cooperation in the Eastern Nile Basin (Tawfik, 2020; Zeidan, 2015), much focus was put on cooperation between the countries that have built several dams and reservoirs, hoping to limit the ravages of droughts and floods on the waters of the Nile River for this case Egypt, Ethiopia and Sudan with little focus on non-Eastern Nile Basin riparian countries. Egypt enjoys military, economic and discursive power vis à vis other riparian states. Despite there being elaborate and comprehensive Kenya- Egypt cooperation, Kenya has faced backlashes occasioned by Kenya's intended withdrawal from NBT in 2004 which was seen as an 'act of war against Egypt'; as well as violation of 1929 and 1959 treaties over \$27.6 million 2004 project to allow Egypt extract water from Lake Victoria. This undermines regional interests of East Africa Community (EAC) countries common interest of protecting the Lake for economic interests (Kagwanja, 2007). Overlooking the influence of the Kenyan-Egyptian Defence cooperation influencing the management of internecine conflicts in the Nile basin could be the missing link in the failure to contain the tensions in the Nile basin. This study therefore aspires to fill this empirical gap.

1.2 Research Objective

The objective of the study was to evaluate the impact of Kenya-Egypt defence cooperation on Nile Basin internecine conflicts.

II. LITERATURE REVIEW



2.1 Theoretical Review

This study was guided by three theories. These are Structural realism theory, Securitization theory and Neo-Marxist theory

2.1.1 Structural Realism Theory

Structural realism was coined by Kenneth Waltz in 1979. The theory assumes that power is the most important factor and states will use this to make their mark in the international system (Waltz, 1979). Structural realist theories disregard social differences among states as well as variations in regime type, mainly because the international system creates the same basic incentives for all great powers. Structural realists view power as a means to an end the end being survival. States seek to be dominant in their region because they do not have a rival state capable of hurting them. According to Waltz (1979), the structure of the international system is the driving force for states' relations and not the internal characteristics of the states.

The structure of the international system ultimately forces states to behave aggressively which pushes states to engage in security competition because of no higher authority (Mearsheimer, 2006). The theory is relevant to the study in a sense that Egypt is the strongest amongst all the riparian states that is economically, politically and militarily and because of her power it forces the other riparian states to then join forces to try and contain Egypt's dominance. This is illustrated in the various agreements that have been signed along the Nile Basin all of which have attempted to get Egypt to sign that allows inclusivity and cooperation but also as a way to contain dominance over the Nile. Furthermore, this theory can be used to demonstrate how Kenya can leverage her geographical advantage to use the Nile for hydro-diplomacy and manage internecine conflicts and while Egypt will use power to leverage control about decisions concerning water sharing.

2.1.2 Securitization Theory

Securitization theory, developed by Ole Wæver and Barry Buzan of the Copenhagen School in the 1990s, offers a theoretical framework for understanding how issues are framed as matters of security, enabling states to justify extraordinary measures beyond normal political processes (Jackson & Sorensen, 2007). Key concepts include the referent object (what is being protected), securitizing actor (who frames the issue as a threat), existential threat (the perceived danger), audience acceptance (public or institutional support), and extraordinary measures (actions taken to address the threat). In the Nile Basin, both Kenya and Egypt have securitized water resources, framing them as existential threats to their national security. For Egypt, which relies on the Nile for over 90% of its water supply, any upstream activities, such as Ethiopia's Grand Ethiopian Renaissance Dam (GERD), are perceived as existential threats. Kenya, on the other hand, views equitable access to the Nile's waters as vital for its development and agricultural sustainability. This framing has shaped Kenyan-Egyptian defense cooperation, focusing on protecting shared interests through military and diplomatic strategies.

2.1.3 Neo-Marxist Theory

Postulated by; Antonio Gramsci (1930), Andre Gunder Frank (1971), The Frankfurt School (1950) cited in Jay (1973) and Herbert Marcuse (1964) and Louis Althusser (1970). Neo-marxism emphasizes the structural inequalities inherent in the global capitalist systems, by analyzing power relations between states and social classes within broader (Jackson & Sorensen, 2007) framework of global capitalism and imperialism. This theory argues that capitalism drives states to compete and attempt to dominate each other. In its realist orientation, neo Marxism presumes that conflict and potential between states is the reality of international affairs; and that conflict is driven by the conflict between business interests and workers.

Neo-Marxist challenge rigid economic determination giving importance to individual and group agency in resisting oppression. That society is composed of different groups with competing interests. These groups are defined by their access to and control over resources, such as wealth, power, and social status. In the context of international relations, it highlights how unequal access to critical resources and imbalances in power shape tensions and conflicts among states. The theory posits that dominant groups seek to maintain their advantages, while subordinate groups struggle for greater access, creating a persistent cycle of conflict and contestation. Conflict theory provides a lens for understanding how disparities in resource distribution, political power, and economic influence contribute to tensions between states. It emphasizes that competition for scarce resources whether material, political, or strategic lies at the heart of social and international conflicts. Applied to the Nile Basin, the theory helps analyze structural inequalities, such as the historical water allocation imbalances stemming from colonial-era treaties, and assess how these inequalities influence defense cooperation between Kenya and Egypt. Further, conflict theory allows for the examination of external influences, such as the role of international organizations, alliances, or external states in either exacerbating or mitigating tensions. By focusing on power relations and systemic disparities, the theory also considers whether Kenya-Egypt

defense cooperation addresses or perpetuates these inequalities, particularly in the face of resource-based disputes like water access.

2.2 Empirical Review

Herrer (2022) offers a historical and game-theoretic analysis of the Nile dispute. He depicted how colonial-era treaties along with Egypt’s downstream dominance, demographic pressures alongside upstream assertiveness have established persistent mistrust and limited cooperation. Tawfik (2020), in his research through interviews and investment data, elucidates how Egyptian business activities in Ethiopia and Sudan have generated mixed findings. In some instances, it fosters cooperation while at times cementing tensions due to weak political trust. At a wider scope, Kinne and Jonas (2017) empirically illustrate, adopting global network analysis, that defense cooperation agreements and bilateral lending co-evolve, with security and economic partnerships buttressing one another. This model hints possible insights for Nile Basin dynamics though not directly relevant to relations on Kenya–Egypt. Keskinen et al. (2014) introduces hydro-diplomacy concept, empirically illustrating reasons for combining diplomacy into technical water cooperation. The authors stress that political and diplomatic engagement is indispensable for overseeing transboundary water tensions. At the same time, Kimenyi and Mbaku (2015), via legal and institutional analysis outline the inadequacy of colonial-era Nile water regimes and the urgent need for inclusive legal frameworks so as to curb proliferation of disputes into militarized crises. Collectively, these research works elucidate the benefits of historical, economic, security, diplomatic, and legal dimensions in shaping Nile Basin conflicts. However, none directly looks at the role of Kenya–Egypt defense cooperation in influencing conflict or cooperation outcomes within the Basin. This portrays a critical void that this current study addresses by empirically evaluating how such bilateral defense ties impact internecine conflicts in the Nile Basin.

III. METHODOLOGY

3.1 Research Design

The study adopted descriptive survey research design. Descriptive research is directed at making careful observations and detailed documentation of a phenomenon of interest (Kothari, 2004).

3.2 Study Area

The study area was in Nairobi City and Cairo City in Egypt (Figure 1). Both Nairobi and Cairo serve as key decision-making centers for their respective countries. Nairobi is the capital of Kenya, and Cairo is the capital of Egypt.



Figure 1
Map Showing Kenya and Egypt
Source: GIS Expert.



Research conducted in the cities above allowed closer access to policymakers, military officials, and diplomatic representatives involved in shaping and implementing defense cooperation strategies. Nairobi and Cairo are strategically important cities in the context of the Nile Basin. Nairobi serves as a regional hub in East Africa, and Cairo is a major political and cultural center in North Africa. The implications of defence cooperation in managing conflicts in the Nile Basin are likely to have a significant impact on the overall geopolitical landscape of these region.

3.3 Target Population

The target population for the study comprised military personnel from the Kenya Army, Kenya Air Force, and Kenya Navy. In Kenya Army, the study targeted 250 personnel (On a strategic basis) 600 personnel (Operational level), and 400 personnel (tactical level). In Kenya Airforce, the study targeted 180 personnel (Strategic level), 250 personnel (operational level), and 320 personnel (tactical level). It also targeted Kenya Navy respondents, where 120 military personnel were targeted (Strategic level), 230 personnel (Operational level), and 150 personnel (tactical level). On KIIs, the study targeted the senior civilian officials from the defense ministry, Ministry of Foreign Affairs (40), officials (10) from the International Peace Support Training Centre (IPSTC) (20), senior military officials (50) and security as well as defense analysts (25). From the Egypt, KIIs targeted were the Egyptian Military Attaché (40) Egyptian Defence attaché (30), officials from the High Commission of Egypt. (50), Egyptian representatives from the defense sector (25), and Indian defense contractors and advisors (35).

3.4 Sample size and Sampling Techniques

Purposive sampling was used in selection of participants, including, military officials, diplomats, government representatives, and experts in international relations. Additionally, the study used convenience sampling, where participants were selected based on their availability and accessibility. Given the geopolitical context of the study, convenience sampling involved selecting participants from locations where the defense cooperation activities are prominent. To arrive at the required sample size, the researcher used Yamane's (1967) formula to calculate the sample size.

$$n = N (1+Ne^2)$$

Where: n = minimum sample size

N = Population

E = precision set at 95% (5% = 0.05)

Hence; $n = 2500/1 + (2500 \times 0.0025)$

n = 280 participants

3.5 Data Collection methods

Primary data was collected using interviews and questionnaires while secondary data from document analysis, research publications, policy reports and government reports, website searches, and newspaper publications.

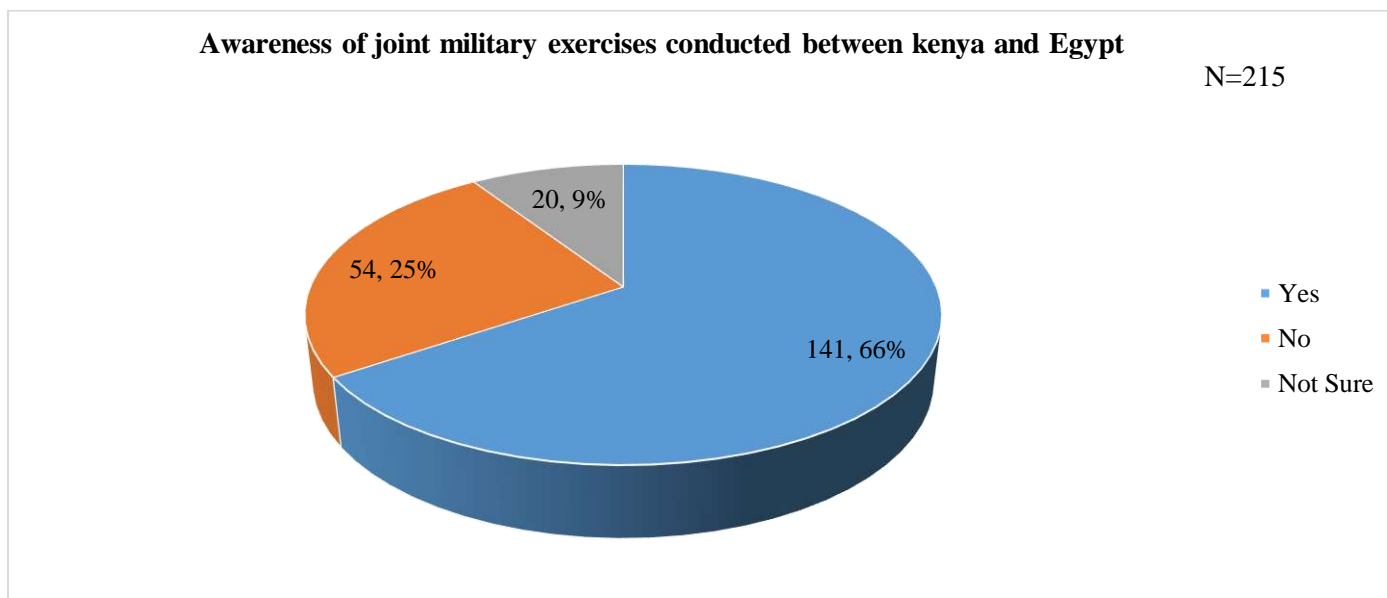
3.6 Data Analysis and Presentation

Qualitative data obtained from Interviews were analyzed using thematic techniques while quantitative data from the questionnaires were edited, coded and entered into a computer spread sheet in a standard format to allow descriptive statistics analysis. Statistical Packages for Social Sciences (SPSS) version 24 and Microsoft Office Excel 2013 were used to analyze quantitative data. The analyzed data was then presented in descriptive form in terms of frequencies and percentages. The findings were then presented in tables, bar charts and pie charts.

IV. FINDINGS & DISCUSSION

4.1 Awareness of Joint Military Exercises Conducted between Kenya and Egypt

The data presented in Figure 2 highlights the level of public awareness regarding joint military exercises between Kenya and Egypt. Understanding public perception in this area is crucial for evaluating the visibility and impact of bilateral defense cooperation initiatives

**Figure 2**

Awareness of Joint Military Exercises Conducted between Kenya and Egypt

The findings on public awareness of Kenya-Egypt military exercises reveal a relatively high level of recognition, with 141 (66%) of respondents aware of these initiatives. This indicates that defense cooperation is a visible and significant aspect of bilateral relations. However, the 20 (9%) of respondents who were either unaware or indifferent to the exercises highlights a need for improved communication and outreach. By addressing this gap, both governments can foster greater public engagement and support for their defense partnerships. Improved awareness could also enable citizens to engage meaningfully with the geopolitical dimensions of military cooperation, contributing to a more informed and participatory approach to national security. Ultimately, the success of such partnerships depends not only on government action but also on public understanding and involvement, making awareness-building a critical component of defense and diplomacy.

In response to the foregoing, one of the KIIs revealed that:

“I have come across some information regarding the matter of Kenyan-Egyptian military cooperation and I don’t think that it provides much insight into the contents and usefulness of such shows. It seems like such issues are masked from our sight if we do not actively search them out. I believe that if the government desires more support from its subjects, it should make more efforts and include us in such topics”
(Interview with KII, Ministry of Foreign Affairs, 7/28/2024, Nairobi).

Having informed the public about the military cooperation, for instance, joint exercises between Kenya and Egypt, they ensure the civil society understands the relationship between the military and the citizens. Schadlow, in his study conducted in 2017, pointed out that the understanding of the populace has a major impact on the acceptance and approval of the defence policies. When the public is aware of the military drills and their intentions a better perception and boosts confidence in the nation are portrayed. This can be confirmed with the different responses of most of the participants in the pie chart who have some understanding of Kenya-Egypt military exercises implying that they may view such a move as accruing to the security benefit of the nation and the region. Schadlow also highlights the importance of efficiency in using the state’s resources and of the government providing clear information to the public about military operations to help maintain the social contract between the people and the state.

However, the fact that 20 (9%) of respondents either stated that they were unfamiliar with these exercises or responded with unsure provided an insight into a possible missing link. As Herrer (2022) pointed out, defending policies commonly becomes an issue of significant concern due to the poor communication strategies of governments with the public on military issues. Such disengagement can result in erroneous and unfavorable perceptions and a lack of support, which may hinder the realization of military cooperation agendas. According to Davis, the public must be educated on the strategic importance of multinational operations since their effectiveness depends on public consciousness of multilateral training exercises. This approach helps increase public support and makes the citizens of a particular country more informed about their country’s defense and its relations with other countries.

The understanding that Kenya and Egypt have also had military exercises is not without some wider implications for the stability of the region. As stated by Okoth (2007), military cooperation is in a position of surging and maintaining stability especially in some African countries that are prone to conflicts. Such cooperation can also enhance the perception of security in both public domains as citizens of the two countries envision themselves as a team working



collectively for the same noble course against common adversaries. Using the example of military exercises such as Kenya & Egypt’s military, Menkhaus indicates that military maneuver is a confidence-building measure that is core to helping reduce conflicts and cooperate in the region. The high level of awareness could be because the respondents understand the strategic value of these exercises in promoting peace and security in the region.

On the other hand, a certain level of unawareness carried by a segment of society may potentially reduce the effectiveness of these exercises in promoting regional stability. According to Kimenyi and Mbaku (2015), if the public is not informed enough about military cooperation, there are misconceptions and doubt, thus less support for such cooperation. Such skepticism can be especially dangerous in those areas as it undermines relationships between states, especially if the historical experience of their conflicts is rather rich. In their paper, Bachmann and Hönke state that the broad public should be better informed and engaged in military cooperation and this is why more attention should be paid to the role of civil society organizations and media.

4.2 Reasons for Kenya-Egypt Defense Cooperation

Figure 3 illustrates the various reasons behind the defense cooperation between Kenya and Egypt as perceived by the respondents. Analyzing these motivations provides valuable insight into the strategic, security, and diplomatic factors that drive military collaboration between the two nations.

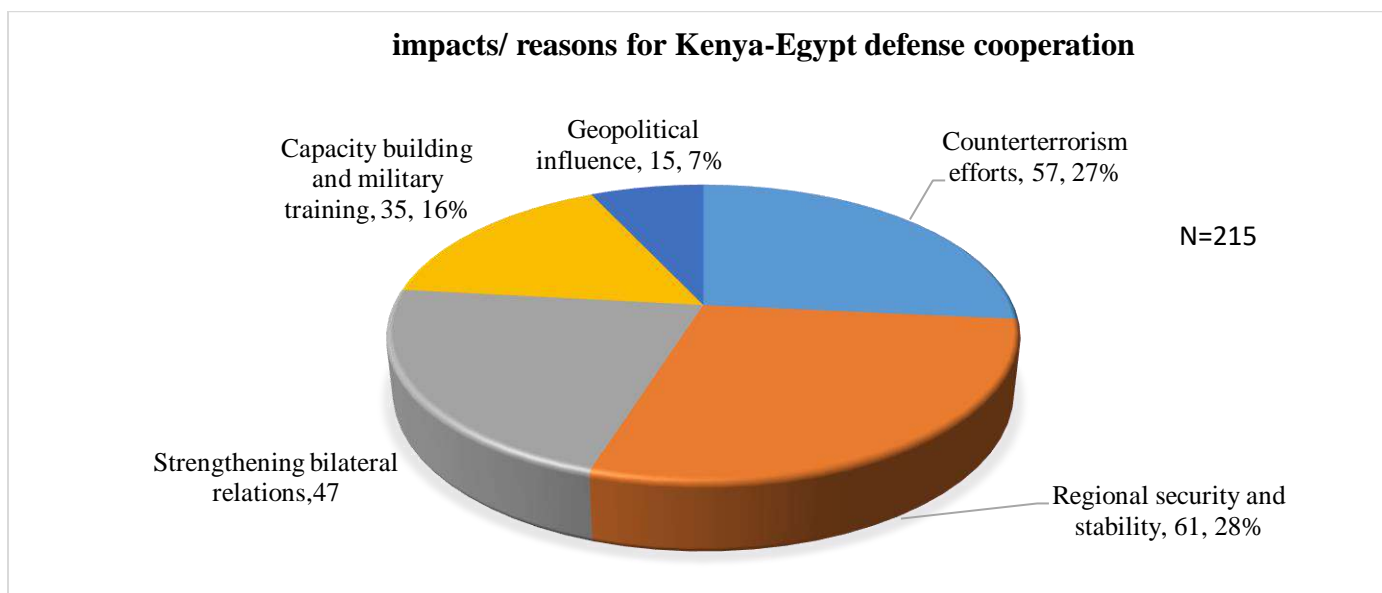


Figure 3
Reasons for Kenya-Egypt Defense Cooperation

Out of 215, the study found out that, 57 (27%) stated that counterterrorism efforts contributed to defense cooperation between Kenya and Egypt. Besides, 61 (28%) reasoned that regional stability security and stability was a reason, 47 (22%) argued that strengthening bilateral relations was the reason for cooperation, 35 (16%) stated that capacity building and military training was a factor defining Kenya- Egypt defense cooperation and 15 (7%) stated that geopolitical influence was the reason for defense cooperation.

The study reveals that respondents view Kenya-Egypt defense cooperation as driven by diverse and interconnected factors, reflecting the complex dynamics of bilateral and regional security. Capacity building and military training emerged as the most frequently cited factor, with 61 (28%) of respondents identifying it as the primary motive for Kenya-Egypt defense cooperation. This reflects the recognition of the critical need to modernize military capabilities through cooperation and technology sharing. Joint exercises provide opportunities for both nations to train together, gain tactical and strategic insights, and enhance their readiness to address domestic and regional security challenges. According to Kinne and Jonas (2017), capacity-building initiatives in defense partnerships are vital for preparing militaries to operate effectively in modern warfare. Respondents likely recognize that investments in training and development result in better-equipped and better-trained forces capable of addressing evolving threats. In a rapidly changing security environment, such efforts strengthen both nations' abilities to maintain peace and stability within their territories and beyond.

Counterterrorism measures were identified as a primary motive by 57 (27%) of respondents, reflecting the shared security concerns of Kenya and Egypt. Both countries face significant threats from terrorist groups such as Al-Shabaab in the Horn of Africa and ISIS-affiliated groups in Egypt’s Sinai Peninsula. Collaborative efforts in



counterterrorism allow the two nations to pool resources, share intelligence, and coordinate operations, enhancing their ability to combat these threats effectively. The parity between counterterrorism and capacity building in the responses underscores the urgency of addressing terrorism as a shared threat. Adar and Check (2011) highlights the importance of counterterrorism partnerships in maintaining regional and international stability. Respondents appear to recognize that cooperation between Kenya and Egypt extends beyond their borders, contributing to global counterterrorism efforts and ensuring security for neighboring regions as well. Regional security and stability were identified as key factors by 47 (22%) of respondents. The respondents likely view Kenya-Egypt defense cooperation as a stabilizing force in a region characterized by ongoing and historical conflicts. Both nations have roles as prominent actors in African geopolitics, with the potential to influence regional security dynamics positively.

The emphasis on regional stability highlights the importance of defense partnerships in preventing conflicts, resolving disputes, and fostering peace. Scholars like Adar (2011) and Tawfik (2020) argue that bilateral defense cooperation can have far-reaching implications for regional security, particularly in areas prone to political instability and crises. The responses suggest that Kenya and Egypt's collaborative efforts are seen as a means of strengthening the broader security architecture in Africa.

Enhancing diplomatic relations was cited by 16% of respondents as a significant reason for defense cooperation. This response underscores the broader diplomatic and political benefits of such partnerships. Defense cooperation serves as a subfield of foreign policy, facilitating stronger ties between Kenya, representing East Africa, and Egypt, a major player in North Africa and the Middle East. Through defense collaboration, Kenya and Egypt can foster closer relations in other areas, such as trade, technology, and education. Respondents likely understand that improved bilateral ties create opportunities for addressing shared challenges and advancing mutual interests. As Keskinen *et al.* (2014) note, defense partnerships often act as catalysts for broader diplomatic and economic engagement.

Geopolitical influence was the least cited factor, with only 15 (7%) of respondents identifying it as the main motive for Kenya-Egypt defense cooperation. While this was the least popular response, it reflects an understanding of the strategic considerations involved in such partnerships. Defense cooperation enhances the strategic positions of both nations, enabling them to assert greater influence within regional and international organizations such as the African Union and the Arab League. According to Tesfaye (2014), closer defense collaboration between Kenya and Egypt strengthens their combined ability to influence global decision-making and defend their sovereignty interests. Respondents who chose this option likely recognize the potential of the partnership to amplify the voices of both nations on the international stage.

The distribution of responses underscores the multifaceted nature of Kenya-Egypt defense cooperation. Capacity building and counterterrorism measures highlight the immediate security concerns that drive collaboration, while regional stability and bilateral relations reflect the broader diplomatic and political advantages of such partnerships. Although fewer respondents emphasized geopolitical influence, its inclusion demonstrates an awareness of the strategic dimensions of the relationship. Taken collectively, these findings suggest that Kenya-Egypt defense cooperation serves multiple purposes, addressing urgent security threats while also fostering long-term diplomatic and strategic gains. The respondents' recognition of these diverse factors highlights the complexity of defense partnerships and their significance for both nations.

The researcher therefore argues that, the study's findings reveal that Kenya-Egypt defense cooperation is driven by a combination of capacity building, counterterrorism, regional stability, bilateral relations, and geopolitical influence. Each of these factors reflects a unique aspect of the partnership, contributing to its overall significance. The respondents' emphasis on capacity building and counterterrorism underscores the pressing security challenges that both nations face and the importance of collaborative efforts to address them. Meanwhile, the focus on regional stability and bilateral relations highlights the broader diplomatic and political benefits of defense cooperation. Although geopolitical influence was less frequently cited, its inclusion demonstrates an awareness of the strategic considerations that underpin the partnership. By pursuing a multidimensional approach to defense cooperation, Kenya and Egypt are not only enhancing their own security but also contributing to regional and international stability. These findings provide valuable insights into the perceptions of defense cooperation and underscore the importance of sustained collaboration between the two nations. In view of the immediate statement, one of the KII eviscerated:

“Regional security is not a luxury but a reality, and the cooperation with Egypt is based on this fact that security cannot be achieved alone” (Interview with Senior Kenyan Military Official, 30/7/2024, Nairobi, Kenya).

This sentiment underscores the importance of collaboration in the pursuit of security and stability within the region. This point is also underscored in the literature where it is argued that no country can be secure by itself in the contemporary world, let alone in volatile regions such as Africa. Horn of Africa and North Africa are the areas that have complex securities threats that are hard to separate from the global system; thus, Kenya and Egypt must liaise. Thus, the issue of defence cooperation does not only lie in the processes of responding to threats in the present, but also in the creation of long-term conditions and norms of preventing conflict situations in the future.



4.3 Impact of Defence Cooperation on Internecine Nile Conflict Situation

The study sought to establish the impact associated with Kenya- Egypt Cooperation the Nile Conflict context. The findings are as indicated in table 1.

Table 1

Impacts of the Cooperation on the Nile Conflict

Impacts of Cooperation	Yes		No		Don't Know	
	N	%	N	%	N	%
Create Diplomatic Hub	150	58.7	45	9.1	33	8.8
Shared Mutual state interests	190	69.9	32	8.4	92	24.5
Joint Peace Efforts	210	82.4	36	9.6	30	8.0
Address Environmental Concerns	193	71	47	12.5	62	16.5
Regional security and stability	185	69.1	77	20.5	39	10.4
Enhanced Egypt Monopoly	200	81.2	34	20	40	21.4

From the results it was identified that the impacts of the cooperation include: joint peace efforts 210 (81.2%), enhanced Egypt Monopoly 200 (81.2%), addressing environmental concerns 193 (71%), shared mutual state interests 190 (69.9%), regional stability and security 185 (69.1%) and creation of Diplomatic Hub 150 (58.7%).

Outcomes of this study resonate with earlier research on the dynamics of Nile Basin. The high rating of joint peace efforts (81.2%) conforms to Herrer (2022) study, who underscores that cooperative models, if strategically framed, can ease historical mistrust. He hinted that Kenya–Egypt defence cooperation contributes to confidence-building within the Basin. The notion that the partnership increases monopoly of Egypt’s (81.2%) is in line with Kimenyi and Mbaku’s (2015) observation that colonial-era asymmetries continue to bolster dominance downstream, with defence ties potentially reinforcing Egypt’s hegemonic posture. Confronting environmental concerns (71%) concurs with Keskinen et al. (2014), who debated that water diplomacy must integrate political and technical cooperation. These outcomes posit that military partnerships can avail platforms for broader environmental security agendas. Pointing shared mutual state interests (69.9%) mirrors Tawfik’s (2020) research that economic and political interdependence can generate cooperative incentives, though the persistence of mistrust can impeded their effectiveness. For regional stability and security (69.1%) is reinforced Kinne and Jonas (2017) empirical evidence which depicted defence agreements serve as stability tools. This is by linking security to enlarge cooperation networks. Finally, establishing diplomatic hub (58.7%) agrees with Keskinen et al.’s (2014) and Tawfik’s (2020) emphasis on diplomacy and multi-actor engagement. This hints that Kenya–Egypt defence cooperation avails a geopolitical platform for dialogue beyond the military sphere. To this end, the above outcomes depict convergence with existing literature but extend it by offering empirical evidence on the underexplored dyadic function of Kenya–Egypt defence cooperation in shaping conflict and cooperation results in the Nile Basin.

4.3.1 Joint Peace Efforts and agreements

Multiple attempts have been undertaken including treaties, cooperation frameworks, summits in which Kenya has also anticipated, however, most of these approaches have suffered mediation shortcomings more so partiality. The Nile basin countries have also formally agreed through the NBI on a shared vision that seeks to achieve sustainable socio-economic development through equitable utilization of, and benefit from, the common Nile water basin.

As noted by an interview with Egyptian attaché:

“Egypt aims to promote understanding especially among African people and states; It promotes cooperation through education, culture, investment and diplomacy through agreements inform of programs and projects for mutual benefits of all parties involved” (interview with Egypt attaché in Cairo on June 4th 2024).

This assertion is in agreement with a study by Swain (2008) advocates for a framework that prioritizes inclusive cooperation among economically underdeveloped nations, acknowledging shared challenges while advancing sustainable resource utilization.

4.3.2 Egypt Monopoly

Oloo (2007), notes that Egypt has worked strenuously to guarantee its dominance over the Nile’s resources, leveraging its political and military power to maintain control. Additionally, the structural realists view power as a means to an end the end being survival. The structural realism explains how states behave and in this case Egypt operate and live in an anarchic system where states have no higher authority to answer to which consequently forces the state to be as powerful as possible in the pursuit of power. States seek to be dominant in their region because they do not have a rival state capable of hurting them. It strikes at the complex relations between foreign policy within the international



structure and domestic influences (Kinne & Jonas, 2017). Further Tawfik (2020), notes that Egypt uses political incentives, investments, economic and defence cooperation in Kenya and other riparian states such as Ethiopia and Sudan to improve its position in Nile Negotiations and promote state level interdependence. Specific to Kenya, Military training as one of the integral forms of cooperation in the framework of defense relations is also consistent with the general strategic perspectives for Kenya and Egypt. This gives Egypt discursive and bargaining power leveraging over Kenya. However, other scholarly literature questions Egyptian dominance as a challenge which continues to dissent over cooperative and bilateral initiatives.

4.3.3 Regional Security and stability

Both Kenya and Egypt have been at the fore front championing for security and stability in East Africa as well as Middle East and North Africa respectively. For instance, Kenya participated in the Hydromet project alongside Sudan, Tanzania, Egypt, Uganda, UNDP AND World Meteorological Organization (WMO). The aim was to evaluate the balance of the Lake Victoria catchment in order to control the lake levels as well as the flow of water down the River Nile.

Both countries work together through the defence cooperation to combat common challenges such as terrorism and cross border-trade. There is also evidence of Egypt’s support during Kenya’s tenure on the United Nations Security Council 2021-2022, which amplifies Africa’s voice on global peace and security matters.

The two countries have an added advantage of dominance within respective regional jurisdictions as noted by various scholars. This historical position as regional leaders led to the development of Kenya- Egypt joint Declaration for strategies and Comprehensive Partnership 2024. These platforms provide Kenya a chance to seek stronger regional alliances. This observation is supported by studies Mekonnen (2010) and Herrer (2022).

4.4 Whether Defense Cooperation between Kenya and Egypt Impacts on Security in East Africa

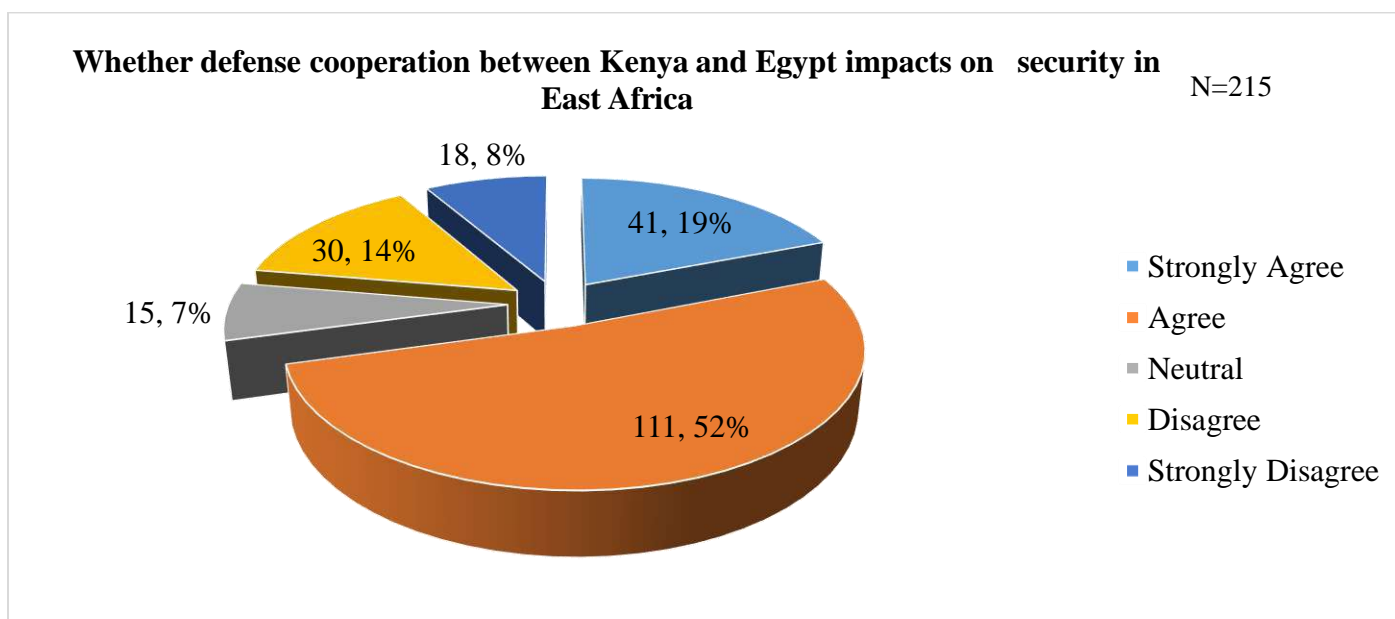


Figure 5
Whether Defence Cooperation between Kenya and Egypt Impacts on Security in East Africa

Out of 215 respondents 41 (19%) strongly disagreed with inquiry 111 (52%) agreed with the inquiry 15 (7%) were neutral 30 (14%) disagreed to the inquiry and 18 (8%) strongly disagreed with inquiry. A majority of respondents, 111 (52%) of the respondents agreed that defense cooperation between Kenya and Egypt positively influences East African security. This majority reflects a belief that joint efforts in areas such as intelligence sharing, combined military operations, and training contribute to the region's security architecture. Respondents likely perceive this partnership as enhancing regional stability by addressing shared threats, such as terrorism and transboundary conflicts. Scholars such as Kimenyi and Mbaku (2015) argue that collaborative defense initiatives can act as deterrents to external threats while fostering a unified approach to regional security. Kenya and Egypt’s cooperation likely resonates with these respondents as a model for leveraging bilateral relationships to strengthen collective security mechanisms. Additionally, the symbiosis between the two nations rooted in mutual interests and shared goals may be seen as an efficient framework for addressing regional challenges, as highlighted by Hanasz (2014).



The debate surrounding the impact of Kenya-Egypt defense cooperation on East African security reflects broader academic discussions about the role of bilateral partnerships in regional security. Keskinen *et al.* (2014) emphasize the importance of trust and inclusivity in fostering effective security collaborations. In the case of Kenya and Egypt, their partnership in military training, intelligence sharing, and joint operations represents a strategic effort to address shared threats. However, as the findings suggest, the impact of such cooperation is not straightforward. While proponents highlight its potential to enhance security and stability, critics point to the challenges of aligning interests, managing asymmetries, and addressing broader regional dynamics. The diversity of opinions among respondents underscores the need for a more nuanced understanding of the factors influencing regional security and the role of bilateral defense partnerships.

The findings reveal a spectrum of opinions on the impact of Kenya-Egypt defense cooperation on East African security, reflecting the complexities of regional dynamics and the challenges of assessing bilateral partnerships. While a majority of respondents view the partnership positively, a significant minority express skepticism or opposition, highlighting the need for trust-building, inclusivity, and greater transparency. Scholarly perspectives support the notion that defense cooperation has the potential to enhance regional security, but they also caution against the risks of exclusion and asymmetry. By addressing these concerns and fostering a more collaborative approach, Kenya and Egypt can strengthen their partnership and contribute to a more secure and stable East Africa.

A rationale for the asserted positive relations between defense cooperation between Kenya and Egypt is that it makes the region more secure through better organization and resource management. Kimenyi and Mbaku (2015) posit that defense cooperation with other countries can increase security in East Africa because it enhances the sharing of intelligence and preparedness. The plausibility of this argument is that the terrorism threats in Kenya and the Middle East can be easily tackled through cooperation between the Kenyan and Egyptian governments. For instance, the Kenyan strong strategic geographical location and Egyptian huge experience in military affairs will complement to create a sound security architecture to deal with matters of insurgency and piracy.

However, there are worries that optimism on defense cooperation will not necessarily translate to better security status. Others have noted that such relationships can at times complicate existing conflicts or even generate new security threats. According to Tawfik (2020), the emphasis on bilateral and defense cooperation can diminish the attention on regional challenges and fail to address the multifaceted nature of the conflicts. Focus on security may diminish understanding of other forms of conflict and development patterns, thereby creating a gap in addressing the fundamental causes of insecurity. One of the KII participants provided a detailed response indicating daunting skepticism on the general effectiveness of the Kenya-Egypt defense cooperation.

He said,

“Kenya and Egypt are working together towards enhancing the level of security in the region but what has been realized is that there is sometimes little or no provision for looking into the root causes of conflicts that prevailed in East Africa; meaning that conflicts that arise due to ethnic practices or even economic inequality might not be solved through defense cooperation, meaning that those who are relying on the measures will obtain only the short term solutions while the root causes of remain unresolved” (KII with official from High Commission of Egypt, 23/7/2024, Nairobi, Kenya).

The researcher, therefore, argues that, one can state that the cooperation in the sphere of defense between Kenya and Egypt can either positively or negatively influence security in East Africa. It is even doing it while potentially exacerbating conflicts at the roots and while some question how much it addresses local security needs. The outlined array of opinions on this topic highlights the fact that the analysis of the outcomes of defense cooperation should be considered through the prism of advantages and possible disadvantages of cooperation within the framework of multidimensional security threats in East Africa.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study concludes that, the Kenya-Egypt defence cooperation is viewed as an element of a much greater strategy aiming at bolstering the security architecture of the region. Its cooperation with Kenya has been both a solution to the conflict through: joint peace efforts, addressing environmental concerns, shared mutual state interests and regional stability; and a causal factor to the Nile internecine conflict through promoting Egypt Hegemony and creation Diplomatic Hubs.

5.2 Recommendation

The study recommends that, both countries, on sustainable basis adopt a dyadic approach in consolidating and coordinating their strategies devoid of either national interest obscuring the collective security endeavor.



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Effect of employee capabilities on the supply chain performance of sugar manufacturing firms in the western region, Kenya

Oliver Asienwa^{1*}
 Fredrick Njehu Kiongera²
 Mumaraki Nanyama Rosemary³

^{1*}olivermuseveni3@gmail.com

²fkiongera@mmust.ac.ke

³rmumaraki@mmust.ac.ke

^{1,2,3}Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

Supply chain performance refers to the ability of an extended supply chain to meet end-customer demands through responsive inventory and capacity management, timely delivery, and product availability. This study sought to establish the influence of employee capabilities on supply chain performance. The study was anchored on the Resource-Based View Theory. A descriptive survey research design was employed, targeting four sugar manufacturing firms with a total population of 281 respondents. A sample size of 165 was selected using purposive and simple random sampling techniques. Data was collected using structured questionnaires. A pilot study conducted at Kibos Sugar Company in Kisumu County tested the reliability and validity of the research instruments. Reliability was confirmed with Cronbach's alpha coefficients of 0.7 and above, while validity was ensured through expert reviews. Data analysis involved descriptive statistics (frequencies, percentages, means, and standard deviations) and inferential statistics, including linear regression. The findings revealed that employee capabilities ($r = 0.664$, $R^2 = 0.441$, $p = 0.000$) had significant positive effects on supply chain performance. The study recommends that sugar manufacturing firms invest in enhancing employee competencies, streamline production cycles, improve fleet management systems, and promote effective information sharing. Additionally, adopting democratic management styles that encourage employee participation and innovation is essential for optimizing supply chain performance.

Keywords: Employee Capabilities, Supply Chain Performance, Sugar Manufacturing Firms, Western region, Kenya

I. INTRODUCTION

Within the modern competitive market landscape, companies are no longer able to use only internal capabilities to achieve an outstanding performance of the supply chain. The cooperation with strategic partners and the improvement of the logistics possibilities have been acknowledged as critical in terms of efficiency, flexibility, and customer satisfaction (Wu et al., 2015; Nimmy et al., 2019). The most common supply chain performance measures are the cost of each unit, the level of inventory turnover, the level of affirmative order fulfilment, and customer responsiveness. Sugar business, mostly found in the Western Region of Kenya, including Kakamega, Bungoma, and Busia counties, is an important source of economic development, job creation in the countryside, and livelihoods to farmers (Kenya National Bureau of Statistics [KNBS], 2020). Nevertheless, poor supply chain efficiency, lack of appropriate infrastructure, and fluctuating market prices are some of the issues in the sector that impair competitiveness and profitability (Owino, 2021; Njeru, 2021).

The performance of supply chains, which is determined by aspects such as cost, quality, speed, flexibility, and customer satisfaction, is essential in the sustainability of the industry (Christopher, 2016; Barney & Hesterly, 2019). Inefficiencies in the Kenyan sugar industry including lack of good logistics, consistency in raw material supply, and delays in production, are some of the factors contributing to the undermining of efficiencies in the sugar industry of Kenya (Mwangi, 2019). Procurement, logistics, inventory control and quality assurance processes are handled mainly through employee capabilities such as knowledge, skills, competencies and attitudes (Collis & Montgomery, 2011; Grant, 2016; Leuschner et al., 2013). Trained workers increase the efficiency of production and minimize disruptions and build strong relationships with suppliers and customers (Huo, 2012; Mutua, 2019).

Highly skilled workers are optimizing the process of acquisition, inventory levels and supply chain predictions, contributing to reductions in expenditure, and increasing supply chain resiliency (Fawcett et al., 2019; Basu, 2016; Melnyk, 2021). Additionally, engagement and employee motivation perform the role of operational efficiency and



innovation, which are crucial in terms of a competitive advantage (De Vries et al., 2020). Nonetheless, only a few empirical studies have been done on how employee capabilities can influence the supply chain performance of sugar firms in the Western Region of Kenya. This research will fill this gap by investigating how employee capabilities can affect the performance of the supply chain to provide an understanding of human resource development strategy to enhance competitiveness in the manufacture of sugar.

1.1 Statement of the Problem

The sugar manufacturing industry in the Western Region of Kenya plays a crucial role in the country's economy through employment creation, revenue generation, and rural development. However, despite its importance, the industry faces persistent challenges in achieving effective supply chain performance, largely due to deficiencies in logistical capabilities. Poor logistics—such as weak transportation systems, inadequate storage facilities, ineffective inventory management, and limited use of information technology—have contributed to delays, high operational costs, and reduced competitiveness (Njeru, 2021).

Reports by the World Bank (2016) highlight stagnation in Kenya's manufacturing sector, driven partly by logistical inefficiencies and unstable management practices. These challenges have resulted in declining earnings, reduced market share in the East African Community, and overall poor growth in the manufacturing sector. Specifically, sugar manufacturing firms in Western Kenya continue to struggle with these issues, making it difficult to meet market demands and maintain a competitive advantage. Although previous studies have examined employee capabilities and supply chain performance in various sectors, little focus has been given to the sugar manufacturing sector in this region, particularly with regard to the moderating role of management style. This has left a significant knowledge gap, especially in understanding how specific employee factors like adaptation to emerging trends, knowledge exchange through benchmarking and knowledge integration in the firm influence supply chain performance in this context. Therefore, the problem this study seeks to address is to bridge the gap between logistics capabilities on supply chain performance of sugar manufacturing firms in Western Region, Kenya, while considering the moderating effect of management style.

1.2 Research Hypotheses

H0₁: There is no significant effect of employee capabilities on supply chain performance of sugar manufacturing firms in Western Region, Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

The study is grounded in the Resource-Based View (RBV) Theory, initially introduced by Wernerfelt (2014) and later expanded by Barney (1991). RBV posits that organizations can attain and sustain a competitive advantage by acquiring, developing, and deploying valuable, rare, inimitable, and non-substitutable (VRIN) resources and employee capabilities (Barney, 2005). While the theory highlights the importance of internal resources, it faces criticism for its broad definitions, subjectivity in valuing intangible assets such as reputation and knowledge, and challenges in adapting to rapidly evolving technologies and market trends. In the context of logistics, RBV underscores the strategic role of capabilities such as supplier partnerships, IT systems, transportation, warehousing, and inventory management. These resources, when unique, difficult to imitate, and non-substitutable, can significantly enhance a firm's competitive position (Paulraj et al., 2017).

Employee capabilities, especially in supply chain management, are also recognized within RBV as strategic resources. Employees' skills, expertise, and knowledge directly influence operational efficiency, adaptability, and problem-solving, ultimately improving supply chain performance (Conner, 1991). In the sugar manufacturing sector of Kenya's Western Region, such human resource competencies meet the VRIN criteria, enabling firms to meet lead time, delivery performance, production life cycle time, order accuracy and fulfilment and compliance rate in the face of external challenges. This study applies RBV to explain how leveraging employee capabilities can drive sustained competitive advantage and superior supply chain performance in this context.

2.2 Conceptual Review

2.2.1 Employee Capabilities

The performance of employees plays a crucial role in improving supply chain management (SCM) and achieving success as a supply chain manager in the firm (Zaman et al., 2019). The efficiency of a supply chain depends on the competence of the staff working in the operational divisions of the organization (Fawcett et al. 2019). According to a study conducted by Williams et al. (2019), investing in technology has few benefits, even though these technologies are easily accessible and affordable to everyone. Employees must have the ability to effectively use the mentioned



technologies in order to give their firm a competitive advantage. Companies need to obtain information about the skills and abilities of supply chain managers and how they might influence the organization's performance. In order to enhance supply chain management, companies need to assess the capabilities, creativity, and competencies of their staff (Krajcsak, 2020).

Fawcett *et al.*, (2019) emphasize that an employee's ability to effectively manage and enhance a company's supply chain largely depends on their competencies. The proficiency of staff within functional departments significantly influences supply chain success or failure. For competitive advantage, employees must demonstrate strong technological skills, while organizations need to fully understand the capabilities of supply chain managers and their potential impact on overall performance. Similarly, Essex *et al.*, (2016) found a strong correlation between the individual abilities of supply chain managers and their overall performance, noting that dynamic and adaptable skills are key to long-term success. Wagner *et al.* (2020) further argue that supply chain managers must continually update and expand their abilities to respond effectively to emerging challenges. Overall, versatile skills remain a critical determinant of success in supply chain management, enabling managers to adapt, improve performance, and secure a sustainable competitive edge (Essex *et al.*, 2016; Fawcett *et al.*, 2019; Wagner *et al.*, 2020).

Supply chain performance refers to the measures that the extended supply chain takes to meet end-user demands, including product availability, on-time delivery, and the supply network's capacity and inventory holdings (Dametew *et al.*, 2018). Ambe (2014) argues that qualitative, quantitative, and temporal indicators are utilized to assess a company's performance, as opposed to more conventional metrics such as efficiency, effectiveness, technology, and adaptability.

2.3 Empirical Review

The need to understand the role of employee capabilities in enhancing supply chain performance has gained attention in recent years. Scheibe and Blackhurst (2018) applied a grounded theory case study on large and mid-sized U.S. manufacturing companies, revealing that the shortage of qualified supply chain managers poses a significant challenge, although their study lacked specificity on the skills, attributes, and behavioral goals required.

Similarly, Phan *et al.*, (2022) found that dynamic employee capabilities positively influenced supply chain finance performance, Fintech adoption, and innovative work behavior in Vietnamese financial institutions, underscoring the importance of workforce creativity. Flöthmann *et al.* (2018) demonstrated that both individual supply chain management (SCM) skills and organizational knowledge significantly enhance SCM performance globally, highlighting the pivotal role of human resource management in competency development.

Wisconsin *et al.* (2020) also affirmed that human capital, employee empowerment, and advanced manufacturing technology are beneficial to the supply chain in the Indonesian manufacturing, where organizational innovation mediates the benefits of these factors. The skills directed at leadership are also important; Mencl *et al.* (2016) determined that leadership effectiveness is promoted by interpersonal and emotional intelligence capabilities, and this beneficial effect might be applied to the supply chain situations as well. Although such studies indicate the importance of innovation, skills, and technology in the improvement of the supply chain performance, the bulk of evidence is obtained in the Asian and Western context. Empirical research on the impact of such factors on the outcomes of supply chains of the African manufacturing industries, especially in the sugar industry of Kenya, where the problems of inefficiency, outdated technology, and employee empowerment remain, is still missing. Filling this gap will offer localized knowledge that will expand the discourse on supply chain management across the world to unexplored regions.

In Kenya, Onyando (2018) showed that learning capabilities—a component of dynamic capabilities—directly influence manufacturing firm performance in Nairobi County. While these studies collectively affirm the value of employee competencies in supply chain success, most are context-specific and industry-limited, leaving a gap in understanding their role within the Kenyan sugar manufacturing sector, which the current study seeks to address.

III. METHODOLOGY

The research was carried out in Bungoma and Kakamega counties in western Kenya because of the presence of quite four large sugar companies of the region, namely Mumias Sugar Company, Nzoia Sugar Company, West Kenya Sugar Company, and Butali Sugar Company which were also selected based on their strategic roles in the sugar sector and varied operational characteristics. Descriptive survey design has been followed in order to come across patterns and relationships among employee capabilities and supply chain performance.

From a population of 281 procurement, finance, logistics and marketing staff, a sample of 165 respondents was drawn through purposive and simple random sampling based on a population size of 281 according to Yamane formula. Structured questionnaires were used and the questions included both closed and open-ended questions to collect the data. Drop and pick-place was used.



Validity and reliability of instruments were tested using a pilot study at the Kibos Sugar Company, the criterion being Cronbach alpha (0.7 and above). Its validity was also checked by the use of expert review. Examination of data included cleaning, coding and testing using descriptive statistics, data were shown in tables.

Ethical issues were taken care of: informed consent, confidentiality, voluntary participation, and a limit on data utilization to academic only.

IV. FINDINGS & DISCUSSION

4.1 Employee Capabilities

Table 1 presents descriptive data utilized to determine the impact of staff capabilities on the supply chain performance of sugar production enterprises in the western region. Key note: N=140; 5- strongly Agree, 4 is Agree, 3 is fairly agree 2 is Disagree and 1 is strongly disagree.

Table 1

Descriptive Statistics: Employee Capabilities

Statement	5	4	3	2	1	Mean	SD
When there is new information, it is shared within the departments through meetings to enhance supply chain performance.	2.9 (4)	48.6 (68)	44.3 (62)	2.9 (4)	1.4 (2)	3.49	0.68
Knowledge integration in the firm is achieved through exploring, identifying and synthesizing ideas to assess experience and solve problems.	2.9 (4)	27.1 (38)	57.1 (80)	8.6 (12)	4.3 (6)	3.16	0.79
Exchange of information and knowledge through benchmarking within the organization takes place frequently, formally and timely to improve on supply chain performance	0 (0)	44.3 (62)	47.1 (66)	2.9 (4)	5.7 (8)	3.30	0.79
The employees are highly proficient, they can help to create an atmosphere that fosters innovation and influence the companies supply chain performance.	0 (0)	31.4 (44)	57.1 (80)	8.6 (12)	2.9 (4)	3.17	0.70
Employees adapt to new trends quickly thus enhancing supply chain performance	5.7 (8)	67.1 (94)	25.7 (36)	0 (0)	1.4 (2)	3.76	0.62

The descriptive findings show that information and knowledge management practices are very important in improving the supply chain performance in the surveyed companies. A greater number of the respondents (51.5) affirmed that each department shares new information in a systematized manner through meetings ($M = 3.49$, $SD = 0.68$) which indicates that the company has well-developed communication mechanisms that facilitate integration. The finding is consistent with Phan et al. (2022), who stressed the importance of timely information sharing to reduce uncertainties and enhance coordination between the supply chain functions. On the contrary, exploration and synthesis of knowledge were moderately supported with 30 percent agreeing and 57.1 percent fairly agreeing ($M = 3.16$, $SD = 0.79$), which implies partial implementation. This can be compared to the study by Wisedsin et al. (2020), who found out that knowledge integration improves organizational learning, but its uptake varies between companies. In the same vein, the knowledge exchange mechanism of benchmarking had moderate-to-high agreement, with 44.3 percent agreeing and an equal proportion fairly agreeing ($M = 3.30$, $SD = 0.79$). This is in line with Flothmann et al. (2018) who suggested that best practice is adopted through benchmarking but the divergence in responses suggests that it is institutionalized differently in different organizations. Another factor was also based on employees proficient: 31.4% strongly agreed and 57.1% fairly agreed that proficient employees can contribute to innovation and increase the performance of supply chains ($M = 3.17$, $SD = 0.70$), which confirms the ideas of Wisedsin et al. (2020) and Phan et al. (2022) that note human capital as an innovation driver. Lastly, the most powerful factor was adaptability as 72.8% of the respondents strongly agreed or agreed that workers quickly adapt to emerging trends ($M = 3.76$, $SD = 0.62$). This is similar to Flothmann et al. (2018), who found adaptability to be the key to resilient and responsive supply chains. Collectively, these findings provide evidence that although all the analysed variables have an effect on the performance of supply chain, employee adaptability seems to be the factor that has the greatest impact in the analysed companies.

From a managerial perspective, the findings imply that organizations should prioritize continuous training and capacity-building programs that enhance employee adaptability and innovation, as these appear to yield the strongest impact on performance. At the same time, firms should institutionalize knowledge integration processes and strengthen benchmarking practices to ensure that best practices and lessons learned are consistently applied across departments. By balancing investments in human capital with robust knowledge management systems, managers can build more resilient, innovative, and high-performing supply chains.



4.2 Supply Chain Performance

Table 2 presents descriptive on the supply chain performance of sugar production enterprises in the western region.

Table 2

Supply Chain Performance

Statement	5	4	3	2	1	Mean	SD
The firm has shortened the lead time period between placement of an order and delivery of the same to clients	1.4 (2)	70 (98)	28.6 (40)	0 (0)	0 (0)	3.73	0.48
The firm has efficient delivery means that ensure faster movement of goods to final destinations	2.9 (4)	65.7 (92)	31.4 (44)	0 (0)	0 (0)	3.71	0.51
The firm's production systems have reduced on the average time it takes to process raw materials into completed end-products	2.9 (4)	50 (70)	47.1 (66)	0 (0)	0 (0)	3.56	0.555
The firm has ensured strict adherence to the degree to which an order's specifications match the original order request from a client without any deviations	10 (14)	55.7 (78)	31.4 (44)	0 (0)	2.9 (4)	3.70	0.77
The firm has improved on required adherence standards of companies in relation to relevant laws, regulations and industry standards regarding to product and process qualities	10 (14)	55.7 (78)	31.4 (44)	0 (0)	2.9 (4)	3.70	0.77

The descriptive findings indicate that most of the respondents felt that the firm had reduced the lead time between making of the order and when it gets delivered, and that a total of 71.4 percent of the respondents strongly agreed or agreed. It is consistent with Phan et al. (2022), who note that minimizing the lead time will improve customer satisfaction and increase responsiveness of the supply chain. The high mean score ($M = 3.73$, $SD = 0.48$) in the present research also serves to support the fact that timely delivery is seen as one of the most important forces of operational efficiency.

Likewise 68.6 percent of the respondents revealed that they were in agreement with the fact that the firm possesses efficient delivery systems that enable goods to move faster. This is analogous with Flothmann et al. (2018), who state that logistics and distribution networks play a direct role in supply chain agility and competitiveness. These findings are consistent with findings carried out in the past and hence the importance of strong delivery mechanisms in minimizing delays and enhancing service quality is therefore justified.

As to the efficiency of production, 52.9% of the participants affirmed that the production systems have resulted in decreased average processing times of the firm, but a significant proportion of 47.1% moderately affirmed. The average ($M = 3.56$, $SD = 0.555$) indicates that the progress has been achieved, but there is the possibility of improvement. Wisedsin et al. (2020) also had similar findings that although process optimization can lead to a decrease in the production cycle time; the impact of that depends on the level of technology adoption and the continuous improvement of the process, which could be the cause of the moderate perceptions experienced in this study.

Lastly, 65.7 percent of the respondents stated that the firm has a strong compliance to order requirements with no deviations, with a very minimal percentage (2.9) strongly not agreeing. The average result of 3.70 and a slightly larger variance ($SD = 0.77$) is a mirror of a rather positive perception but with varying opinions among the respondents. This is in line with Onyando (2018), who observed that the accuracy of order-related is one of the pillars of customer loyalty and supply chain credibility. Nevertheless, the inconsistency also implies that sometimes the lapses can still exist, and Onyando states that strict quality compliance should be only monitored and the personnel should be trained.

Altogether, the descriptive findings indicate that the company has achieved significant improvement in its working performance in terms of reduced lead times, effective delivery patterns, lean manufacturing process, and compliance with order requirements. These findings are a direct correlation to the research aims of the study of the contribution of logistical and production efficiencies to better service delivery and customer satisfaction. The high level of agreement of the respondents shows that the operational strategies that the firm embraces align with the best practices that are emphasized in the previous literature. Nevertheless, the average attitudes toward efficiency of production and the frequent failure in accuracy of orders indicate what areas should be improved through the continuous improvement. The results, therefore, offer empirical evidence to the aims of the study besides indicating areas of actions to be undertaken to enhance operational performance.

4.3 Linear Regression Analyses

To ascertain the effect of effect of employee capabilities on supply chain performance of sugar manufacturing firms in Western Region, a regression analysis was conducted. Findings are shown in Table 3.



Table 3
Effect of Employee Capabilities on Supply Chain Performance

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.664 ^a	.441	.437	.65162	.441	108.739	1	138	.000
a. Predictors: (Constant), Employee Capabilities									
ANOVA ^a									
Model			Sum of Squares	df	Mean Square	F	Sig.		
1	Regression		46.172	1	46.172	108.739	.000 ^b		
	Residual		58.597	138	.425				
	Total		104.769	139					
a. Dependent Variable: Supply Chain Performance									
b. Predictors: (Constant), Employee Capabilities									
Coefficients ^a									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
1	(Constant)	.386	.301		1.284	.201			
	Employee Capabilities	.870	.083	.664	10.428	.000			

a. Dependent Variable: Supply Chain Performance

The model summary tabulation reveals a moderately positive correlation between employee capabilities on supply chain performance of sugar manufacturing firms in Western Region, Kenya as indicated by the R value of 0.664. Consequently, an increase in employee capabilities is expected to result in enhanced outcomes. The coefficient of determination, commonly referred to as R square, indicates that employee capabilities explain 44.1% of the variability observed in supply chain performances ($R^2=0.441$). This implies that employee capabilities significantly influence the outcomes attained. The results of the F test suggest that the model well captures the variability in the dependent variable, as evidenced by an F value of 108.739 and a p-value of 0.00 is less than 0.05. Furthermore, this illustrates that the employee capabilities is a dependable measure of supply chain performance.

Based on the findings presented in Table 6, it can be shown that the unstandardized regression coefficient (β) for employee capabilities was determined to be 0.870 at a significance level of $0.00 < 0.05$. This finding indicates that a change of one unit in employee capabilities would result in a significant improvement in supply chain performance by 87.8%. The regression equation was used to quantify the impact of employee capabilities on supply chain performance. Supply chain performance = $0.386 + 0.870$ employee capabilities

Based on the research findings, it is evident that employee capabilities significantly contribute to the supply chain performance of sugar manufacturing firms in Western Region. Wisedsin *et al.*, (2020) investigated the effects of employee capabilities and advanced manufacturing technology on supply chain performance. This found employee capabilities as positive and significant. Similarly, Onyando (2018) found a positive significant relationship between dynamic capacities and firm performance of manufacturing enterprises in Nairobi County, with one of the objectives being to discover how learning capabilities effect performance. It is in disagreement with the study by Flothmann *et al.* (2018) tried to help understand SCM competencies better by breaking them down into human and organizational parts and looking at how these parts affect SCM performance who found employee competencies significant on SCM performance.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study aimed at establishing the effect of employee capabilities on supply chain performance of sugar manufacturing firms in Western Region, Kenya. Employee capabilities and the level of output is 0.664(p value 0.00) on supply chain performance. The study gave an R^2 of 0.441. This implies that employee capabilities significantly influence supply chain performance of sugar manufacturing firms in Western Region.

Given that employee capabilities was a significant predictor of supply chain performance, it was clear that employee capabilities had a major beneficial effect on supply chain performance of sugar manufacturing firms. This suggested that sugar manufacturing firms that had stronger employee capabilities can achieve higher levels of supply chain performance.



5.2 Recommendations

The study recommends that employees should realize their potential by adapting to emerging trends in procurement sector that would facilitate performance. It is also important that employees improve their knowledge through benchmarking initiatives from other players. Lastly sugar manufacturing firms should make knowledge integration part and parcel of their duties

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The impact of social media use on students' behaviour change in Tanzanian tertiary institutions

Fredrick Elias Sanga¹

¹fredrick.sanga2@tia.ac.tz

¹Tanzania Institute of Accountancy

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ABSTRACT

Technological advancements worldwide have led to the rise of social media as a tool for learning and social interaction across gender and age groups, often through YouTube, Twitter, Instagram, Facebook, and LinkedIn. However, little is known about how it impacts students' behavioural changes in tertiary institutions. Therefore, this study examined the effect of social media on students' behaviour in tertiary institutions. It was guided by the Equation Theory, which suggests how people treat computers, television, and new media like real people and places. The theory was significant in this study because the effects of treating social media as real people determine the effects of social media on students' behaviour through their daily interactions with such platforms. This study employed a descriptive research design. The study employed a sample of 398 students from 10 tertiary institutions in Dar es Salaam. Data were collected through online questionnaires, follow-up interviews, and observation. Qualitative data was analysed using thematic analysis techniques, while quantitative data was reviewed through descriptive and inferential statistical methods. The results showed that social media had a positive and significant effect on students' behavioural changes in tertiary institutions. Social media has improved their study habits, dressing styles, eating habits, communication, relationships, and purchasing behaviour. These changes have improved their academic performance and social well-being. However, the abandonment of African traditional culture in dressing and food has created a need for policy interventions that purposefully regulate social media use to sustain its benefits while also mitigating its detrimental effects through a legal framework. It is proposed that building students' capacity serves as a strong and effective institutional approach to encourage responsible social media use. Future research could explore the effects of social media among adult employees and graduates and see if online behaviour during higher education carries over to the workforce.

Keywords: Behaviour Change, Social Media Use, Students, Tertiary Education Institutions

I. INTRODUCTION

Globally, the emergence of social media can be traced back to the 1950s, when phone phreaking was used to enhance free, unauthorized telephone call access, which paved the way for social networking sites in the 1990s (Gupta, 2020). That means social media began about 75 years ago, when these youth in tertiary education were not yet born. Currently, there are several social media platforms, notably Facebook, Instagram, Twitter, YouTube, and LinkedIn, connecting people and enhancing their interaction worldwide (Mujiwat & Laili, 2013). It has become a means of communication and networking across age, gender, race, education level, and geographical locations (Ramzan et al., 2023). The expanding use of social media in the world has gone beyond social interaction to a teaching and learning tool in educational institutions (Throuvala et al., 2021). Apart from the positive use of social media among students, it has become a destructive bomb, where approximately 30% to 40% of students in the developed world have experienced cyber-attacks through social media use (Livingstone, 2020). That means, social media is a developmental and detrimental platform if not well-regulated.

In the context of developed countries, social media use has been associated with cyberbullying and declining academic performance (Ramzan et al., 2023; Throuvala et al., 2021; Livingstone, 2020). That means social media use influences social evils, without which they could not have happened. The same experience is evident in developing countries where social media use among higher education students has increased due to the COVID-19 Pandemic, to bridge the social distancing control measures in the lockdown, as evidenced in South Africa, Nigeria, and Kenya (Okafor & Mwangi, 2021; Chikandiwa, 2020). This means, social media provided an alternative teaching and learning avenue when learners were physically separated from each other and from educational settings due to the pandemic.

In the context of Tanzania, the increasing use of social media among students is seen for both social networking and academic issues (Sserunkuuma et al., 2023; Manyerere, 2021). The recent data show that nearly 35% of higher education students have reported being affected negatively by the irresponsible use of social media (Masele & Rwehikiza, 2024). That means, higher education students have become the most victims of social media use instead

of capitalizing on the advantageous position, hence a need for this study to assess the impact of social media use on students' behaviour in tertiary education institutions in Tanzania, specifically in the Dar es Salaam Region.

1.1 Statement of the Problem

Globally, social media has been in use for about 70 years (Gupta, 2020). That means, social media has lived longer to reach adulthood age currently. Most of the previous studies have focused on the negative effects of social media, which were indecent dressing styles among students, causing eating disorders among students in higher education institutions (Ramzan et al., 2023; Throuvala et al., 2021; Livingstone, 2020; Ibrahim, 2020; Gunes & Dremirer, 2023; Kashaija, 2021). That makes social media be regarded as a medicinal warning 'put away from the reach of children'. However, little is known about its effects on students' behaviour change in tertiary institutions, where students are a bit lower aged compared to their counterparts, more mature university students. That literature gap hampers policy intervention to regulate its use, which creates a practical gap as well.

1.2 Research Objective

To assess the effects of social media use on students' behaviour change in tertiary institutions.

II. LITERATURE REVIEW

2.1 Theoretical Review

The study was guided by media equation theory postulated by Byron Reeves and Clifford Nass which explains how people treat computers, television, and new media like real people and places (Reeves & Nass, 1996). The theory was significant in this study because the effects of treating social media as real people determine the effects of social media on students' behaviour change through their daily interactions with such platforms (Oetken, 2024). The nature of this study requires the theory of this nature, because the nature of social media use in tertiary institutions is congruent with media equation theory, as such a group of people who treat social media like people are likely to face the effects.

2.2 Empirical Review

Globally, social media was developed to meet the needs of adult people (The US Surgeon General's Advisory on social media and Youth Mental Health, 2023). However, they have developed into a teaching and learning tool in higher education in the developed world: China, Poland, Spain, Turkey, and the United States of America (Purgat et al., 2017). The literature review on social media use in developing countries indicates the five main uses: social, political, economic, education, and health, as evidenced in Africa, Asia, and Latin America, which means social media has multiple uses across sectors (Sultana, 2011).

It has brought negative experiences in relation to human behaviour (Nalongo, 2024). A study by Nesi et al. (2021) assessed the effects of social media use on students' behaviours, and the negative effects were found on cyberbullying and psychological torture, among higher education students in the United States of America. The study found that the excessive use of Facebook and Instagram platforms contributed to the emotional stress among students, most of them females, hence a need for an intervention strategy to moderate their use and effects.

The study in Indonesia on the impact of social media on changing behaviour patterns among Generation Z found that the excessive use of social media results in neglecting their social environment, committing suicide, and cyberbullying (Mujiwat & Laili, 2013). On the other hand, Alvi (2021) evaluated the influence of social media on students' academic outcomes and showed that the extremely use of social media instigated higher education students' tendencies of procrastination, decreased their academic performance, and raised the indicators of depression and anxiety. The study recommended the initiatives to control social media use in higher education to rescue the youth generation at risk.

In Nigeria, the study indicates that several students in higher education have ethical and unethical use of social media (Adetimirin, 2024). In Kenya, the study identified the influence of social media use on behaviour change among university students. The study indicated that students learn unethical behaviour by imitating what they see on social media, hence a need for an intervention programme to enhance ethical social media use among higher education students (Ndung'u et al., 2023).

For the case of Tanzania, the study explored the most commonly used social media platforms in academic institutions as WhatsApp, YouTube, Facebook, and X (formerly known as Twitter and Instagram (Mashauri & Kandengukila, 2025). The responsible social media use among students was said to improve their academic performance. The study on examining the use of social media on students' academic life revealed that most of the students of Buhare Community Development Training Institute, Musoma, Mara, Tanzania were familiar with the variety of social media platforms and the majority of them trusted the information shared through social media



(Mbegani et al., 2022). The study, which assessed the effects of social media use on behaviour change among higher education students, found a positive and significant effect of social media use on students’ unethical behaviour, such as misinformation and cyberbullying, hence a need for social media use policy and institutional guidelines to enhance the responsible use of social media in higher education (Ponera & Mubuyaeta, 2023).

Similarly, Masele and Rwehikiza (2024) observed the misuse of social media among higher education students, hence proposed capacity building to enhance students’ ability to manage the negative impact of social media use. Another study on the influence of social media use on students’ academic performance established that irresponsible social media use among students affects their academic performance due to time wasted accessing irrelevant information, hence the need to be regulated (Nkolimwa, 2024). The reviewed literature on previous studies indicates a literature gap about the impact of social media use on students’ behaviour change in tertiary education institutions.

III. METHODOLOGY

3.1 Description of Study Area

The study was conducted in tertiary institutions in the Dar es Salaam region, which is the country’s city centre and business hub. The choice of Dar es Salaam was instigated by its nature and character as the heart of technological advancement, urban life, and commercial hubs, attracting people, business, and production. It is the largest city and commercial centre, which offers a technological life in different spheres of life; hence, assessing the impact of social media use on students’ behaviour became easy and relevant.

3.2 Research Design

This study employed descriptive research design. This research embraced a descriptive research design, as is appropriate for examining the impact of social media use on students’ behaviour change in Tanzanian tertiary institutions. It enables the researcher to generate a detailed and systematic description of existing phenomena without manipulating variables. This design helps in capturing attitudes of responders, perceptions, and behavioural patterns related to social media use, providing a clear understanding of how different platforms influence students’ conduct, communication styles, and social interactions within an academic setting.

3.2 Population

Tertiary institutions in Tanzania enroll students completing secondary education, most of them aged between 18 to 25. These youth and adolescent students’ digital hence with a desire to join and use a variety of social media platforms. Therefore, the choice of this group was significant because they are the main users and victims of social media (Mujiwat & Laili, 2023).

3.3 Sample Size

The study sample was 398 Tertiary Institutions students, calculated through the Yamane formula from the estimated population of 100,000 Tertiary Institutions students enrolled in the Dar es Salaam region.

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{100,000}{1 + 100,000(0.05)^2}$$

$$n = 398$$

Whereby:

- n - The sample size
- N - Population of study
- e - Error estimate(e) =5%

Therefore, the study involved a total of 398 students from 10 higher learning institutions in the Dar es Salaam region, Tanzania.

3.4 Sampling Techniques and Data Collection

The study used a convenience sampling technique to reach 398 respondents from an estimated population of 100,000 Tertiary Institutions students in the Dar es Salaam region. The technique was chosen because of its strength in reducing bias, thereby improving the validity and reliability of the study findings for generalization. Online questionnaires created with Google Forms were shared in WhatsApp groups of ten Tertiary Institutions in the Dar es Salaam region. When the responses reached 398, which was the target sample size, the Google Form was closed, and



the data were exported to SPSS Version 25 for analysis. The quantitative data were verified with a follow-up interview with students who volunteered for the semi-structured interview. The researcher interacted with some students in their tertiary institutions for observation purposes to verify the questionnaire and interview results.

3.5 Measurement of the Variables

The dependent variable, students’ positive behaviour change in tertiary institutions in the Dar es Salaam region, was measured by evaluating student responses in relation to the study style, dressing style, eating habits, communication behaviour, relationships, and purchasing habits. The independent variable, social media use, was operationalized by a five-point Likert scale from 1: Strongly Disagree, 2: Disagree, 3: Moderately Agree, 4: Agree, to 5: Strongly Agree. For instance, Nesi et al. (2021) adopted a similar measurement framework in their study on university students in the United States, utilizing detailed surveys to capture both quantitative dimensions of social media use. Respondents rated their level of agreement with the indicators for all four variables using a five-point Likert-like scale, where 1 represented "strongly disagree" and 5 indicated "strongly agree."

3.5.1 Model of Fit Testing

To assess the effects of social media use on students’ behaviour change in tertiary education, the study developed a model $SU = \beta_0 + \beta_1SS + \beta_2DS + \beta_3EH + \beta_4CB + \beta_5RH + \beta_6PB + \epsilon$, where SU stood for social media use. SS for study style, DS for dressing style, EH for eating habits, RH for relationship habits, CB for communication behaviour, and PB for purchasing behaviour. A diagnostic test was conducted for a model of fit; the result is presented in Table 1. It indicates that the linear regression model developed in this study was statistically significant and fit for the study, as the R-squared was 75% and the adjusted R-squared was 75%, which means social media use among tertiary education students affects their behaviour by 75%, and only 25% relies on other factors. The Durbin-Watson test results 1.704, which lies between the acceptable values 1.5 to 2.5, hence the absence of autocorrelation among variables (Shahanga & Kasambala, 2023). Similarly, the prob for statistics was 0.0, which is below 0.5, hence the model fit for the study (Shahanga & Kasambala, 2024).

Table 1

Model Diagnostic Test Results

R-Squared	75%
Adjusted R-squared	75%
F-statistics	25.132
Prob(F-statistics)	0.00000 ^b
Durbin-Watson Test	1.704

3.5.2 Multicollinearity Test

The multicollinearity test was analyzed for social media effects on students' behaviour change in tertiary education. Results in Table 2 reveal that the Variance Inflation Factor (VIF) for all of the variables under study ranged from 1.106 to 1.315, and the general average of VIF for all variables was 1.179, which was below 10. The tolerance level (1/VIF) ranged from 0.705 to 0.952, and the average was 0.875, which is generally above 0.1. This means all the explanatory variables used in this study were free from multicollinearity (Shahanga et al., 2023).

Table 2

Multicollinearity Test Results

Variables	VIF	Tolerance
Study style	1.214	0.877
Dressing style	1.092	0.931
Eating habit	1.315	0.901
Communication behaviour	1.278	0.705
Relationship habit	1.106	0.952
Purchasing behaviour	1.074	0.884
Average	1.179	0.875

3.5.3 Validity Test

To ensure validity, the questionnaire and interview guide were shared in a panel discussion with two research experts with a doctoral degree and experience in social science research. Questions were discussed in relation to the objectives and modified to adequately address the study objectives. Then, the tools were subjected to 10 students of



one tertiary institution for pretesting. The results indicated that, English language was a challenge to some of the respondents, so the tools were translated into the Kiswahili language for easy understanding. The tools in the Swahili language were also administered to another group of ten students, whose responses assured the clear understanding and freedom of the respondents to respond correctly to all the items.

3.5.3 Reliability

A Cronbach’s alpha test was conducted for all variables of the study to ensure the reliability. The results presented in Table 3 indicate that all the study variables had an alpha of 0.7 or above, hence acceptable or excellent as the rule of thumb is (Shahanga & Kasambala, 2023;2024).

Table 3
Scale Test for Reliability Analysis Results

Measurement Scale	Cronbach’s Alpha	Remarks
Social media use	.74	Acceptable
Study style	.82	Excellent
Dressing style	.79	Acceptable
Eating habit	.69	Acceptable
Language use	.84	Excellent
Relationship habit	.72	Acceptable
Purchasing behaviour	.77	Acceptable

IV. FINDINGS & DISCUSSION

4.1 Descriptive Results

Descriptive statistics for the study variables included mean, standard deviation (S.D.), and Cronbach's alpha (α). Table 4 presents the descriptive statistics and reliability coefficients for the study variables based on 398 respondents. The responses indicated a mean score ranging between 0.37 and 0.42, which is above the average mean of 3.0 in a five-point scale, and a standard deviation ranging between 0.728 and 0.907, hence the positive effects of social media use on students' positive behaviour change in Tertiary Institutions. The results further indicate that social media use has influenced students’ change in dressing styles. The physical observation of tertiary students verifies these changes, particularly in smart descent dressing, matching dress colours and shoes, handbags, and belts. Also, social media has influenced them to change their eating habit. The physical observation indicates that most of the students in tertiary institutions during meal time queue for chicken chips and not for ugali or rice, the common food eaten in their homes. About the communication behaviour, they prefer recording and posting voice notes and video clips, making conference calls and video meetings rather than physical meetings, and purchasing habits online rather than in physical shops. That means social media has become a changing agent for students’ behaviour.

Table 4
Descriptive Analysis Results

Variables	Mean	SD	(α).
I use social media	0.41	0.854	.89
I use social media as a learning tool	0.36	0.752	.81
I have known various dressing styles through the use of social media	0.37	0.895	.82
I have changed my eating habits due to social media use	0.39	0.899	.79
I have learned how to communicate due to social media use	0.40	0.901	.74
I have established a new relationship through social media use	0.42	0.728	.86
I use my social media to purchase things online	0.38	0.907	.77

4.2 Regression Results

To assess the effects of social media use on students’ positive behaviour change in tertiary institutions, the study conducted a descriptive statistics analysis through the linear regression model. The regression coefficient for social media use on student behaviour varied from one variable to another. One study style was ($\beta = 0.18, p < .003$); dressing style ($\beta = 0.057, p < .016$); eating habit ($\beta = 0.112, p < .052$); communication behaviour ($\beta = 0.015, p < .041$); relationship habit ($\beta = 0.213, p < .031$) and on purchasing habit ($\beta = 0.148, p < .024$) as summarized in table 5. The results suggest a positive and significant effect of social media use on students’ positive behaviour change in tertiary education institutions. The results imply that the increasing use of social media influences the behaviour



change positively and significantly; therefore, social media needs to be regulated to capitalize on the positive effects on behaviour change.

Table 5
Linear Regression Analysis Results

Variables	Coefficients	t-statistics	Sig	Decision
(Constant)	0.21	0.554	0.54	
I have learnt how to study through social media use	0.18	0.907	0.003	Accepted
I have known various dressing styles through the use of social media	0.057	0.95	0.016	Accepted
I have changed my eating habits due to social media use	0.112	0.899	0.052	Accepted
I have learned how to communicate due to social media use	0.015	0.201	0.041	Accepted
I have established a new relationship through social media use	0.213	0.228	0.031	Accepted
I use my social media to purchase things online	0.148	0.907	0.024	Accepted

$$SU = \beta_0 + \beta_1SS + \beta_2DS + \beta_3EH + \beta_4LU + \beta_5RH + \beta_6PB + \epsilon$$

a. Predictors: (Constant), study style (SS), dressing styles (DS), eating habits (EH), communication style (LU), relationship habit (RH), purchasing behaviour (PB).

b. Dependent Variable: Social Media Use (SU).

4.3 Qualitative Results

The qualitative results included interview and observation results conducted with students within their tertiary educational institutions.

4.3.1 Interview results

Triangulating the regression results, the follow-up interview was conducted with 20 students, two from each institute of study, a male and a female. Their responses on how social media affects students' behaviour in tertiary institutions. Their responses were:

“Most of us girls joining tertiary institutions come with behaviour learnt from our parents or community. Once we join these institutions and own a smartphone, we learn to eat chips instead of ugali, dress like white ladies rather than African women, and purchase online rather than in physical shops”. (Interview response from female students of Institute A, July 2025).

A male respondent added:

“Social media has both positive and negative effects, depending on the user, but for me it has helped me to match clothes, colours, and shoes, how to communicate via WhatsApp video calls, and access YouTube video clips relating to my programme of study”. (Interview response from a male student of Institute D, July 2025).

The interview results are congruent with the quantitative results on the effects of social media on students' behaviour change in relation to study style, eating, communication, dressing, relationships, and purchasing habits. However, the effects are double-edged, positive and negative; therefore, social media are neither good nor bad but depend on the user and use.

4.3.2 Observational results

The physical observation in two tertiary training institutions out of 10 under study indicated that 8 out of every 10 students had a smartphone from which they accessed social media platforms. They had a different dressing style; most of them stylishly matched clothes, handbags, and shoes in colours. Also, during midday, when most of them take lunch, they mostly queue for chips rather than ugali and rice. In their study groups, they use social media shared clips to learn and discuss different academic matters. Others communicate using emojis rather than words, writing in short forms rather than full words or sentences. The observation results are similar to what was found in the descriptive and interview results. The observation results indicate that social media use has become a part and parcel of students' behaviour and social life.

4.4 Discussion

The regression, interview, and observation results suggest a positive and significant impact of social media use on students' behaviour change in tertiary education institutions. If social media has influenced the students' change in study style, and if such a study style has improved academic performance, that is a positive change, hence the positive effect of social media; if the new study style has deprived their academic performance, such effects are negative. The effects of social media on study style concur with the previous study in Indonesia, which indicated that students who comply with the social media use regulation improved their academic performance (Mujiwat & Laili,



2023). This implies that the positive results of social media rely mainly on the students' compliance with the use regulations. In relation to the effects on dressing style, if students imitate the decent dressing style through social media, that is a positive effect on behaviour change, which improves their personalities. The results deviate from the previous study in Nigeria, which found that social media use among students negatively impacts their change in dressing patterns by imitating celebrities, western dress styles, peer influence, and fashion in vogue (Ibrahim, 2020). About the eating habit, if the use of social media impacts students' choice of food to meet their nutritional needs, but abandoning their traditional food types is a negative effect of social media. The results deviate from the previous study in Turkey, which associated social media use and eating disorders among students (Gunes & Dremirers, 2023). That means social media influenced students' choices of what to eat, which has both mixed effects positive and negative effects. About the relationship habits, if social media can lead to friendship formation and relationship breakups, that means it plays a double-edged sword function of positive and negative, hence a need to be regulated. The results concur with a previous study in Tanzania, which showed mixed social effects of social media use at the family and societal level, strengthening family communication but reducing family ties (Kshaija, 2021). Moreover, if social media use has enhanced the students' purchasing behaviour, changing from physical to online, that is a positive effect if the online systems enable them to get a variety of items, cheap, durable, and genuine products, rather than physical shopping. The results concur with a previous study in India, which found that social media has enabled consumers to search product variety brands, compare price and durability, and receive views of previous consumers, which enable them to decide what, when, and where to buy (Biswas & Dhimal, 2021). The effects of social media use on positive behaviour change among students differ from earlier studies, which focused only on the negative effects of social media without considering its positive aspects in the United States, where it was shown that social media use increases levels of cyberbullying and psychological distress among students (Nesi et al., 2021). Similarly, Alvi (2021) identified procrastination, declining academic achievement, and mental health issues as negative effects of social media among students in tertiary institutions in Dar es Salaam. It deviates from the study in Kenya, which found that the use of social media among students influences their exam cheating, pornography, stress, depression, and lowers their memory (Nyangesa et al., 2019). The results align with the media equation theory because when the media is treated as real people, it can lead to both positive and negative effects. Just as we take precautions when interacting with people, we should do the same when engaging with social media. No one is entirely good or bad; it depends on how you interact with them.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The results showed a positive and significant effect of social media on students' behaviour change in tertiary institutions. Social media has influenced changes in their study habits, dressing styles, eating habits, communication behaviour, relationships, and purchasing behaviour. Some of the changes improved their academic performance and well-being, while others alienated them from their developmental social-cultural values. Therefore, this study concludes that social media are neither good nor bad, but how they are used, students in tertiary institutions should be guided on the responsible use of social media to capitalize on the advantages and minimize negative effects to achieve their academic and social goals.

5.2 Recommendations

To enhance the responsive use of social media in tertiary institutions, the tertiary institutions should incorporate in the curriculum social media as a teaching, learning, and assessment tool for students, instructors, and management. Through these initiatives, students will develop awareness of the educative role of social media. Also, tertiary institutions should develop guidelines on the responsive social media use and conduct capacity building for their students about the dos and don'ts in social media. While policy interventions aim to regulate social media use purposely to sustain and uphold the benefits of social media and, at the same time, regulate its use to mitigate the detrimental effects through a legal framework, building students' capacity is proposed as a strong, effective institutional approach to encourage responsible social media use. Future research could explore the effects of social media among adult employees and graduates to see if online behaviour during higher education carries over into the workforce.

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The usage of social media platforms on students' literacy in higher learning institutions in Tanzania: A case of a selected higher learning institution in Arusha region

Jane Joseph Tesha¹

¹jtesha@iaa.ac.tz

¹Institute of Accountancy, Tanzania

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ABSTRACT

The integration of social media platforms has been a subject of global discourse. The students' desire for social interaction and connection, along with their extensive use of social media, has come to define their everyday lives. The study examined the impact of social media platform use in Tanzania's Arusha Region on students' literacy skills in higher education institutions (HEIs). The study's primary goals were to evaluate the degree of social media platform utilization among HEIs and look into how social media use helps HLIs improve their literacy. The investigation was guided by the positivist philosophy and the diffusion of innovation theory. A mixed techniques approach and a cross-sectional descriptive study methodology were used. Thematic analysis and descriptive statistics were employed. Using stratified, basic, and purposive sampling approaches, 98 respondents in all were recruited from a population of 427 instructors and 4573 undergraduate students from four HLIs. The Cronbach's alpha value of $r = 0.875$ was achieved after the reliability of the questionnaires given to students and instructors was examined using SPSS Version 23. Peer debriefing was used to assess the instrument's reliability for gathering qualitative data. According to the survey, the increasing tendency of incorporating social media into educational activities is shown in the usage of several platforms like Facebook, Instagram, Twitter, and WhatsApp. Nonetheless, it is important to stress the importance of using these platforms responsibly. In conclusion, the predominant usage of social media platforms is still social rather than educational, even if the majority of students utilize them extensively for social contact and certain instructional purposes. HLIs were advised to produce and distribute instructional films on Twitter, Facebook, Instagram, YouTube, and WhatsApp. Students' literacy skills will improve if they have access to this pertinent academic knowledge.

Keywords: Arusha Region, Information Literacy, Platform, Social Media

I. INTRODUCTION

The integration of social media into educational settings has been a subject of global discourse. In Europe, a significant percentage of young individuals engage with social networks, influencing their learning experiences and information consumption patterns (Snelson et al., 2022). Similarly, in the United States, studies have highlighted the dual role of social media in enhancing communication while also presenting challenges related to information accuracy and critical thinking among students. A study by Ahmad (2024) in Asia found that higher education institutions have leveraged social media platforms to foster communication and information dissemination, thereby enhancing the learning environment. However, concerns regarding the impact of these platforms on students' literacy skills have been raised, emphasizing the need for balanced integration. Africa has witnessed a surge in social media usage among students, with platforms serving as tools for knowledge exchange and academic collaboration (Mbodila et al., 2020). Nonetheless, the implications of this usage on literacy development remain underexplored, warranting empirical investigation. Research by Baynit et al, (2025) in East Africa, including Tanzania, the adoption of social media in educational contexts has been growing. Studies have indicated that students utilize these platforms for academic purposes, yet the extent to which Social media platforms are widely utilised by Higher Learning Institutions (HLIs) in developed countries.

Across the globe, students are actively engaging with various platforms, such as Facebook, Twitter, and blogs, to connect with peers, share experiences, and express themselves (Boon et al, 2020). In Europe, developed countries such as Norway and the Netherlands have a strong tradition of utilising online learning. For instance, in Norway, HEIs such as the University of Oslo and the Norwegian University of Science and Technology utilise online learning platforms such as Canvas to deliver courses and facilitate communication between students and course instructors (Torriss et al., 2022). African countries are increasingly adopting online learning platforms to provide higher education. South Africa and Botswana have adopted the use of computers and other technological devices to promote learning (West et al., 2023). In Kenya, higher education institutions have adopted online learning platforms (Mwende, 2022). The adoption



of technology in the teaching and learning processes across countries signifies a paradigm shift from face-to-face teaching to online learning through social media platforms.

The rising integration of social media into global education, marked by its role in communication and improved access to educational materials, prompts apprehension among education stakeholders in Tanzania. Notably, stakeholders have expressed concerns about disturbances in the learning environment attributed to social media use (Van den Beemt et al., 2020). This hesitancy among educators raises pertinent questions about the potential consequences for the quality of education. Existing literature, although illuminating global trends, falls short in providing a comprehensive understanding of the specific challenges and benefits associated with social media in HLIs in Tanzania. Furthermore, studies by Laizer (2024) and Ponera (2022). Ncheke et al., (2021), and Van den Beemt et al. (2020) indicate a gap in the current understanding of the dynamics of social media in Tanzanian education. Therefore, the present study aimed to bridge this knowledge gap by comprehensively assessing the usage of social media platforms in HLIs and their influence on students' literacy skills in Tanzania, with a specific focus on Arusha Region.

1.2 Research Objectives

The study aimed to investigate how students' literacy skills in Tanzania's Arusha Region were affected by the use of social media platforms in higher education institutions (HEIs)

1.2.1 Specific Objectives

1. To assess the extent of social media usage among students in a selected higher learning institution in Arusha Region.
2. To examine the influence of social media usage on students' literacy skills, focusing on reading and writing proficiency.
3. To identify factors that affect students' engagement with social media for educational purposes.
4. To propose strategies for optimizing the use of social media to enhance students' literacy skills in higher learning institutions

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Diffusion of Innovation Theory

Everett Rogers created the Diffusion of Innovation Theory in 1962, and it provides information on how novel concepts, goods, or technology proliferate and gain acceptance over time in a social system (Rogers, 2003). According to this idea, innovators and early adopters embrace innovations first, followed by the early majority, late majority, and laggards. The adoption process is said to follow a bell-shaped curve (Head & Eisenberg, 2010). The theory also pinpoints important elements that impact the pace and scope of adoption, such as the perceived qualities of the innovation (complexity, compatibility, and relative advantage), social networks, communication channels, and adopters' traits (socioeconomic status, innovativeness).

The Diffusion of Innovation Theory is predicated on the notion that people consider the benefits and drawbacks of embracing an innovation before deciding to do so, and that social networks have a significant impact on adoption choices. A useful framework for comprehending and forecasting the uptake of social media platforms in higher education institutions is provided by the diffusion of innovation theory. Institutions can speed up the adoption process and maximize the benefits of technology-enhanced learning in influencing students' information literacy skills by, for example, focusing on early adopters and opinion leaders, highlighting the communication channels that the target audience prefers, and highlighting the relative advantages and compatibility of online learning platforms with current practices.

2.2 Empirical Review

The reviewed studies highlight diverse perspectives on technology, social media, and e-learning in education across different contexts. West et al. (2023) in Australia showed that social media influences adolescents' competence development, though reliance on self-reported data limits objectivity. Kelly et al. (2015) found that most Australian university students lacked confidence and understanding of generative AI, but the extent of its use on social media remained unclear. Ventayen (2023) and Baynit et al. (2025) revealed that while students viewed ChatGPT as useful, it posed risks to academic integrity, though the qualitative focus limited generalizability. Oloyede (2022) emphasized the need for regulatory reforms and infrastructure to promote gender-inclusive online learning in Africa, while Maune et al. (2023) identified cost, poor infrastructure, and limited ICT resources as major barriers to e-learning in Zimbabwe. Mwende (2022) reported that University of Nairobi students valued online education but doubted its legitimacy and engagement. Similarly, Mohammed & Ali (2022) found e-learning adoption in Tanzania constrained by poor ICT infrastructure, low skills, and negative attitudes, with findings limited to public universities. Mwanakatwe (2021)



showed social media shaped identity and academic life in Tanzanian higher education, though its relevance to secondary education was uncertain.

To address these limitations and contextual differences, the current study in Arusha focused on how social media supports information literacy development in secondary schools, applying a mixed-methods approach to generate more generalizable insights.

III. METHODOLOGY

3.1 Research Philosophy

The study assumed Positivist philosophy. Positivism is a widely adopted research philosophy in studies that aim to explore cause-and-effect relationships using observable, measurable, and quantifiable data. Given that the research title focuses on how the usage of social media platforms in HLIs influences students' information literacy skills, a positivist approach is appropriate, especially if the researcher aims to generalize findings from a sample to a wider population. This philosophy is especially relevant in contexts like Tanzania or other developing countries, where students are actively engaging with various social media platforms to connect with peers, share experiences, and express themselves.

3.2 Study Area

The area of this study was Arusha Region, which comprises the seven administrative districts of Arusha Region. This region consists of five universities in total, which offer courses for undergraduates. The choice of this study area is due to the extensive usage of social media platforms among students in higher learning institutions. Therefore, the researcher gathered relevant data for this study.

3.3 Research Design

This study employed the cross-sectional descriptive research design. The design aimed to investigate a research problem by describing a pattern of phenomenon at a particular point in time (Cohen et al. 2018). The cross-sectional design was suitable for this study for two reasons. First, the cross-sectional aspect of the design allowed assessment of the research problem at a particular point in time, in line with the time requirements of conducting this study. Secondly, the descriptive nature of the design allowed the research to assess the opinions of students in HLIs in Arusha Region regarding the extent of usage of social media platforms and their contribution to the development of information literacy skills, hence generalizing findings in the studied area.

3.4 Research Approach

In this study, the researcher adopted a mixed methods approach to collect both qualitative and quantitative data at the same time concerning the usage of social media and its influence on students' information literacy skills in Arusha Region, Tanzania. Wium and Louw (2018) argue that a mixed methods approach involves collecting, analysing, and integrating both qualitative and quantitative data in a single study. The use of qualitative and quantitative data was necessary for complementary purposes.

3.5 Targeted Population

The targeted population was 4573 undergraduate students and 427 lecturers from four HLIs located in the Arusha Region (TCU, 2024). The study targets students because they are the beneficiaries of social media usage. Therefore, assessing students' opinions on the usage of social media provided first-hand and reliable perspectives about its influence on students' information literacy skills. The lecturers gave more insight into how the usage of social media contributes to the development of information literacy skills in HLIs.

3.6 Sample size

According to Oribhabor and Anyanwu (2019) sample size refers to the number of items to be selected from the population to constitute a sample. This study's sample size was derived using the Yamane formula for sample size determination. The formula was appropriate for this research because it helped to calculate the sample size from a large population of higher education students in the Arusha Region. The formula helped to ensure that the research results represent the target population (Yamen et al., 2017). The formula was presented as follows.

$$n = \frac{N}{1 + N(e^2)}$$

Where;

n = Sample Size

N = Target population, which is 5000 students and lecturers



Margin error, which is 0.1

Therefore,

$$n = \frac{5000}{1 + 5000 (0.1^2)}$$

$$n = 98$$

Therefore, the sample size of this study was 98 respondents, comprising 82 students and 16 lecturers, as shown in Table 1.

Table 1
Sample Size Grid and Sampling Techniques

S no.	Category	Sample	Sampling procedures
1.	University students	82	Stratified & Simple random
2.	Lecturers	16	Simple random
	Total	98	

3.7 Sampling Techniques

Stratified and Simple random sampling were applied to select the sample size of 82 students from the sampling frame. Simple random sampling is a type of probability sampling in which each member of the target population has an equal chance of being selected in a study (Thomposon, 2012). For the case of lecturers, simple sampling was used to select 4 lecturers from each of the sampled universities. In particular, using stratified random sampling, students were grouped based on their gender. Therefore, 41 students from every university were selected based on their gender. Consequently, 20 male and 21 female students were selected from four universities in the Arusha region. Simple random sampling was employed to select the students in their strata. Similarly, simple random sampling was used to select 16 lecturers. Therefore, through stratified sampling and simple random sampling techniques, 98 respondents were sampled for this study.

3.8 Data Collection Methods

Questionnaires were used to collect quantitative data from 82 university students and 16 lecturers. The questionnaire was structured into 5 Likert scale responses. For the first theme, 10 statements were developed to investigate the research objective, while for the second theme, 11 statements were developed to investigate the research objectives. In addition, structured interviews were conducted with 16 lecturers. These instruments enabled the collection of both quantitative and qualitative data that provided in-depth insights into the usage of social media platforms in higher learning institutions and their influence on students' information literacy skills in Arusha Region, Tanzania

3.9 Validity and Reliability

Validity is a measure of the quality of research, which examines whether research instruments measure the concepts intended to be measured (Cohen et al., 2018). Face and content validity were ensured to ensure that the questionnaire instruments are clear and include items related to the research questions' concepts. For the interview guides, the peer debriefing process was employed to enhance the credibility of the questions. The questionnaires were validated by consulting two education experts from HLIs. The experts reviewed the data collection instruments. The researcher improved the instrument based on the recommendations from the experts. A reliability test was conducted by administering the questionnaire instruments to 30 undergraduate students from one HLI that was not included in the actual study. The data were entered in SPSS version 23 after the pilot study. The Cronbach Alpha reliability test results produce a reliability score of 0.875, as shown in Table 2.

Table 2
Reliability Test for Students' and Lecturers' Questionnaire (SQ)

Cronbach's Alpha	N of Items
.875	21

According to George and Malley (2003), a reliability of 0.6 is minimally accepted, and a reliability of above 0.70 is regarded as outstanding; hence, the research instruments were regarded as reliable. To enhance the credibility and transferability of the interview guide, the researcher applied triangulation techniques, combining multiple sources of data to strengthen the trustworthiness of qualitative findings. Questionnaires were then issued to the respondents and collected on the agreed date, while a personal interview was conducted on the same day of the visit. The researcher audio-recorded the conversation for later transcription with the consent of the interviewee.



3.10 Data Analysis

The quantitative data were analyzed using descriptive statistics in SPSS Version 23, while qualitative data were subjected to thematic analysis. These analysis approaches facilitated a comprehensive interpretation of findings, allowing for a clearer understanding of patterns and themes.

3.11 Ethical Considerations

All the ethical principles in research were followed across all the stages of this study. In so doing, the researcher informed the respondents of the aim of the study and asked for their voluntary participation. Respondents were assured of confidentiality and anonymity of whatever information they provided. This means that the information collected was used for this study only and was not linked to any person. Finally, in order to address the issue of plagiarism, all the sources of information were duly acknowledged.

IV. FINDINGS & DISCUSSIONS

4.1 Response Rate

The findings are presented starting with the return rate of instruments to justify the adequacy of the collected data, followed by demographic information of respondents, and finally, a discussion and interpretation of the findings according to themes derived from research questions.

4.1.1 Return Rate of Instruments

The researcher administered questionnaires to 82 students and 16 lecturers. During data collection, all the filled questionnaires were collected. Table 3 gives a summary as follows:

Table 3
Distribution of Research Instruments and Instruments' Return Rate

Instruments Distributed	Sample Size	Instruments' Return Rate	(%)
Questionnaires for students	82	82	83.67
Questionnaires for Lecturers	16	16	16.3
Total	98	98	100

The data in Table 3 shows a return rate of 100% for both the lecturers' and students' Questionnaires. These high rates of return suggest that the respondents were willing to participate in the study, and they filled out and returned all the questionnaires. Equally, all face-to-face interviews were successfully conducted with lecturers. This is an indication that the items in the questionnaires were also understood by the respondents and that the study was of interest to them. The obtained high rate of return, therefore, allowed the researcher to proceed with further analysis of the data.

4.1.2 Demographic Information of Students

Students' background information sought in this study included their gender, age, year of study, laptop ownership, and smartphone ownership. Table 4 shows the demographic information of students.

Table 4
Students' Demographic Information (n=82)

Information		Frequency	Percentage
Gender	Male	41	50.00
	Female	41	50.00
Age	18 - 24 years	48	58.54
	25 - 35 years	22	26.83
	36 - 50 years	12	14.63
Year of study	First year	26	31.71
	Second year	26	31.71
	Third year	30	36.58
Laptop ownership	Yes	26	31.71
	No	56	68.29
Smartphone ownership	Yes	74	90.24
	No	8	9.76



The data in Table 4 show that 50% of the students were male and 50% were female. This balanced representation was crucial for obtaining views about the usage of social media platforms in higher learning institutions and their influence on students' information literacy skills in Arusha Region, Tanzania

The data also show that the majority of the students were aged 18-24 years (58.54%). This generation is highly involved in technology and well-positioned to provide relevant information about the use of social media platforms while at universities. Additionally, the data show that 26.83% of participants were aged 25-35 years, and 14.63% were aged 36-50 years, offering a diverse age range for a more comprehensive feedback.

The data in Table 4 also show that 36.58% of the students were in the third year, while 31.71% were in the first year and 31.71% were in the second year. The researcher selected more students from the third year with the assumption that they have stayed in the university for at least three years and therefore have more experience with aspects related to social media usage. Including students from the first and second years ensured a well-balanced perspective on online learning adoption across different stages of university education.

The data show that the majority of participants do not own laptops (68.29%), a situation that could imply a significant barrier to the application of social media platforms. Without access to laptops, students might face challenges in engaging fully with online education. However, the data show that the majority of participants own smartphones (90.24%), suggesting that smartphones could be a viable tool for online learning. Students can use their phones to access educational content and participate in online classes. This widespread smartphone ownership presents an opportunity for students to use mobile technology to enhance social media experiences.

4.1.3 Demographic Information of Lecturers

Demographic information of lecturers sought in this study included gender, professional qualifications, and experience. Their information on these variables has been presented in Table 5.

Table 5

Lecturers' Demographic Information (n=16)

Variable		Frequency	Percentage
Gender	Male	12	75
	Female	4	25
Professional qualification	Tutorial assistant	2	12.5
	Assistant lecturer	8	50
	Lecturer	4	25
	Senior lecturer	2	12.5
Experience	1 -3 years	3	18.75
	4 – 6 years	7	43.75
	7 – 9 years	4	25
	10 years and above	2	12.5

The data show that 75% of the respondents are male, while 25% are female. This indicates a gender disparity among respondents, with a predominance of males. In the context of online learning applications, this gender distribution might reflect a broader trend in higher learning institutions in the Arusha Region, where male lecturers may have more opportunities or inclination to participate in such studies. The data show that 12.5% of the participants are Tutorial Assistants, 50% are Assistant Lecturers, 25% are Lecturers, and 12.5% are Senior Lecturers. This distribution suggests that most respondents hold positions as Assistant Lecturers, indicating a large proportion of early-career academics involved in the study. The relatively lower percentage of Senior Lecturers might imply that more experienced staff may have different engagement levels with online learning platforms.

The data also show that 18.75% of respondents have 1-3 years of experience, 43.75% have 4-6 years of experience, 25% have 7-9 years of experience, and 12.5% have over 10 years of experience. The majority of respondents fall within the 4-6 years of experience. This range of experience is indicative of a dynamic and potentially adaptable group, which could positively impact the adoption and implementation of online learning platforms in higher learning institutions.

4.1.4 The Extent of Usage of Social Media Platforms in HLIs in Arusha Region

The theme derived from objective one and question one of the research question of this study assessed the extent of usage of social media platforms in HLIs in Arusha Region. In their respective questionnaires, students and lecturers were provided with a Likert scale having 10 statements and requested to indicate their extent of agreement or disagreement with each. Their responses were quantified to generate percentages. During the discussion, the percentage of those who agreed and those who strongly agreed was added up. The same was done to the percentage of those who



disagreed and those who strongly disagreed. The response percentages of students and lecturers to the items in the Likert scale are presented in Table 6.

Table 6
Percentage Responses of Students (n = 82) and Lecturers (n =16) on the Extent of Social Media Platforms Usage

Statements	Strongly Agree		Agree		Unsure		Disagree		Strongly Disagree	
	SS	LS	SS	LS	SS	LS	SS	LS	SS	LS
Students learns via Moodle	40.2	50	18.3	37.5	11	0	15.9	6.3	14.6	6.3
Students learn via Zoom	58.5	31.3	28	25	1.2	0	9.8	31.3	2.4	12.5
Students can access internet in the classrooms	72	62.5	23.2	37.5	1.2	0	2.4	0	1.2	0
Students can access internet in the computer laboratory	62.2	50	22	12.5	3.7	12.5	7.3	18.8	4.9	6.3
Students can access internet in the library	63.4	43.8	24.4	31.3	1.2	0	6.1	0	4.9	25
Students can access internet in dorm/ room	58.5	31.3	20.7	37.5	6.1	6.3	12.2	12.5	2.4	12.5
Students can access internet at high speed	65.9	37.5	23.2	43.8	3.7	0	3.7	0	3.7	18.8
Students can access internet on daily basis at the university campus	64.6	68.8	19.5	31.3	0	0	8.5	0	7.3	0
Students can access online platforms for searching academic materials	61	56.3	18.3	37.5	0	0	15.9	0	4.9	6.3
Students can get support services from IT department when encounter challenges in accessing internet services	59.8	62.5	18.3	37.5	3.7	0	12.2	0	6.1	0

Key; SS = students’ percentage response; LS = lecturers’ percentage response

Concerning the learning through Moodle, the data show that 58.5% of students agreed that they learn via Moodle, while 30.5% disagreed, and 11.0% were neutral. Among lecturers, 87.5% agreed, 12.5% disagreed, and none was neutral. Regarding the learning via Zoom, the data show that 86.6% of students agreed they learn via Zoom, 12.2% disagreed, and 1.2% were neutral. For lecturers, 56.3% agreed, 43.8% disagreed, and none were neutral. Focusing on students’ access to the internet in the classrooms, the data shows that 95.1% of students agreed that they can access the internet in classrooms, 3.7% disagreed, and 1.2% were neutral. All lecturers (100%) agreed with this statement. Regarding the accessibility of the internet in the computer laboratory, the data show that 84.1% of students agreed they can access the internet in computer laboratories, 12.2% disagreed, and 3.7% were neutral. Among lecturers, 62.5% agreed, 25.0% disagreed, and 12.5% were neutral. In addition, concerning the accessibility of the internet in the library, the data show that 87.8% of students agreed they can access the internet in the library, 11.0% disagreed, and 1.2% were neutral. For lecturers, 75.0% agreed, 25.0% disagreed, and none were neutral. On the aspects of the accessibility of the internet in the students’ dormitories or rooms, the data show that 79.3% of students agreed they can access the internet in their dorms/rooms, 14.6% disagreed, and 6.1% were neutral. Among lecturers, 68.8% agreed, 25.0% disagreed, and 6.3% were neutral. Concerning the speed of the internet, the data show that 89.0% of students agreed they can access the internet at high speed, 7.3% disagreed, and 3.7% were neutral. For lecturers, 81.3% agreed, 18.8% disagreed, and none was neutral. Moreover, concerning the accessibility of the internet on a daily basis, the data show that 84.1% of students agreed they can access the internet daily at the university campus, 15.9% disagreed, and none were neutral. All lecturers (100%) agreed with this statement. Regarding the accessibility of online platforms for searching academic materials, the data show that 79.3% of students agreed that they can access online platforms for searching academic materials, 20.7% disagreed, and none were neutral. Among lecturers, 93.8% agreed, 6.3% disagreed, and none were neutral. The data indicate that 78.0% of students agreed that they can get support services from the IT department when encountering challenges in accessing internet services, 18.3% disagreed, and 3.7% were neutral. All lecturers (100%) agreed with this statement.

4.2 Quantitative Findings

4.2.1 The Contribution of Social Media Platforms to the Development of Information Literacy Skills among Students in HLIs in Arusha Region

The second objective of the study sought to explore how social media contributes to the development of information literacy skills among students in HLIs in Arusha Region. To fulfil this objective, the study prepared items 1 – 8 in the questionnaire for lecturers and students. During data collection, a five-point Likert scale of 5=Strongly Agree, 4=Agree, 3= Neutral, 2= Disagree, and 1=Strongly Disagree. Data collected from students are presented in Table 7.



From the table, Facebook, as a social media platform commonly used by adolescents to access information on literacy skills, recorded a mean score of 4.10. The data shows that 50% of students strongly agreed and 10.8% agreed, while 38.3% were undecided, yet 1.2% disagreed. Using contracted words in social media interactions contributes to poor mastery of spelling, as seen in the mean score of 3.99, which was higher than the grand mean score of 3.09. Similarly, academic discussions online enable students to develop an interest in reading, and they also recorded a mean score of 3.99. In terms of percentage, the data shows that 42.1% of students strongly agreed and 42.5% agreed, while 1.7% were undecided, yet 13.8% strongly disagreed. Use of YouTube as a social media platform was found to negatively affect the ability of adolescents to develop effective literacy skills. This aspect recorded a mean score of 3.99.

Table 7

Responses from Students on the Contribution of Social Media to the Development of Information Literacy Skills among Students in HLIs (n=82)

Contribution of Social Media	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree		Mean
	f	%	f	%	f	%	f	%	F	%	
Facebook is a social media platform commonly used by students to access information on literacy skills	41	50.0	9	10.8	31	38.3	0	0.0	1	1.2	4.10
Using contracted words in social media interactions contributes towards poor mastery of spelling	60	72.9	1	1.3	0	0.0	3	3.3	18	22.5	3.99
Online academic discussions enables students to develop interest in reading.	38	47.1	9	10.4	32	39.6	0	0.0	3	2.9	3.99
Use of YouTube negatively affects the ability of students to develop effective literacy skills	35	42.1	35	42.5	1	1.7	0	0.0	11	13.8	3.99
Use of text messages in social media enables students to improve in writing skills	44	54.2	0	0.0	1	0.8	4	5.0	33	40.0	3.23
Frequent use of Snapchat enables students to develop interest in literacy skills	13	15.8	0	0.0	59	72.1	2	2.1	8	9.6	3.11
Social media such as Snapchat boosts my critical thinking skills	4	4.6	38	45.8	7	8.8	2	2.5	31	38.3	2.76
Posts from Twitter helps in enhancing reading interest	2	2.5	29	35.8	2	2.5	39	47.1	10	12.1	2.70
Students rely on Instagram as their social media platform yet it negatively affects their acquisition of literacy skills	12	15.0	1	1.3	0	0.0	59	72.5	9	11.3	2.36
Use of WhatsApp chats improves my interest in reading and writing	34	41.5	1	1.7	1	1.3	8	10.0	38	46.3	3.02
students can access reliable information literacy skills on YouTube	12	14.2	0	0.0	9	10.4	1	2.1	60	73.3	1.80
Grand mean score											3.09

Table 8 below illustrates the extent to which different social media platforms shape students' literacy skills within higher learning institutions. Facebook, for instance, is extensively used for social purposes but also serves an emerging academic role by enhancing reading and information literacy through the sharing of articles and participation in online discussions. However, its predominant social orientation often distracts students from engaging meaningfully with academic materials. WhatsApp emerges as the most widely utilized platform, particularly for group communication and peer collaboration, which positively fosters writing and communication literacy. Nevertheless, its dominance in informal exchanges may inadvertently encourage non-standard language use, thereby weakening students' formal academic writing skills.

Instagram, while primarily associated with social interaction, contributes to the development of visual and media literacy. Its use of infographics and visual explanations supports students' understanding of complex ideas, although the overemphasis on images tends to discourage deep reading and critical analysis. Similarly, Twitter (X), though less commonly used, plays an important role in strengthening critical and digital literacy by exposing students to concise information, global academic debates, and summarization practices. Yet, the platform's character limitations often result in superficial engagement rather than in-depth learning. YouTube is increasingly significant in supporting listening and comprehension literacy by providing access to academic tutorials, recorded lectures, and explanatory videos. Despite



these advantages, its unregulated use exposes students to misinformation and the risk of spending excessive time on entertainment content rather than academic resources.

Overall, the evidence suggests that social media platforms have a dual influence on students' literacy skills. On the one hand, they provide valuable opportunities for enhancing reading, writing, critical thinking, and comprehension when utilized for academic purposes. On the other hand, their dominance as tools for informal interaction poses risks to formal literacy development and deeper intellectual engagement. This underscores the importance of guided and responsible use of social media within higher learning institutions to maximize educational benefits while minimizing potential drawbacks.

Table 8

Influence of Social Media Platforms on Students' Literacy Skills in Higher Learning Institutions (HLIs)

Social Media Platform	Extent of Use among Students	Type of Literacy Skill Influenced	Positive Influence	Negative Influence
Facebook	High (for social and limited academic use)	Reading & Information Literacy	Enhances access to academic discussions, sharing of articles, and collaborative reading	Distracts students through excessive social interaction
WhatsApp	Very High (most commonly used for communication)	Writing & Communication Literacy	Encourages group discussions, peer-to-peer writing, and instant sharing of academic materials	Promotes informal writing styles that may erode formal academic writing standards
Instagram	Moderate (mostly for social purposes, limited academic use)	Visual & Media Literacy	Supports visual communication skills, aids in accessing infographics/academic visuals	Overemphasis on images may reduce focus on deep reading and critical analysis
Twitter (X)	Low–Moderate (emerging educational tool)	Critical & Digital Literacy	Encourages summarization skills, critical engagement with concise information, and following academic debates	Risk of superficial learning due to limited character space and trending distractions
YouTube	Moderate (increasing educational use)	Listening, Viewing & Comprehension Literacy	Provides access to tutorials, academic lectures, and explanatory videos that enhance comprehension	May expose students to misinformation and time-wasting entertainment content

While explaining how social media contributes to the development of information literacy skills among students in HLIs, one of the lecturers remarked that;

“Social media platforms provide collaborative learning opportunities and access to educational content, which can enhance learning experiences among students in HLIs in the Arusha region. For instance, the use of various platforms such as Facebook, Instagram, Twitter, and WhatsApp reflects the growing trend of integrating social media into educational activities. However, responsible use of these platforms should be emphasized” (Personal Interview, 27th July, 2025).

Regarding the use of text messages in social media (mean score = 3.23), the study establishes that it enables adolescents to improve in writing skills to a certain level. Its contribution towards literacy skills was supported by 54.2% of students who strongly agreed and none agreed, while 0.8% were undecided, 50% disagreed, and 40.0% strongly disagreed. Furthermore, frequent use of Snapchat (mean score = 3.11) enables adolescents to develop an interest in literacy skills. Its contribution was supported by 15.8% of students who strongly agreed and 0.4% agreed, while 72.1% were undecided, 2.1% disagreed, and 9.6% strongly disagreed.

Social media such as Snapchat boosts students' critical thinking, which is another aspect that was mentioned by students. The participants posted a mean score of 2.76. Students rely on Instagram as their social media platform, yet it negatively affects their acquisition of literacy skills, with a mean score of 2.36. On the same theme on the contribution of social media to the development of information literacy skills among students in HLIs in Arusha region, a lecturer noted that:

“HLIs should create and share educational videos on YouTube, Facebook, Instagram, Twitter and WhatsApp. This relevant academic information, if accessed by students, will enhance their literacy skills. Similarly, making use such vast resources will supplement traditional teaching methods. Students should be guided on how to find reliable and relevant educational content on the platform” (Personal Interview, 29th July, 2025).

In addition, the lecturer's parent pointed out that:



“Students should be encouraged to set personal limits on social media usage to balance their time effectively between academic and social activities. Tools and apps that monitor and control screen time can be introduced” (Personal Interview, 29th July, 2025).

While responding to the question on how social media influences students' information literacy skills, another lecturer remarked that:

“Course instructors in educational institutions should provide guidelines on the effective use of social media platforms like Twitter and WhatsApp for academic purposes. This could include following educational accounts, participating in academic discussions, and using these platforms for research and collaboration” (Personal Interview, 30th July, 2025).

Use of WhatsApp chats improves students' interest in reading and writing, with a recorded mean score of 3.02 that was slightly lower than the grand mean score of 3.09. The data shows that 41.5% of students strongly agreed and 1.7% agreed, while 1.3% were undecided, 10.0% disagreed, and 46.3% strongly disagreed.

4.2 Discussion

The findings from the study highlight several critical aspects regarding the use of online learning platforms, internet accessibility, and social media in shaping students' literacy skills in higher learning institutions in the Arusha Region. The research instruments achieved a 100% return rate, ensuring reliable and representative data collection from both students and lecturers. Demographic analysis revealed an equal gender distribution and indicated that most lecturers were assistant lecturers, suggesting differences in adoption of digital tools across academic seniority levels, consistent with Kimani and Mwendwa (2021). In relation to learning platforms, Moodle was widely acknowledged as an essential tool for enhancing information literacy, although challenges such as usability and limited technical support were reported. Zoom, on the other hand, was strongly preferred by students for its flexibility and accessibility, though lecturers expressed mixed opinions about its effectiveness, echoing findings by Powell et al. (2022).

With regard to internet access, the results demonstrated that most universities in the Arusha Region provide consistent connectivity in classrooms, computer labs, libraries, and student residences, although disparities remain. High-speed internet was recognized as critical for digital learning (Zarei & Mohammadi, 2022), yet occasional challenges such as limited bandwidth, infrastructural deficiencies, and financial constraints were highlighted. Access to online platforms for academic purposes was reported as high, supporting resource sharing and collaborative learning, though training gaps for both students and instructors were identified. IT support services were generally available, ensuring quick resolution of technical problems, though occasional deficiencies persisted.

The use of social media platforms revealed both positive and negative effects on literacy skills. Facebook, WhatsApp, Twitter, and Snapchat were found to enhance reading, writing, and critical thinking skills when used responsibly, aligning with findings by Greenhow and Lewin (2016) and Sivakumar (2020). However, the use of contracted words, particularly in chats, was shown to negatively affect spelling and formal writing skills, consistent with Wood et al. (2014). YouTube and Instagram, while widely accessed, were perceived as more entertainment-focused, with limited contributions to literacy development unless carefully integrated into academic contexts (Snelson et al., 2022; Kelly et al., 2015). The results also highlighted social media's potential to foster collaboration, engagement, and motivation in reading and writing, though addiction and misuse could undermine academic performance.

Overall, the study underscores that while digital platforms and social media present significant opportunities for enhancing literacy skills, their effectiveness depends on responsible use, institutional support, and training. Higher learning institutions must therefore strengthen technical infrastructure, provide continuous sensitization, and encourage the academic integration of social media and online learning platforms to maximize their educational benefits.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

According to the study's findings, social media platforms are widely used in Arusha region higher education institutions and have a strong integration with teaching methods. The extensive use of YouTube, Facebook, Instagram, Twitter, WhatsApp, and Moodle for student involvement served as proof of this, demonstrating the platforms' popularity and universal acceptability in the academic community. Furthermore, professors' judgments on Zoom's efficacy as a teaching tool were more varied, reflecting a range of experiences and viewpoints, even if students preferred it as a learning tool. Additionally, both lecturers and students agreed that internet connection is widely available in computer labs, libraries, and classrooms, fostering a technologically enhanced learning environment that supports academic pursuits. To guarantee constant accessibility and usability of online platforms, however, concerns including sporadic connectivity problems and differences in technical support levels, were noted as problems that need to be addressed. Regarding the effects on educational quality, the widespread use of social media platforms, which typically promotes easier access to learning materials and flexible learning settings, emphasizes the significance of resolving infrastructure and technical issues to maximize their efficacy in literacy development.



According to the data, students mostly use social media platforms for social contact rather than education, even if they also use them extensively for some instructional purposes. Group interactions and resource sharing on social media platforms like Facebook and WhatsApp demonstrate the potential for educational involvement. However, there is little incorporation of social media sites like Snapchat, Instagram, and Twitter into official educational activities; instead, they are primarily utilized for private communication and enjoyment. Social media platforms' educational potential could be increased by incorporating them into the curriculum in a planned and intentional manner and promoting their use in scholarly discourse. The results emphasize how crucial it is to use social media sites like YouTube and WhatsApp in a controlled and responsible manner to improve students' education in HLIs. Important techniques that students find useful include getting help, managing their schedule, and making use of educational resources. Reading comprehension can be further improved by participating in scholarly debates and interacting with instructional materials. To avoid distractions and guarantee a balanced approach, social media usage must be restricted and adjusted to emphasize educational benefits.

5.2 Recommendations

The following recommendations were made:

HLIs should create and share educational videos on YouTube, Facebook, Instagram, Twitter, and WhatsApp. This relevant academic information, if accessed by students, will enhance their literacy skills. Students should actively participate in responsible usage of social media and utilize interactive tools provided by the platforms to enhance engagement and acquisition of literacy skills. There is a need to develop clear guidelines and policies for the use of social media platforms in educational settings, outlining expectations for both academic engagement and responsible social interaction. This can be made possible by establishing peer support groups to discuss and address social media issues.

Collaborative learning through social media platforms by integrating them into group projects, discussions, and peer-to-peer tutoring activities should be encouraged. Similarly, there is a need to regularly monitor and assess students' social media usage patterns to identify opportunities for educational enhancement and to address potential distractions or misuse. Parents should be educated about the dual roles of social media in adolescents' lives and encourage them to set reasonable usage limits to support academic responsibilities. Online academic discussions through social media platforms to foster collaborative learning, critical thinking, and literacy skills among students should be facilitated and promoted.

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Effect of career progression factors on service delivery: Evidence from refugee humanitarian organizations in Kenya

Robert K.W. Egessa^{1*}

Audan Leah Lokala²

Edwin Simiyu³

^{1*}regessa@mmust.ac.ke

²ekaionesmus82@gmail.com

³ejsimiyu@mmust.ac.ke

¹<https://orcid.org/0000-0002-1862-2823>

²<https://orcid.org/0009-0007-9253-9263>

³<https://orcid.org/0009-0003-5383-5992>

^{1,2,3}Department of Business Administration and Management Sciences, Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

This study investigated the effect of career progression factors on service delivery by employees of selected refugees' organizations in the humanitarian services ecosystem in Kenya. The study was based on Herzberg's two-factor theory. It utilized descriptive and explanatory research designs. Using the census, the study targeted all 300 employees of the five dominant refugee organizations operating in Kakuma Refugee Camp in Turkana County, Kenya. Data was collected from the respondents using structured questionnaires. Validity and reliability of the questionnaire were established. Data was analyzed using both descriptive and inferential statistics. The study established that career progression factors had a positive and significant effect on service delivery. The study provides strategic insights for human resource management policymakers in refugee organizations by highlighting the importance of structured career progression initiatives in supporting employee welfare, building employee loyalty, and enhancing service delivery. Specifically, these results inform international human resource management practices by providing insights into the development of targeted policies aimed at improving staff acquisition, retention, and overall organizational effectiveness in humanitarian organizations.

Keywords: Career Progression, Human Resource Management, Humanitarian Organizations, Service Delivery

I. INTRODUCTION

Service delivery quality plays a critical role in determining organizational efficiency and effectiveness in both public and private sectors organizations (Al-Ibrahim, 2014). This is particularly important for organizations operating within humanitarian settings where, ensuring support for continued human co-existence, peace, conflict resolution and livelihood is key. In this context, an organization's capacity to fulfill client needs with efficiency and responsiveness hinges not only on operational infrastructure but also on the robustness and reliability of its talent. Career progression comprising of promotion, training and development, employee engagement and flexible working practices serves a crucial role in enhancing employee productivity and overall institutional output (Shiri et al., 2023; Parveen and Rizq, 2024). Given the focus and nature of humanitarian organizations where personal interaction and responsiveness are key, prioritizing staff development has a direct impact on the service provision consistency, quality and sustainability (Moteki, 2023).

Globally, research in various parts of the world including China, Oman, Brazil and Saudi Arabia shows that career progression has gained increasing recognition as a core function within strategic human resource management (SHRM). Organizations that establish well defined development pathways and invest in skill building initiatives such as training and career development are more likely to cultivate a culture of a committed and high performing workforce (Tawfig and Kamarudin, 2021; Ambrosius, 2018; Gallardo-Gallardo et al., 2020; Al Balushi et al., 2022). Research



further shows that when staff members perceive organizational support in upward mobility and growth prospects within their organizations, their levels of motivation, innovation, and efficiency in service delivery tend to rise correspondingly (Sibonde & Dassah, 2021; Al Balushi et al., 2022; Deepalakshmi, 2024). Moreover, institutions that focus on internal growth and career advancement are better positioned to retain skilled talent and ensure sustainable operational success. Such institutions build social capital that is instrumental in building organizational cohesiveness and enhance performance (Kang et al., 2020). Organizations are therefore investing in career development for renewal and sustainability.

In Africa, according to Manjoo et al. (2023) the presence of a clear career path influences employee retention. This calls for organizations to clearly design career paths and ladders to enable employees to plan their careers and work towards attaining desired career goals. Various studies undertaken in Kenya, Nigeria and South Africa affirm that career progression ensures that an organization has a sustainable continuous supply of talent for service delivery (Mugaa et al., 2018; Ebini et al., 2023; Ketchiwou et al., 2022). Career progression opportunities are often limited, especially in public service and nonprofit organizations. Structural and financial constraints such as under resourced HR departments, bureaucratic inefficiencies and discrepancies between policy pronouncements and execution have hindered the development of effective talent management systems (Kim, 2025; SRC, 2023). In Kenya, despite reforms in employment laws and public sector governance, significant challenges persist in translating these legal frameworks and policies into practical, inclusive career advancement systems particularly in marginalized regions and within humanitarian focused institutions (Turkana County Government, 2018). The result is frequently a workforce that experiences low morale, high attrition rates and substandard service delivery.

Refugee serving organizations operating in Kenya, particularly in regions like Kakuma and Kalobeyei in Turkana County, work in environments marked by operational risk, harsh climatic conditions and persistent fear of conflicts. This is exacerbated by the reason for exile that the refugees are away from their mother land due to forced displacement arising from political upheavals. Employees working for such organizations therefore have to navigate sociocultural, psychological and political terrains as they seek to deliver the requisite services to these populations. The refugee organizations they work for are mandated to provide essential services including healthcare, education, protection and humanitarian aid to vulnerable refugee populations (UNHCR, 2023). To do so effectively, they must continually attract, train and retain their staff to ensure competence and avoid obsolescence. Despite these expectations, many of these organizations suffer from inadequate or poorly enforced career progression mechanisms, leading to dissatisfaction among employees, restricted career advancement opportunities that ultimately, compromised service standards. Even in contexts where resources are constrained, the structured development of human capital through strategic growth initiatives remains a cornerstone of organizational effectiveness (Korff et al., 2015).

Despite the growing body of literature linking HRM practices with organizational performance, there exists a notable gap in research concerning the specific influence of career progression factors on service delivery in humanitarian and refugee assistance settings within Kenya. An appreciation of uniqueness of humanitarian organizations and how they differ from profit-making entities is critical in understanding talent management in humanitarian context. Such entities operate based on altruistic values. This makes aid workers to face the challenge of reconciling altruistic motives with career objectives and personal relations (Hindman and Fechter, 2011). Further, the need to react rapidly to sudden crises demands a high degree of flexibility by such humanitarian entities and their employees. In addition, humanitarian operations often take place in dangerous locations (Stoddard, et al 2009). These scenarios pose a challenge in looking at career progression initiatives in such organizations using lenses that would have been used to assess the same issues in calm settings.

1.1 Statement of the Problem

In normal settings, humanitarian organizations are expected to implement robust human resource management practices that prioritize career progression. This may encompass clear promotion pathways, comprehensive training and development programs, active employee engagement and flexible work arrangements. Such practices enhance employee motivation, job satisfaction, and performance, leading to improved service delivery outcomes (Korff et al., 2015; Azimi et al., 2025).

A cursory look at various studies done on career progression factors and their effect on service delivery show that career development factors affect service delivery and organizational performance (Ngari et al., 2025; Kathukya & Igoki, 2024; Odollo & Muema, 2020). Most of these studies have however been undertaken in different geographical and sectoral contexts with scant empirical evidence from the humanitarian organizations sector despite the critical role such organizations play in conflict resolution, humanitarian assistance and development across the globe. Further, many refugee organizations operate without structured career progression frameworks given their altruistic orientation (Hindman and Fechter, 2011; ILO, 2021). These deficiencies contribute to low morale, high turnover rates and inconsistent service delivery (UNHCR, 2023). Additionally, existing literature predominantly focuses on logistical, economic and policy aspects of aid delivery, leaving a significant gap in understanding the internal human resource

dynamics that affect service quality by refugee organizations. This study sought to address this gap by establishing the effect of career progression factors on service delivery in selected refugee humanitarian organizations in Turkana County, Kenya.

1.2 Research Objective

To determine the effect of career progression factors on service delivery in selected Refugee Humanitarian organizations in Kenya.

1.3 Research Hypotheses

HO₁: Career progression factors have no significant effect on service delivery in selected Refugee Humanitarian organizations in Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

The study was guided by Herzberg's two-factor theory.

2.1.1 Herzberg's Two-Factor Theory

The study was guided by the Two-Factor Theory, developed by Frederick Herzberg in 1959. This theory identified two distinct categories of factors, which influenced employee motivation and job attitudes: motivators (intrinsic factors) such as achievement, recognition, and opportunities for advancement; and hygiene factors (extrinsic elements) including salary, working conditions, rules and regulations and supervision (Shaikh et al., 2019). According to Herzberg, while hygiene factors are necessary to prevent dissatisfaction, they do not lead to job satisfaction or improved performance on their own. True motivation and higher productivity arise from intrinsic factors that satisfy psychological needs for personal growth and achievement (Mehrad, 2020; Mitsakis, and Galanakis, 2022). This distinction underscores the role of hygiene factors in enhancing lasting employee performance especially in the service driven sectors.

In the context of refugee organizations, Herzberg's theory offers a framework for understanding how satisfiers or intrinsic factors such as the job itself that one does, recognition, responsibility and opportunity for career progression influences service delivery outcomes. While many organizations may meet basic hygiene requirements such as safe workspaces, supervision, human resource policies and standard pay, they often fail to offer structured promotion paths, skill development or active employee engagement, which are key motivators that drive job satisfaction and employee effectiveness (Mehrad, 2020; Lixel, & Lantican, 2021). Without these intrinsic elements, employees may remain disengaged, resulting in suboptimal service delivery, even in the absence of overt dissatisfaction. By anchoring on Herzberg's insights, this study sought to establish the extent to which career progression as motivator contributed to enhanced service delivery in refugee organizations, particularly those operating in harsh economic and climatic environments in Turkana County, Kenya.

2.2 Empirical Review

Career Progression is a continuous process that aligns individual aspirations with organizational objectives by enhancing employee capabilities and providing structured growth opportunities. It comprises of both formal and informal learning, internal mobility, and career planning, enabling staff to transition into roles of greater responsibility and impact (Ali et al., 2019). Career development enhances abilities, expertise, and job understanding of the workforce. Well-developed career development frameworks integrate education, skill building, mentoring, and networking to nurture long-term employee engagement and productivity. Within this framework, career planning plays a central role by guiding employees through role progression based on both organizational demands and personal potential (Chebet, 2015; Cania and Hoxha, 2024). When organizational opportunities for training, promotion, and mentorship are limited or poorly aligned with employee expectations, staff motivation declines, leading to service inefficiencies (Muchibi et al., 2022; Al Hilali et al., 2020). In humanitarian settings, particularly in refugee-focused organizations, career development factors should significantly contribute to service delivery outcomes. According to Kathukya and Igoki (2024) career progression practices including career planning, career counselling and career management if undertaken in the desired manner, will lead to professional mobility, enhanced employee experience, increased commitment, talent retention, and improved service delivery.

Service delivery is fundamentally tied to service quality, with scholars like Amerta and Madhavi, (2023) emphasizing that effective service interactions shape client perceptions and satisfaction. Organizations that understand and meet customer value needs tend to outperform competitors by integrating customer focus into their core operations. Key service quality and delivery indicators such as integrity, reliability, and responsiveness are influenced by employee



competence and motivation (Sibonde & Dassah, 2021). For refugee organizations, strengthening service delivery mechanisms is essential to meet both beneficiary expectations and institutional goals.

2.2.1 Career Progression Factors and Service Delivery

Tabiu and Nura (2020) explored the influence of career planning on employee performance within local governments in North Western Nigeria, focusing particularly on perceived career opportunities as a mediating factor. The study established that effective career planning significantly improved both task and contextual performance, with a stronger impact observed on task performance. This suggests that when employees perceive clear and attainable career opportunities, they are more motivated to enhance their work output. A related study on career practices by Mwashila (2018) in public universities in Kenya found that key career management practices such as mentoring, promotions, and in-service training were strongly linked to improved staff productivity and institutional effectiveness. Employees who received career guidance and developmental support exhibited greater commitment to their roles and were more likely to exceed performance expectations. These findings suggest that when organizations invest in staff career progression through mentorship and relevant training, it can lead to better service delivery. This scenarios though addressing public sector service organizations do not tackle career factors in the humanitarian space. An analysis of the applicability of these findings in refugee organizations offering humanitarian assistance is critical to determine its universality.

Namabwe (2012) in studying challenges facing human resource managers in humanitarian settings established that budgetary allocations, competition for talent, insecurity and high costs of training employees affected effectiveness of international humanitarian organizations. Another study by Lazarova et al. (2021) found out that career satisfaction among humanitarian intergovernmental workers was influenced by views of how their assignments fit their overall career and the procedural justice of their organization's career management system. This implies that the employees' perceptions of career advancement opportunities and practices was affected by how fairly their organizations handled career management practices and this in turn affected how employees contributed to their organization's success. Their results showed that perceived fairness and clarity in promotion pathways significantly contributed to higher levels of job satisfaction and engagement.

Other studies by Nanle et al. (2024), Nyoni (2024), and Nasir et al. (2021) all point to the fact that career progression factors affect service delivery. Most of these studies though done in non-humanitarian sectors such as the insurance industry, public sector and private sector firm identify career progression factors to be emphasized in improving organizational human resource management practices. On the other hand, Grant and Hesketh (2021) provided a critical perspective by highlighting the unintended consequences of overemphasizing career planning. Their study found that excessive pressure to map out and pursue career goals could lead to elevated stress and anxiety, which in turn undermined job performance by employees. This suggests that while career development planning and execution is beneficial, organizations must strike a balance between ambition and well-being, by ensuring that such developmental initiatives are supportive rather than overwhelming. By encouraging employee involvement in setting career goals and execution of the same it will reduce risks associated with unintended consequences while still achieving performance benefits. The extent of this scenario among humanitarian workers in refugee settings is worth exploring.

III. METHODOLOGY

3.1 Research Design

The study employed descriptive and explanatory research designs.

3.2 Target Population

The study employed the census method where it targeted all the three hundred (300) employees of the five dominant Refugee Organizations operating in Kakuma Refugee camp in Turkana West Sub County, Turkana County, Kenya. These organizations included Department of Refugee Services, World Vision, Dan Church Aid, Film Aid International, and Inkomoko. They comprised of five (5) Heads of departments and two hundred and ninety-five (295) members of staff of those refugee organizations.

3.3. Data Collection and Analysis

Primary data was collected using structured questionnaires. Validity and reliability of the data collection instrument was tested. For reliability, Cronbach Alpha coefficient was used to test for consistency of the data collection instrument and all the variables exhibited a coefficient greater than 0.7. Both content and construct validity were carried out to check whether the questionnaire statements addressed the contents they were to address.

Data analysis was done using descriptive and inferential statistical tools (Kothari, 2019). The results were presented in form of tables and figures. The following simple linear regression model was applied:

$$Y = \alpha + \beta X + \varepsilon$$



where;

- α Constant
- Y Represents Service Delivery (dependent variable)
- X Represents Career Progression Factors (independent variable)
- ϵ Represents error
- β Represents regression coefficient

The target population was as shown in table 1 below:-

Table 1
Demographic Information of Respondents

Selected Refugee Organization	Designation	Target Population
Inkomoko	Head of organization	1
	Management staff	1
	General Staff	38
Sub –Total		40
Department of Refugee Services (DRS)	Head of organization	1
	Management staff	5
	General Staff	114
Sub- Total		120
World Vision	Head of organization	1
	Management staff	3
	General Staff	25
Sub-Total		29
Dan Church Aid	Head of organization	1
	Management staff	2
	General Staff	20
Sub- Total		23
Film Aid International	Head of organization	1
	Management staff	5
	General Staff	82
Sub- Total		88
TOTAL		300

Source: Respective Refugee Organizations Websites (2024)

IV. FINDINGS & DISCUSSION

4.1 Response Rate

A total of 300 questionnaires were distributed out of which 269 were returned. This represented a response rate of 89.7 percent. This reinforces the assertion by Katheranya, Ndegwa and Oringo, (2020) who recommended that a response rate of 70% or more are appropriate for an effective data analysis and presentation.

Table 2
Reliability Test Results

Item Statistics			
Variables	Items	Cronbach Alpha Results	Remarks
Career Progression Factors	7	.798	Accepted
Service Delivery	4	.760	Accepted

The research assessed the internal consistency of reliability using Cronbach's Alpha. This formula was selected for its effectiveness in evaluating the reliability of the data collection tool. According to Daud *et al.* (2022), scales with a coefficient alpha score of 0.7 indicate acceptable reliability, while a score above 0.7 is deemed adequate for establishing reliability. The study achieved an Alpha coefficient of above 0.7. The results are shown on table 2.



4.3 Descriptive results for Career Progression Factors

Respondents were asked to respond to statements that sought to establish career progression practices prevalent in their organizations. They were to rate the statements on a likert scale of 1 to 5 , with 1 being *strongly disagree* and 5 being *strongly agree* as shown on table 3:

Table 3

Descriptive Results of Career Progression Factors

Statements	5	4	3	2	1	M	S. D
	My organization recruits and selects employees from different parts in the world.	152 (56.5%)	66 (24.5%)	32 (11.9%)	8 (3.0%)	11 (4.1%)	4.26
My organization continuously seeks to improve its employee's competence to enable them cope with the dynamic work environment	142 (52.8%)	76 (28.3%)	27 (10.0%)	18 (6.7%)	6 (2.2%)	4.23	1.024
My organization prioritizes training and development of staff on a continuous basis	125 (46.5%)	67 (24.5%)	28 (10.45)	29 (10.8%)	20 (7.4%)	3.92	1.292
My organization has career progression structure which highlights how employees can grow in their career within the organization	111 (41.3%)	59 (21.9%)	45 (16.7%)	32 (11.9%)	22 (8.2%)	3.76	1.320
There are practical employee mentorship and coaching programs in my organization.	97 (36.1%)	77 (28.6%)	46 (17.1%)	29 (10.8%)	20 (7.4%)	3.75	1.255
My organization allocates adequate funds for career development and management programs	101 (37.5%)	59 (21.9%)	44 (16.4%)	25 (9.3%)	40 (14.9%)	3.58	1.442
I am motivated to continue working for my organization given its career development focus	139 (51.7%)	67 (24.9%)	48 (17.8%)	11 (4.1%)	4 (1.5%)	4.21	.975

The results of the descriptive analysis on table 3 indicate that career progression factors significantly influence service delivery in refugee organizations. A large proportion of respondents affirmed that their organizations recruit globally (56.5% strongly agreed, 24.5% agreed), continuously invest in improving employee competence (52.8% strongly agreed, 28.3% agreed), and prioritize ongoing training and development (46.5% strongly agreed, 24.5% agreed). Moreover, most participants acknowledged the existence of clear career progression structures (41.3% strongly agreed, 21.9% agreed) and active mentorship and coaching programs, with 51.7% strongly agreeing and 24.9% agreeing that the focus on career development supports individual growth. These findings align with prior research by Tabiu and Nura (2020), Mwashila (2018), and Alkhalwaldeh *et al.* (2023), who emphasized the positive impact of career progression on organizational outcomes, though they contrast with Mwangi and Gachunga (2016), who argue that without strong managerial support, such initiatives may fail to enhance service delivery.

4.4 Descriptive Results for Service Delivery

The study further sought the respondents' views with regard to service delivered by the refugee organizations through statements that sought to establish this in their organizations. They were to rate the statements on a likert scale of 1 to 5, with 1 being *strongly disagree* and 5 being *strongly agree* as shown on table 4:

Table 4

Descriptive Results for Service Delivery

	5	4	3	2	1	M	S. D
My organization delivers its mandate in a timely manner	137 (50.9%)	78 (29.0%)	43 (16.0%)	11 (4.1%)	0 (0.0%)	4.27	.874
My organization has ensured it has its target this year	136 (50.6%)	90 (33.5%)	34 (12.6%)	9 (3.3%)	0 (0.0%)	4.31	.819
The clients served by our organization are satisfied with our quality of service	112 (41.6%)	64 (23.8%)	58 (21.6%)	25 (9.3%)	10 (3.7%)	3.90	1.155
Clients served by my organization have no complaints regarding our service delivery	127 (47.2%)	58 (21.6%)	51 (19.0%)	31 (11.5%)	2 (0.7%)	4.03	1.092

The findings on table 4 indicate that most respondents strongly agreed (50.9%) or agreed (29.0%) that their organizations deliver services in a timely manner and successfully meet annual targets, as affirmed by 50.6% and 33.6% of respondents, respectively. Additionally, 41.6% strongly agreed and 23.8% agreed that clients were satisfied with the quality of services, with minimal complaints reported. These results align with studies by Hailu and Shifare (2019) and



Atiku *et al.* (2023), which emphasize the importance of excellent service delivery and customer satisfaction in achieving a competitive advantage.

4.5 Inferential Statistics

The study also sought to establish causality using inferential analysis with regard to the independent variable’s influence on the dependent variable. Simple linear regression test was used for this endeavour. The Regression Analysis was done to establish the Effect of Career Progression Factors on Service Delivery. The results are presented on tables 4.4 to 4.5:

Table 5
Model Summary for Career Progression Factors

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.538 ^a	.290	.287	2.830	.290	108.928	1	267	.000

a. Predictors: (Constant), Career Development Factors

The model summary as per Table 5 shows an R (Correlation Coefficient) of 0.538. This indicates a moderate to strong positive correlation between the predictor (Career progression Factors) and the dependent variable (Service Delivery). It suggests that as Career progression Factors increase, Service Delivery tends to improve. The R-Square is 0.290, means that 29.0% of the variance in Service Delivery can be explained by the Career progression Factors. This is a relatively substantial proportion, indicating a good level of explanatory power. Adjusted R-Squared: 0.287 indicates that the model remains relatively effective despite the inclusion of many predictors. The Standard Error of the Estimate is 2.830. This value denotes the mean distance of the observed values from the regression line. It quantifies the precision of the model's predictions.

Table 6
ANOVA for Career Progression Factors

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	872.104	1	872.104	108.928	.000 ^b
	Residual	2137.659	267	8.006		
	Total	3009.762	268			

a. Dependent Variable: Service Delivery
b. Predictors: (Constant), Career Development Factors

The F Change is 108.928, with degrees of freedom (df1) being 1 for regression model and (df2) being 267 residuals (or error term). ANOVA results on table 6 can be explained as follows: The results explain the explanatory power of the model was significant (F (1,267)=108.928, p<0.05). Regression Sum of Squares stood at 872.104 representing the variance explained by the model (Career progression Factors). Residual Sum of Squares is 2137.659, which represents the variance not explained by the model (i.e., the error or unexplained variance). The Total Sum of Squares is 3009.762 which is the total variance in the dependent variable (Service Delivery). Mean Square (Regression) is 872.104 which is the average variance explained by each predictor in the model. The F-Statistic value is 108.928 which is a measure of how well the model explains the variance in the dependent variable relative to the residual variance. A high F-statistic indicates that the model provides a good fit.

Table 7
Coefficients for Career Progression Factor

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.987	.790		10.115	.000
	Career Development Factors	.292	.028	.538	10.437	.000

a. Dependent Variable: Service Delivery

The coefficient results on table 7 revealed that when Career Progression Factor are zero, the baseline Service Delivery score is 7.987. Each one-unit increase in Career Progression Factor leads to a 0.292 unit increase in Service Delivery, with a strong standardized effect (Beta = 0.538). The relationship is statistically significant ($t = 10.437$, p value 0.000), indicating a meaningful impact.

Thus, the equation $Y = \alpha + \beta X + \varepsilon$ becomes $Y = 7.987 + 0.292X$

The null hypotheses stating H_{0i} : Career Progression Factors have no significant effect on service delivery among selected refugees' organization in Kenya is therefore rejected since the Career Progression factors and service delivery are significant at 0.000 p value.

The findings align with previous literature conducted by Tabiu and Nura (2020), Mugaa *et al.* (2018), Nanle *et al.* (2024) and Nyoni (2024) whose study findings underscore the positive correlation between career development factors and enhanced organizational performance, particularly in service-oriented sectors. They agree that career development programs when aligned to organizational objectives not only improve individual competencies but also lead to greater organizational efficiency and effectiveness, hence improved service delivery.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

From the findings, various conclusions can be drawn. Based on the study objective, it is concluded that a significant and positive relationship exists between career progression factors and service delivery within refugee organizations in Kenya. This shows that career progression factors significantly influence service delivery in refugee organizations offering humanitarian assistance in Kenya. Career progression initiatives such as global recruitment, training and development initiatives, structured career growth, and mentorship and coaching programs were widely implemented in these entities. These initiatives positively influenced employees' service delivery. Inferential statistics further support these observations, with a moderate to strong positive correlation ($r = 0.538$, $p < 0.05$) and regression results indicating that career progression factors account for 29% of the variance in service delivery outcomes. The regression coefficient ($\beta = 0.292$, $p = 0.000$) confirms that improvements in career development are associated with measurable enhancements in service delivery. The study concludes that there is strategic value in aligning career development with organizational performance, especially in service-driven environments like refugee support humanitarian initiatives.

5.2 Recommendations

From the findings and conclusions, the study recommends that organizations should invest in comprehensive career progression programs and structures that provide clear advancement pathways and professional growth opportunities for employees. Such investments will not only enhance employee performance but also improve service delivery outcomes. This is because motivated and well-trained staff are crucial for effective service provision, more so in humanitarian settings that operate on altruistic environments. Further, organizations should adopt formalized career progression frameworks, integrate continuous learning programs, and provide adequate funding for such initiatives. These policies will ensure long-term staff retention and performance improvement.

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Influence of leave programs on employee commitment among county administrators in the Western region of Kenya: The moderating role of organizational culture

Mwinami Sande Jackson^{1*}

Robert Egessa²

Evans Kwendo³

^{1*}jacksandey15@yahoo.com

²regessa@mmust.ac.ke

³ekwendo@mmust.ac.ke

^{1,2,3}Masinde Muliro University of Science and Technology (MMUST), Kenya

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ABSTRACT

Work-life balance initiatives have been shown to positively impact employees' well-being and integration, with commitment emerging as a key factor for successful work-life integration. However, despite the presence of work-life balance practices, employee commitment remained a challenge for managers in the public sector. The role of organizational culture in moderating the relationship between work-life balance practices and employee commitment had not been fully explored. This study investigated the influence of leave arrangement practices on employee commitment, with organizational culture as a moderating factor, among county administrators in the Western Region of Kenya. The study was Guided by Spillover Theory, Enrichment Theory, Segmentation Theory, and Facilitation Theory, the study adopted both descriptive and correlational survey designs. Data were collected from county administrators in selected counties—Kakamega, Vihiga, Busia, and Bungoma—using semi-structured questionnaires. The study sampled the data using a census. Data were analyzed using descriptive statistics (frequency, percentages, mean, and standard deviations) and inferential statistics, with Pearson's correlation coefficient used to assess the relationships between variables. Simple and multiple linear regressions tested the significance of individual work-life balance practices, while hierarchical regression evaluated the moderating effect of organizational culture. The findings revealed that leave programs ($B = 0.638$) had significant positive effects on employee commitment. However, when organizational culture was introduced as a moderating factor, none of these practices showed a statistically significant effect, indicating that organizational culture did not moderate the relationship between work-life balance practices and employee commitment. These results suggested that leave arrangements were key drivers of employee commitment, but enhancing organizational culture alone was not sufficient to improve this relationship. This finding is expected to benefit stakeholders, including county and national governments, researchers, and human resource professionals, by providing insights into strategies that could enhance employee commitment in the public sector. To improve commitment effectively, county administrations might need to look beyond these practices and consider other aspects of the organizational environment, such as leadership, communication, career development, or job security, which could have a more profound effect on fostering employee engagement and loyalty.

Key words: Employee Commitment, Leave Arrangements, Organization Culture, Worklife Balance

I. INTRODUCTION

The reality of modern life is that the quality of work life (QWL) has continued to deteriorate as people continue to focus on work more than ever. It is the fact from researches that on an average, employees in the developed countries spend 14 to 15 hours a day on work against the accepted norms of 8 to 9 hours and most distressing are that the trend is on the rise. Burnout; stress leading to health hazards is the natural off shoot (Choo & Lee, 2017). The success and growth of any given organization depends on its human resources. Employee's intentions to leave is one of the intense challenges for any organization which have lasting effects. Employee's turnover is a serious issue especially in the field of HR management (Choo & Lee, 2017).

In the modern world with its rapid development, human resource professionals are interested in finding alternatives that will allow them to influence the bottom line of their organizations positively, boost the morale of employees, retain employees who have valuable knowledge of the company and follow the trends in the workplace (Dhas & Karthikeyan, 2016). Pressure at work keeps increasing all over the world. Most employees have paid a price to their health and well being due to work target demands which constitute pressure and pressure to balance the two (Palumbo, 2020). Hence, the need to carry this discussion on work-life balance practices to prevent future incidences.



In the UK, conducted studies revealed that the prevalence of working long (more than 48 hours per week) is higher among men than women, consequently, men have poorer work-life balance than women (Choi et al., 2021; Brown et al., 2020). Furthermore, family obligations are not what constitute a problem in work-life balance in organization. The other categories of activities that the person aspires to do, other than the work requirements, are associated with work-life balance. In fact, previous survey-based study conducted by OECD (2018) showed that over a half of British workers believed that they needed a better work-life balance to follow their interest in arts and to practice sporting activities (Daverth et al., 2016).

Spain is among the European Union countries whose workers have lesser extents of work-private life balance. Dual career couples are becoming more common due to the integration of women into the labour force and thus the family unit is subject to severe work-family conflict and family-work conflict (Galvez et al., 2020; Van Steenbergen, et al., 2014). The long school holidays, long working days (nine to eight is normal) and the few opportunities to make part-time working arrangements place Spain at a disadvantage in comparison with other countries of the European Union (Van Steenbergen, et al., 2014). As an illustration, Finland, Norway and Germany exhibit lower worker imbalance than Spain since in the countries there exist institutions and firms that provide family – friendly policies in a more generous manner.

In Korea, WLB issues have been numerous in the society, including a rise in social activities of Women, Rising cases of dual-earner couples and single-parent families (Jeon & Hong, 2020). These transformations have generated additional conflicts and additional troubles in the work and family life of individuals. According to one survey, a large number of Koreans were experiencing work-family conflict. The report showed that 73.8 percent of 663 respondents were experiencing stress because of high conflict between their work and family roles. Moreover, as per previous studies, work-family conflict is strongly connected with other organization outcomes, including organization commitment (OECD, 2018; Tavassoli et al., 2015; Choi and Kim, 2021). Due to this information, numerous organizations, individuals and researchers all over the world have developed an additional interest in the notion of work-family conflict (Namasivayam & Zhao, 2007; Choi & Kim, 2021).

In Australia; the majority of employers discovered the advantages of implementing work-life balance practices in employee recruitment and retention during 1990's (Sethi, 2015). The argument is that employees can become elements of solutions to major issues within the organization Work and family lives. There is constant clash between the two spheres leading to long hours, less time at home and in the office and family missed. It can cause work family conflict and is associated with higher burnout, stress, lack of job satisfaction and lower organizational commitment (Poulose, 2017; ACAs Report, 2015; McDonald & Bradley, 2005).

Organizational level work-life balance programs are observed to be beneficial to both the employers and the employees which in turn improve job satisfaction, work engagement and work productivity of the employees. Many authors have researched and found out that work-life balance has led to minimization of financial loss by organizations. In 1989, US industry incurred \$150 billion annually in direct and indirect health related costs because of job related stress (Golden & Jorgensen, 2015). In Canada, the cost of absenteeism caused by a high level of work-life conflict has been estimated to reach up to 10 billion Canadian dollars per year (Gragano et al., 2020; Linnhoff et al., 2014; Duxbury & Higgins, 2017). The Department of trade and Industry, U.K had estimated the cost of employee absence as 4 billion pounds annually (DTI, 2000). Such employee absence can be minimized or avoided through work-life policies in the organization and thus minimize the monetary losses. Ngari et al 2014, assert that there is a push towards the 24-hour economy in Kenya. As a result of this ferment push, more flexibility is required to cover around the clock peaks. The study postulates that there is much evidence of work intensification and as a result of the fast pace there is greater levels of stress in organizations in Kenya. These findings are consistent with those of who says that employees experience, anxiety, workload and loss of control, pressure, long hours and insufficient personal time (Ngari et al., 2014). These studies agree that such experiences by employees likely encourage a re-assessment of values by employees. The studies also note that, younger individuals joining the workforce are much less willing to sacrifice their personal lives for total commitment to work (Ngari et al 2014). These studies acknowledge that the banking sector is badly hit.

1.1 Statement of the Problem

The situation in any organization is one where employees enjoy a balanced work-life integration, allowing them to fulfil both professional and personal responsibilities effectively. Work-life balance (WLB) practices have been shown to contribute significantly to employee satisfaction, engagement, and overall organizational performance (Murithi, 2020). By offering a flexible and supportive environment, organizations can increase employee commitment, reduce turnover, and improve productivity. This has been evidenced in private sector organizations such as Safaricom and Eco Bank, where implementing WLB practices has resulted in enhanced employee morale and better service delivery (Kegoro et al., 2020). Similarly, research by Mwangi and Omondi (2020) demonstrated that work-life balance practices in higher learning institutions like Kabarak University led to improved employee satisfaction, which in turn positively



affected service delivery. In the banking sector in Nigeria, Oludoyo *et al.* (2023) found that policies related to leave and work flexibility were integral to efficient service delivery and employee performance.

However, the reality in many organizations, particularly in the public sector in Kenya, starkly contrasts with this ideal. Despite the increasing recognition of WLB's importance, employees in the public sector, especially within county governments in Western Kenya, continue to face significant challenges in maintaining a healthy work-life balance. A large portion of public servants in Kenya work extended hours often exceeding the recommended 48-hour workweek which disrupts their ability to balance professional duties with personal and family obligations (Korir, 2019). This imbalance leads to stress, absenteeism, and higher staff turnover, ultimately diminishing employee commitment and hindering organizational performance. Auka and Nyangau (2020) further argue that the exodus of employees from private sector organizations to public sector positions highlights the growing dissatisfaction with workplace conditions, which is exacerbated by the lack of comprehensive WLB programs. While private sector organizations have made considerable progress in implementing flexible work arrangements, welfare programs, and other WLB policies, the public sector remains largely behind in adopting these practices (Kimathi, 2017).

Despite the widespread acknowledgment of the importance of WLB, there is a significant gap in understanding how different WLB practices such as flexible work arrangements, welfare programs, remote working, and leave policies affect employee commitment in specific organizational contexts, especially in the public sector. Although previous studies have demonstrated a positive link between WLB and employee performance, the underlying mechanisms through which these practices influence commitment are not fully explored. Furthermore, the moderating role of organizational culture, particularly in how it impacts the relationship between WLB and employee commitment, remains largely under-researched (Choi & Kim, 2021). While research on WLB has been conducted in countries such as Korea, Spain, Finland, and Germany, these findings cannot be directly applied to the Kenyan context due to significant socio-economic, legal, and political differences (Choi & Kim, 2021). These contextual differences create a need for further investigation into how leave arrangement practices specifically affect employee commitment in Kenya's public sector.

The existing body of literature on leave arrangement practices often overlooks the unique challenges faced by public sector employees in Kenya, and there is a lack of studies that integrate the impact of organizational culture on employee commitment in this specific context. Previous research in countries like Nigeria and the wider private sector has provided valuable insights, but the situation in Kenya's public sector remains poorly understood. For example, while research by Oludoyo *et al.* (2023) shows a positive relationship between leave policies and employee performance in Nigerian banks, similar studies have not been conducted in the Kenyan public sector, leaving a gap in knowledge regarding the role of WLB practices in this context. Furthermore, studies by Kimathi (2017) highlight the poor service delivery in Kenya's public sector, suggesting that WLB practices might not be fully effective in improving employee commitment in this environment. This conflict in findings suggests the need for further exploration to understand the complexities of WLB and its influence on employee commitment in Kenya's public sector.

Therefore, while several studies have examined work-life balance practices globally, the literature remains insufficient to explain the persistent issues of low employee commitment and dissatisfaction in county governments in Western Kenya. This research aims to bridge these gaps by investigating the effects of leave arrangement practices on employee commitment in the public sector and exploring the moderating role of organizational culture. The study will focus specifically on county administrators in Western Kenya, offering valuable insights into how WLB practices can be optimized to improve employee satisfaction and performance in this unique context. By doing so, the research seeks to contribute to the development of more effective work-life balance policies that are contextually relevant to the Kenyan public sector.

1.2 Research Objectives

- i. The study seeks to establish the effect of leave arrangements, organization culture on employee commitment among county Administrators of the four county governments in Western Region Kenya.
- ii. To ascertain the moderating role of organization culture on the relationship between leave arrangements and employee commitment among county administrators in Western Region Kenya.

1.3 Research Hypotheses

H01: Leave programs have no significant effect on employee commitment among county administrators in Western Region Kenya.

H02: Organization culture has no significant effect on the relationship between work-life balance practices and employee commitment among county administrators in Western Region Kenya.



II. LITERATURE REVIEW

2.1 Theoretical Review

Spill Over theory was used as the major or guiding theory in the study. Other theories that were also used as per the objectives of the study included: Enrichment Theory; The Segmentation Theory and Facilitation Theory

2.1.1 Spillover Theory

Research indicates that employees bring emotions, attitudes, skills and behaviors that they develop at work, into their family life and vice versa (Chung & van der Lippe, 2020; Palumbo, 2020; Gragnano et al., 2020; Belsky, 1984; Kelly & Voydanoff, 1985). According to Staines (1980) as quoted in Palumbo (2020) spillover is a positive correlation between work and family such that positive experiences in work would correlate with positive experiences in family and negative experiences in work would correlate with negative experiences in family. A negative spillover may be, e.g., the situation when an employee having negative emotions due to his/ her shift may be influenced during the shift (work) and may remain influenced by the stressful shift in his/her home (Orwa & Nyangau, 2020). Another scenario would be the case of an employee experiencing marital difficulties, in which case his/her domestic life would not be the only aspect that could be compromised, but the quality of the work as well.

In general, the most common position taken by the researchers studying work and family is spillover theory and it was also the theory which had the most support but only weakly. The hypothesis of the researchers was that the worker who has emotional distress due to loss of good reputation or has received unfavorable criticism of the supervisor or co-worker might transfer the negative emotions at the workplace to the family life. The reviewed studies define two meanings of spillover as (a) the positive correlation between family and work satisfaction and family and work values (Pradhan, 2016) and (b) transference in its totality of skills and behaviors between the spheres such as the manifestation of fatigue caused by work at home or the intrusion of family demands into the work schedule.

As cited in Mulanya and Kagiri (2018) the works by (Staines, 1980; Lambert, 1990; Googins, 1991; Zedeck, 1992; Friedman and Greenhaus, 2000) support this assertion by indicating that spillover in one area can affect the other either positively or negatively. Positive spillover is the reality that satisfaction and success in one area can carry with it satisfaction and success in another area. Conversely, negative spillover denotes that the challenges and depression in one area can carry with it the same feeling in another area.

2.1.2 Enrichment Theory

Powell and Greenhaws (2006) developed the theory to examine the phenomenon of enrichment processes that connects work and family and family and work. Enrichment can be defined as a process whereby the quality of life in one role is enhanced by experience in another role. Alternatively, it can as well be described as buildup of psychological resources in one particular role that may overflow into another role. Work-family enrichment posits that action in one sphere can enhance the experiences in the other sphere rather than drain energy of the other sphere (Graham & Dixon, 2017). Enrichment is the process of getting the resources and experiences that come in handy to help those struggling in life. According to the enrichment theory therefore, improvement of role performance in one area is contingent on attainment of resources in another area. Enrichment is concerned with the quality of life of the individual.

According to Powell and Greenhaws (2006), enrichment can take place in the company of one of the two pathways which are effective path and instrumental path. Affective enrichment of work-life implies the transfer of favorable behaviors and feelings between family and work among the workers. Instrumental enrichment of work-life is seen when behaviors and skills acquired in one area enhance performance and effectiveness of that individual in another area.

2.1.3 Segmentation Theory

The theory was propagated in 1960 by Blood and Wolf. This theory holds a view that in the relationship between work and home, the two aspects do not affect the other as they are segmented and thereby all independent entity (Gragnano, 2020). Additionally, it has been noted that work and home have been inherently divided by space, function and time right from the era of industrial revolution. It has been argued that employees sternly holds back thoughts, actions and feelings relating to work when at home and vice versa when at work, thereby enabling employees to maintain fine-lines in relation to family and work. This allows employees to skillfully sort their life.

Segmentation theory assumes that all the domains are autonomous. It also assumes that work and family surroundings of a person do not affect one another and in any case, work and family surroundings operate independently. Yet this division view was challenged through the lens of specialists who demonstrated that work and family are adjacent areas of human life (Lee & Sirgy, 2019). Besides that, it is also necessary to note that the segmentation theory has also the following criticism since it has been pointed out by Guest (2001). Employee social life and work, segmentation theory is the one that lacks the most empirical support and can be regarded as at the stage of theoretical potential. In the



studies of work life balance, this theory has been applied to demonstrate how the various spheres of life of employees correlate to minimize stress that develops due to the different roles.

2.1.4 Facilitation Theory

Barnett (1998) propagated this theory. It is a derivative of the enrichment theory and it discusses the degree to which involvement in one area of life such as work can introduce resources, positive and overall experiences to another role or is facilitated by the skills, experiences and opportunities provided by the area (Talukder et al., 2018).

Facilitation theory can be described as a type of interaction where resources associated with one role enhance or simplify participation in the other role. Frone (2003) defined it as the degree to which involvement in one role results in experiences, skills learning, acquiring, opportunities that simplify involvement in another role (Feeney & Stritch, 2019). The major assumption of this theory is that playing one role becomes easier because of playing another role. Even though, facilitation theory is imagined as a theoretical counterpoint to work-life, critics suggest that they cannot be viewed as the opposite poles of the work life theoretical continuum (Van Steen Bergen et al., 2014). The concept that work and family are mutually supportive and dependent is known as work family facilitation theory (Werbel & Walter, 2002). That is, engagement in one area can positively and beneficially affect performance in the other area. It can be described as the degree to which an individual involvement in one area of life that is either work or family, yields benefits in the form of developmental, affective or capital which benefits result in the improvement of functioning in another area of life that is either family or work. The facilitation between work and -family can be bi-directional in the sense that work can bring benefits that can improve functioning of the work domain.

2.2 Empirical Review

2.2.1 Leave Programs

Leave programs are a critical aspect of work-life balance practices in organizations. They offer employees the opportunity to take time off from work for personal, family, or health-related reasons, which can significantly affect their job satisfaction, organizational commitment, and overall well-being. Several studies have explored how these leave programs impact employees and organizations. Below is an overview of key studies related to leave programs and their impact on employee outcomes.

One notable study by Thompson et al. (2018) examined the relationship between paid leave policies and employee job satisfaction and organizational commitment. The researchers investigated how leave policies, such as annual leave, sick leave, and family leave, contribute to employees' ability to balance work and personal life. The study, which surveyed employees across different sectors, found that employees with access to paid leave were more likely to report higher job satisfaction and stronger organizational commitment. The availability of leave allowed employees to manage their personal and family responsibilities, ultimately leading to greater engagement at work. This study is highly relevant to the current research on county administrators in Western Kenya, where work-life balance is a critical issue, as it shows that leave policies can enhance both job satisfaction and organizational commitment.

2.2.2 Organizational Culture

Schein (2020) examined how organizational culture influences employee behavior and how it moderates the impact of organizational practices, including work-life balance initiatives. His work focused on hierarchical organizations and explored how culture can either support or obstruct work-life balance programs. Schein argued that when an organization's culture values flexibility and work-life integration, it significantly enhances the effectiveness of work-life balance practices, leading to better employee outcomes. His study is particularly relevant to the current research as it provides a foundation for understanding how cultural values, such as support for employees' personal lives, can boost the success of work-life balance programs among county administrators in Western Kenya.

In Denison's (2019) research, he explored the relationship between organizational culture and organizational effectiveness by focusing on four key cultural traits: involvement, consistency, adaptability, and mission. Denison found that organizational culture strongly moderates the impact of human resource practices, including work-life balance initiatives, on employee satisfaction and organizational commitment. His study highlighted that organizations with a strong culture of involvement and adaptability foster environments where work-life balance practices can thrive, leading to higher levels of employee commitment. This aligns with the current study, as it suggests that an organizational culture that values employee well-being and supports work-life balance will likely enhance employee commitment among county administrators in Western Kenya.

According to Schein as quoted in Nguyen et al., (2019), artifacts can be defined as (Schein, 1997): 'At the surface level, there is the level of artifacts which comprises of all the phenomena that one sees, hears and feels when he or she encounters a new group with unfamiliar culture. The visible products of the group, its architecture in the physical form of its environment, its language, its technology and products, its artistic creations, its style as reflected in clothing, modes of address, emotional displays, myths and stories told about the organization, published lists of values, observable



rituals and ceremonies, etc., would be artifacts. This grade was simple to read and extremely hard to decode. Making guesses about the underlying assumptions based on artifacts alone was hazardous, since whatever guesses one makes will be a projection of their own feelings and responses (Schein, 1997). Some examples to these include products, office layout, architecture, documentation, language, technology used, style of dress, myths and stories about the company, rituals and ceremonies.

Values are espoused rationalizations, typically grounded in the learning history of the group: when a solution to a problem is found to be effective and when the group has a collective awareness of that effectiveness, then the value initiates a process of cognitive change. It will first become a shared value or belief and finally a shared assumption. In the event that this transformation process takes place (it will only take place provided the proposed solution remains functional) group members will be inclined to forget the fact that, initially, they were not certain and that the course of action proposed was at a previous point in time discussed and challenged. The only values that can be transformed are the ones that can be physically or socially validated. According to Schein, social validation is a procedure through which a group of people validates some values solely through its collective social experience. Values that concern the less controllable aspects or those that concern the aesthetic or moral issues of the surroundings cannot be tested physically, although they can be validated socially. Predicted values much of the behaviour that can be observed at the artefactual level; they are not founded on prior learning, they simply represent what people says in a variety of situations which may not be consistent with what they would do in situations where these values are functioning. The level of artifacts is interpreted with the aid of values at this conscious level. Organizational values emerge and possess some historic evolution and can hardly be changed or prescribed (Schein, 1997).

When this cognitive transformation of values is successful, values become basic assumptions; they are assumed. What had been a supposition, was slowly beginning to be regarded as a fact. Basic assumptions had minimal variation within a cultural unit; they resemble the theories-in-use that Argyris described. Underlying assumptions are basic and they direct the behavior of individuals and they instruct the members of a group on how to see, think and feel about things. This is the hardest level to change. Because human mind seeks cognitive stability, any confrontation or challenge of a basic assumption will unleash fear and defensiveness. These are the three levels in which the culture of any group can be examined, the essence of a culture provides a description of the pattern of the fundamental underlying assumptions and when one grasps these, then one can easily grasp the other more superficial levels and know how to relate to them properly Harrison (1993), cited by Acquah et al., (2015)

2.2.4 Employee Commitment

Organization commitment is a sense of emotional attachment, identification and involvement to the organization by the employees. In short, the organizational commitment measurement is the evaluation of the alignment between personal values and beliefs of a person and the organization (Palumbo, 2020). Organizational commitment is defined as the readiness of employee to contribute towards organizational goals. Commitment is defined as attraction and attachment of an individual to the work and the organization. It is a socio-psychological attachment of a person to his group or organization, its aims and principles or to his job and career (Sethi, 2015). The commitment of the employees is the most significant aspect to the organization and also to the managers of the organizations. Employee commitment refers to the loyalty of an employee to an organization, the effort that an employee is willing to make on behalf of an organization, the level of goal and value congruency between an employee and an organization and the interest of an employee to be still employed by an organization. In this research study, the researcher will concentrate on the three Allen and Meyer Model of Commitment viz: Affective, Continuance and Normative commitment. It is the most popular method of researching organizational commitment of over 2 decades (Abdullah & Rahman, 2015). It has recently been the most popular conceptualization of organizational commitment. It views commitment with three distinct types: affective commitment, continuance commitment and normative commitment (Allen & Meyer, 1990) as cited by Abdullah & Othman (2016). Affective commitment was the emotional attachment of employees to organization, identification with organization and involvement in organization. Employees, with a high affective commitment, remain in the organization since they wish to do so. Thus, this type of commitment is desire-grounded. Nevertheless, no consistent decision has been made on what are the mechanisms involved in its creation, yet Meyer and Herskovits suggest that any variable that will raise the likelihood of the next three issues assisted people in becoming affectively devoted (Meyer & Allen, 1997). A person gets engaged, that is, driven by his or her volition or caught in the stream of action. A person acknowledges the worth or the interest of the thing or the action to him or her.

Continuance commitment is grounded on the costs that would be incurred in case the individual departed the organization. Thus, individuals with strong continuance commitment remain in the organization since they have to. That is, it would be too expensive to depart. This would be so. Normative commitment (Allen & Meyer, 1990). Normative commitment describes the sense of obligation that an individual may have toward remaining in the organization. That is, employees stay in the organization since they should do it. It has been suggested that normative commitment is determined by the pre and post experience of an individual joining the organization. This implies that it is not only the



organizational socialization that influences the development of normative commitment of the employee but also socialization that takes place within the families and the society in general.

III. METHODOLOGY

3.1 Research Design

This research study adopted descriptive survey and explanatory to explore the relationship between variables. This enabled the researcher to go deeper than descriptive research design. The main characteristic of this method was that the researcher had no control over the variable; the researcher can only report what had happened or what is happening. This design was relevant in identifying characteristics of an observed phenomenon (Leedy & Ormrod, 2010). This design was appropriate for this study since Zikmund (2013) noted that descriptive research design was intended to produce statistical information about the aspects of the research issue that may interest policy makers for instance the telecommunication industry and the beneficiaries for example mobile phone users

3.2 Target Population

The focus of this study was on all the 198 sub-county and ward administrators of the four county governments in Western Kenya (Kakamega, Vihiga, Busia and Bungoma). These county governments in total have 33 Sub-counties and 165 Wards with county administrators who are mostly divided into two levels; Sub- County administrators and Ward administrators as shown in table 1.

Table 1

Target Population in County Governments

Title	Population n _k Subcounty Administrators	Ward Administrators	Total	% Representation n _k
Kakamega	12	60	72	36.36
Busia	7	35	42	21.21
Vihiga	5	25	30	15.15
Bungoma	9	45	54	27.27
Total	33	165	198	100

Source: KNBS2022

3.3 Sampling and Sample Size

This study utilized a census technique, which involved collecting data from the entire population of county administrators in the Western region of Kenya, rather than selecting a sample. A census ensures that every individual in the population is included, providing a comprehensive and accurate representation of the target group. The population for this study consisted of all sub-county administrators and ward administrators in the four counties of Kakamega, Busia, Vihiga, and Bungoma.

By using the census approach, the study gathered data from all 198 administrators, ensuring that the findings reflect the views and experiences of the entire population. This method eliminates the risk of sampling error and provides a full and reliable understanding of how work-life balance practices and organizational culture influence employee commitment among county administrators (Billups, 2019). The census approach is particularly advantageous in this context, as it allows for an in-depth analysis of the entire administrative workforce across the selected counties, thereby ensuring the results are both valid and generalizable to the population.

Table 2

Census Size

County	Population n _k
Kakamega	72
Busia	42
Vihiga	30
Bungoma	54
Total	198

Source: KNBS 2022

3.4 Data Collection

Primary data were collected using structured questionnaires administered to employees at the headquarters of the three companies. The questionnaire was designed to capture information on e-performance management practices, corporate culture indicators, and organizational performance metrics. It included both closed-ended and Likert-scale



items to facilitate quantitative analysis. The instrument was pre-tested to ensure reliability and validity. Data collection was conducted in person and electronically, depending on respondent availability and preference. This hybrid approach increased response rates and accommodated varying work arrangements.

3.5 Data Analysis

Quantitative data were analyzed using descriptive statistics (frequencies, means, and standard deviations) to summarize respondent characteristics and variable distributions. Inferential statistics including correlation and regression analysis were used to test relationships between leave arrangements, organization culture, and employee commitment. Specifically, multiple regression was used to assess the predictive power of leave arrangement practices on employee commitment. Whereas moderation analysis was conducted to examine the influence of organization culture on the relationship between leave arrangement and employee commitment.

SPSS software was used for data entry, cleaning, and analysis. These techniques were appropriate because they allowed for hypothesis testing, model validation, and generalization of findings to the broader population. Descriptive and explanatory designs provided both contextual depth and analytical rigor. Stratified sampling ensured representativeness across firms, while structured questionnaires enabled standardized data collection. The use of regression and moderation analysis was justified by the need to explore complex inter-variable relationships and test theoretical propositions derived from the theories employed in this study.

IV. FINDINGS & DISCUSSION

4.1 Response Rate

A total of 198 questionnaires were distributed out of which 163 were returned. This represented a response rate of 82.32 percent with non-response rate at 17.68 percent which accounts for 35 questionnaires.

4.2 Demographic Analysis

The study sought to determine the demographic profile of the respondents based on gender, age, level of education, length of service, current level of work and county of origin. The results are shown below;

Table 3

Distribution of Respondent's Demographic Characteristics

Gender	Frequency	Percent	Education Level	Frequency	Percent
Male	115	70.6	Diploma	52	31.9
Female	48	29.4	Degree	93	57.1
Total	163	100	Masters	18	11.0
Age of the respondents	Frequency	Percent	PhD	0	0.0
18-25 years	0	0.0	Others	0	0.0
26-30 years	0	0.0	Total	163	100
31-35 years	9	5.5	Level of administration	Frequency	Percent
36-40 years	19	11.7	Subcounty administration	40	24.5
41-45 years	56	34.4	Ward administration	123	75.5
46-50 years	40	24.5	Total	163	100
51 years and above	39	23.9	Work experience	Frequency	Percent
Total	163	100	Below 1 year	2	1.2
Status of the Respondents	Frequency	Percent	Between 1 and 5 years	24	14.7
Married	148	90.8	Above 5 years	137	84.1
Single	11	6.7	Total	163	100
Divorced	2	1.2			
Separated	2	1.2			
Total	163	100			

The findings on the gender of the respondents indicate that male gender constituted the majority at 70.6% while the female gender stood at 29.4%. This implies a fair representation of both genders in this study. The study established that 34.4% of the respondents were between the ages of 41-45 years, followed by 24.5% who were between the ages of 46-50 years, 23.9% who were the ages of 51 years and above, 11.7% who were between the ages of 36-40 years, 5.5% who were between the ages of 31-35 years and both ages between 18-25 years and 26-30 years recorded 0.0%. These findings indicate that the study managed to gather data across all range of ages of the respondents. This was vital because younger and older employees enhance problem-solving abilities and possess a diverse pool of knowledge, thus, enabling the researcher to grasp information from all perspectives. Given the location of the study area, age factor is critical



because it informs family set ups and responsibilities of employees. The findings indicated that majority of the respondents 90.8% are married, followed by 6.7% single employees while both divorced and separated employees recorded 1.2% each. Further, the findings indicate that majority of the respondents 57.1% had attained Bachelor's Degree, followed by Diploma (31.9%), master's degree (11.0%) and lastly no PhD level or other specifications were interviewed constituting 0%. This implies that the study managed to collect data from the respondents with standard education. These people possessed knowledge about the research and therefore aided the researcher to obtain an insightful information on the work life balance practices, organization culture and employee commitment of county administrators in Western Region Kenya. The results show that the respondents with above 5 years of experience accounted for the majority (84.1%), followed by those whose years of experience were between 1-5 years (14.7%) and lastly those whose years of experience were below 1-year constituting (1.2%). These findings indicate that the participants in this research had an invaluable expertise required to cement insights on the work life balance practices, organization culture and employee commitment of county administrators in Western Region Kenya.

4.3 Descriptive Analysis of Leave Programs

The study relied on a Likert Scale whereby 1 represented Strongly Disagree, 2 Disagree, 3 Fairly Agree, 4 Agree and 5 Strongly Agree. Table 4 below represents a summary of the responses from the participants for Leave Programs questionnaire item.

Table 4

Descriptive Results for Leave Programs

Leave Programs	5	4	3	2	1	M	SD
My county offers sick leaves	23 (14.1%)	60 (36.8%)	76 (46.6%)	4 (2.5%)	0 (0.0%)	3.63	.754
Provision of sick leaves enables me to have confidence in work activities	16 (9.8%)	62 (38.0%)	83 (50.9%)	2 (1.2%)	0 (0.0%)	3.56	.685
Sick leaves provided by county governments enables me to have time with my family and be taken care of	16 (9.8%)	62 (38.0%)	79 (48.5%)	6 (3.7%)	0 (0.0%)	3.54	.722
My county government offers maternity leaves to its employees	10 (6.1%)	59 (36.2%)	93 (57.1%)	1 (0.6%)	0 (0.0%)	3.48	.622
Maternity leaves help me to take care of the newborn child	21 (12.9%)	65 (39.9%)	67 (41.1%)	6 (3.7%)	4 (2.5%)	3.57	.853
The provision of maternity leaves options contributes to my success at work	22 (13.5%)	71 (43.6%)	59 (36.2%)	9 (5.5%)	2 (1.2%)	3.63	.832
My county has paternity leaves	20 (12.3%)	70 (42.9%)	57 (35.0%)	14 (8.6%)	2 (1.2%)	3.56	.861
Paternity leaves give me time to take care and concentrate on issues related with the family or home	16 (9.8%)	62 (38.0%)	74 (45.4%)	9 (5.5%)	2 (1.2%)	3.50	.796
Provision of paternity leave makes me be more committed to my work	17 (10.4%)	61 (37.4%)	76 (46.6%)	8 (4.9%)	1 (0.6%)	3.52	.773
My county provides compassionate leaves	8 (4.9%)	63 (38.7%)	80 (49.1%)	11 (6.7%)	1 (0.6%)	3.40	.717
Compassionate leaves enable me to attend to family related issues	13 (8.0%)	69 (42.3%)	76 (46.6%)	5 (3.1%)	0 (0.0%)	3.55	.686
Provision of compassionate leave makes me like my job	15 (9.2%)	66 (40.5%)	80 (49.1%)	2 (1.2%)	0 (0.0%)	3.58	.675

The analysis of leave programs among county administrators in Western Kenya highlights the availability and effects of various leave options, including sick leaves, maternity leaves, paternity leaves, and compassionate leaves, on employee well-being, commitment, and work-life balance. Sick leaves are moderately available, with a mean score of 3.63 (S.D = 0.754), enabling employees to attend to their health needs, which contributes to their confidence in work activities, reflected by a mean score of 3.56 (S.D = 0.685). Sick leaves also allow employees to spend time with their families during recovery, as indicated by a mean score of 3.54 (S.D = 0.722), showing their importance in balancing personal and professional responsibilities.

Maternity leaves are provided by the county, scoring a mean of 3.48 (S.D = 0.622), and are crucial for employees who need time to care for their new-borns, as highlighted by a mean score of 3.57 (S.D = 0.853). This arrangement also contributes to employees' success at work, with a mean score of 3.63 (S.D = 0.832), reflecting the positive effect of maternity leaves on employee satisfaction and productivity. Similarly, paternity leaves scored a mean of 3.56 (S.D = 0.861), indicating moderate availability. They give fathers time to focus on family responsibilities, as shown by a mean score of 3.50 (S. D = 0.796), and enhance their commitment to work, with a mean score of 3.52 (S. D = 0.773).



Compassionate leaves, with a mean score of 3.40 (S.D = 0.717), allow employees to address urgent family matters, thus supporting their personal lives and overall job satisfaction. The ability to take compassionate leave enables employees to attend to family-related issues, scoring a mean of 3.55 (S.D = 0.686). This flexibility makes employees appreciate their jobs more, as reflected by a mean score of 3.58 (S.D = 0.675).

Overall, the leave programs provided by county governments in Western Kenya are essential in supporting employee work-life balance and commitment. These leave options allow employees to address personal and family needs without compromising their professional responsibilities, thereby enhancing job satisfaction and organizational commitment cited by Davidescu et al. (2020). However, the moderate implementation scores suggest that while these leave options are available, there is room to enhance their accessibility and ensure they fully meet the needs of all employees.

4.4 Descriptive Analysis of Organization Culture

Table 5 presents descriptive statistics on organization culture, summarizing respondents' perceptions across key dimensions. The study relied on a Likert Scale whereby 1 represented Strongly Disagree, 2 Disagree, 3 Fairly Agree, 4 Agree and 5 Strongly Agree. The table provides mean scores, standard deviations, and frequency distributions, offering insights into the organization's cultural environment.

Table 5

Descriptive results for Organization Culture

Organization Culture	5	4	3	2	1	M	SD
My county has open communication channels among employees	17 (10.4%)	65 (39.9%)	78 (47.9%)	2 (1.2%)	1 (0.6%)	3.58	.719
Communication channels in the county are open among management and workers	20 (12.3%)	70 (42.9%)	66 (40.5%)	7 (4.3%)	0 (0.0%)	3.63	.753
Management seeks input from employees on major decisions	20 (12.3%)	66 (40.5%)	69 (42.3%)	7 (4.3%)	1 (0.6%)	3.60	.783
Most projects designed to make things better in this organization have been successful	12 (7.4%)	62 (38.0%)	83 (50.9%)	6 (3.7%)	0 (0.0%)	3.49	.688
County government is supportive of any change	11 (6.7%)	69 (42.3%)	75 (46.0%)	8 (4.9%)	0 (0.0%)	3.51	.697
Most of the changes at management levels make my work easier	12 (7.4%)	65 (39.9%)	79 (48.5%)	7 (4.3%)	0 (0.0%)	3.50	.697
Most people in the county government are encouraged to make suggestions for improvement	19 (11.7%)	67 (41.1%)	67 (41.1%)	6 (3.7%)	4 (2.5%)	3.56	.840
Employees in the county government agree with the laid down goals and vision	26 (16.0%)	75 (46.0%)	51 (31.3%)	9 (5.5%)	2 (1.2%)	3.70	.847
County government values its employees	21 (12.9%)	73 (44.8%)	56 (34.4%)	11 (6.7%)	2 (1.2%)	3.61	.841
Compared to other organizations, county government is the best to work with	22 (13.5%)	66 (40.5%)	68 (41.7%)	5 (3.1%)	2 (1.2%)	3.62	.803
County government employees work well together	21 (12.9%)	63 (38.7%)	75 (46.0%)	3 (1.8%)	1 (0.6%)	3.61	.756
county employees know the goals, vision and mission of this county government	13 (8.0%)	60 (36.8%)	83 (50.9%)	6 (3.7%)	1 (0.6%)	3.48	.723

The results on organizational culture among county administrators in Western Kenya indicate that open communication and employee engagement are moderately emphasized but with room for improvement. The presence of open communication channels among employees received a mean score of 3.58 (S.D = 0.719), suggesting a positive yet modest level of openness in internal communication. This is complemented by a slightly higher mean of 3.63 (S.D = 0.753) for open communication between management and workers, indicating that communication lines between various levels of the organization are generally open but could be enhanced to foster a more inclusive culture.

Management's effort to seek input from employees on major decisions was rated with a mean score of 3.60 (S.D = 0.783), reflecting moderate inclusion of employee feedback in decision-making processes. The success of projects designed to improve organizational operations was noted, with a mean score of 3.49 (S.D = 0.688), implying that while improvements are often achieved, there might be challenges that need addressing to maximize success rates. The county government's support for change was seen positively, with a mean score of 3.51 (S.D = 0.697), showing that management is generally receptive to change, albeit not uniformly across the board.

Further, most changes at management levels were seen to make work easier, as reflected by a mean score of 3.50 (S.D = 0.697). However, this suggests that while beneficial, the effect of management changes is not always



strongly felt by all employees. Encouragement of suggestions for improvement among county staff scored a mean of 3.56 (S. D = 0.840), highlighting that while suggestions are welcomed, there may be inconsistencies in how this culture is practiced across departments. The alignment of employees with the county's goals and vision was relatively strong, with a mean score of 3.70 (S.D = 0.847), suggesting a shared sense of direction among workers. The county government's perceived value of its employees had a mean score of 3.61 (S.D = 0.841), reflecting a moderately positive recognition of employee contributions. Comparatively, the county government was regarded as one of the best places to work, with a mean of 3.62 (S.D = 0.803), suggesting that employees generally hold their employer in high regard compared to other organizations.

Moreover, the collaboration among county employees was rated positively, with a mean score of 3.61 (S.D = 0.756), indicating a good level of teamwork within the organization. Finally, employee awareness of the county's goals, vision, and mission was noted with a mean score of 3.48 (S.D = 0.723), implying that while most employees are knowledgeable about the strategic direction, there is still a need to enhance communication and engagement regarding the organization's objectives.

Overall, the organizational culture within county governments in Western Kenya is characterized by moderate levels of open communication, employee involvement, and alignment with the organization's goals. However, there is an opportunity to further strengthen these aspects, particularly in enhancing communication effectiveness, increasing the impact of employee input, and reinforcing a supportive environment that values and maximizes the contributions of all employees.

4.5 Descriptive Analysis of Employee Commitment

Table 6 below represents a summary of the responses from the participants for Employee Commitment questionnaire item.

Table 6

Descriptive results for Employee Commitment

Employee Commitment	5	4	3	2	1	M	SD
I would be very happy to spend the rest of my career with this county government	17 (10.4%)	67 (41.1%)	78 (47.9%)	1 (0.6%)	0 (0.0%)	3.61	.679
I feel a great sense of belonging with the county government	13 (8.0%)	61 (37.4%)	88 (54.0%)	1 (0.6%)	0 (0.0%)	3.53	.651
I feel emotionally attached to this county government	12 (7.4%)	60 (36.8%)	89 (54.6%)	1 (0.6%)	1 (0.6%)	3.50	.670
I really feel as if these counties problems are a part of me	16 (9.8%)	62 (38.0%)	79 (48.5%)	6 (3.7%)	0 (0.0%)	3.54	.722
I am not afraid of what might happen if i left this county job	17 (10.4%)	65 (39.9%)	72 (44.2%)	8 (4.9%)	1 (0.6%)	3.55	.771
It won't be costly for me to leave this county job	12 (7.4%)	63 (38.7%)	78 (47.9%)	10 (6.1%)	0 (0.0%)	3.47	.723
Staying with this county government is a matter of necessity as much desire	7 (4.3%)	70 (42.9%)	73 (44.8%)	13 (8.0%)	0 (0.0%)	3.44	.703
The reason I continue working for this organization is that learning would require sacrifice	9 (5.5%)	65 (39.9%)	77 (47.2%)	12 (7.4%)	0 (0.0%)	3.44	.712
I do not believe that a person must always be loyal to his or her organization	8 (4.9%)	68 (41.7%)	78 (47.9%)	9 (5.5%)	.0 (0.0%)	3.46	.678
Jumping from organization to organization does not seem at all unethical to me	7 (4.3%)	59 (36.2%)	87 (53.4%)	10 (6.1%)	0 (0.0%)	3.39	.670
If I got a better job elsewhere, I would not feel it was right to leave my current one	21 (12.9%)	63 (38.7%)	60 (36.8%)	17 (10.4%)	2 (1.2%)	3.52	.891

The results of employee commitment among county administrators in Western Kenya indicate a moderate to strong level of commitment and attachment to their county government jobs, with varying degrees of emotional connection, job security, and organizational loyalty. A significant proportion of employees expressed satisfaction with their current roles, with 41.1% agreeing and 47.9% strongly agreeing that they would be happy to spend the rest of their careers with the county government, resulting in a mean score of 3.61 (S.D = 0.679). This suggests a high level of satisfaction and commitment among employees, which is further supported by a sense of belonging to the county government, indicated by a mean score of 3.53 (S.D = 0.651). Emotional attachment to the county government is also present, with a mean score of 3.50 (S.D = 0.670), though it varies among employees, indicating that some still feel a weaker connection.



The commitment to the county's issues is highlighted by 48.5% of respondents feeling that the county's problems are a part of them, with a mean score of 3.54 (S.D = 0.722). However, the fear of leaving the county job appears relatively low, as 44.2% agreed and 4.9% strongly agreed that they are not afraid of leaving, reflected in a mean score of 3.55 (S.D = 0.771). This suggests that while employees are committed, they do not feel entirely dependent on their current roles for security or satisfaction. Responses also indicate that many employees do not perceive staying with the county as a major burden, with 47.9% agreeing that it wouldn't be costly to learn their county job, reflected in a mean score of 3.47 (S.D = 0.723). Additionally, the notion of staying as a matter of necessity rather than just desire is moderately felt, with a mean score of 3.44 (S.D = 0.703), suggesting that while commitment is strong, it is often balanced with practical considerations.

Interestingly, 47.2% of employees acknowledged that leaving would require some sacrifice, resulting in a mean score of 3.44 (S.D = 0.712). However, loyalty to the organization is not universally seen as essential, as 47.9% agreed that one does not always need to be loyal to their organization, with a mean score of 3.46 (S.D = 0.678). Furthermore, 53.4% of employees do not view switching jobs as unethical, with a mean score of 3.39 (S.D = 0.670). Lastly, a notable portion of respondents (38.7%) stated that even if they found a better job, they would feel conflicted about leaving, reflected in a mean score of 3.52 (S.D = 0.891).

Overall, these results reflect a complex picture of employee commitment, where county administrators show a strong emotional and professional connection to their work but also maintain a level of pragmatic flexibility. They value their roles and feel connected to their work but do not perceive themselves as unconditionally bound to their current positions, indicating a balanced approach to job commitment and loyalty (Bardach, 2023).

4.6 Inferential Statistics,

4.6.1 Correlation analysis

The study was designed to assess leave arrangement practices, organization culture, on the dependent variable (employee commitment) of County Administrators in Western Region Kenya.

Leave Programs demonstrated a strong positive correlation with Organizational Culture ($r = .678, p < .05$) and Employee Commitment ($r = .652, p < .05$), illustrating that structured and supportive leave programs contribute to a positive organizational culture and reinforce employee loyalty. This suggests that leave programs are not merely a benefit but also a key factor in building a committed workforce. Organizational Culture has a strong positive correlation with Employee Commitment ($r = .706, p < .05$), demonstrating that a supportive, inclusive, and well-structured organizational culture is essential for fostering employee loyalty and commitment.

These findings collectively suggest that leave programs, are deeply intertwined with the organizational culture and significantly influence employee commitment among county administrators in Western Kenya. A supportive organizational culture enhances the impact of these practices, leading to a more dedicated and committed workforce, which ultimately improves service delivery within county administrations cited by Bruno (2021). However, careful attention should be given to balancing these factors to avoid potential challenges, as the integration of various supportive measures can sometimes result in perceived inequities or differing employee experiences.

4.6.2 Regression Analysis for Leave Programs and Employee Commitment

The findings of the study displayed in table 7 demonstrate that the value of R-square is 0.426. This value implies that, 42.6% of variation of employee commitment was explained by Leave Programs.

Table 7

Simple Regression Model Summary for Leave Programs and Employee Commitment

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.652 ^a	.426	.422	2.945	.426	119.244	1	161	.000

a. Predictors: (Constant), LEAVE PROGRAMS

The ANOVA at 0.05 level of significance is highlighted in table 8 above. The results show that the independent variable of study; Leave Programs, is not very significant in predicting of employee commitment as shown by an F value of 119.244 and a significance value of .000, a value that is less than the significance level of 0.05. Furthermore, the significance of this model is supported by the eta squared of 42.6 percent.

**Table 8***ANOVA Results for Leave Programs.*

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1033.940	1	1033.940	119.244	.000 ^b
	Residual	1395.998	161	8.671		
	Total	2429.939	162			

A. Dependent Variable: Employee Commitment

B. Predictors: (Constant), Leave Programs

Based on Table 8 above, the study results indicate that Leave Programs significantly affects employee commitment (significance value=0.000). These results suggest that a one unit or level increase in Leave Programs, other things being equal, results in a .638 rise in employee commitment. Therefore, the null hypothesis, Leave Programs has no effect on employee commitment among county administrators in Western Region Kenya is rejected at a significance level of 0.05.

Table 9*Regression Coefficients for Leave Programs.*

		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.282	2.497		4.519	.000
	Leave Programs	.638	.058	.652	10.920	.000

a. Dependent Variable: Employee Commitment

The results in Table 9 are consistent with the past literature that has highlighted the significance of Leave Programs in promoting employee commitment. As an example, motivation-hygiene theory research conducted by Herzberg (1966) highlights the importance of remote working, both intrinsic and extrinsic, as key factors that motivate employee commitment which translates to better organizational performance. On the same note, Armstrong (2010) points out that properly designed remote working lead to increased employee commitment levels which positively affect employee commitment.

Given the significance level of 0.05, the null hypothesis which posits that Leave Programs has no effect on employee commitment among county administrators in Western Region Kenya. This aligns with the theoretical framework that suggests a positive correlation between Leave Programs and employee commitment, as documented in earlier studies by Vroom (1964) and more recent research by Deci and Ryan (2000) on self-determination theory. The results of this study thus reinforce the notion that organizations that invest in effective Leave Programs are likely to see significant improvements in employee commitment.

4.6.3 Multiple Regression Analysis – Leave and employee commitment

The research conducted a multiple regression, whereby it regressed the dependent variable employee commitment against the independent variable. Table 10 below shows the regression results. The model fitted well with R² of 0.708 or 70.8 percent. These results indicate that the joint impact of leave arrangement practices account for 70.8 percent variance in employee commitment of County Administrators in Western Region Kenya.

Table 10*Multiple Regression Leave Arrangement Practices and Employee Commitment*

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.841 ^a	.708	.700	2.120	.708	95.638	4	158	.000

a. Predictors: (Constant), Leave Programs

The table 10 above illustrates the magnitude of change that is observed on the dependent variable (employee commitment) that is predicted by the independent variable. The multiple regression yielded the R value of 0.841 and the R² of 0.708, suggesting that 70.8 percent of the observed variations in employee commitment can be attributed to the leave arrangement practices. Also, the adjusted R square (.700) attempts to give a more candid value that estimates the R squared value of the whole population of the study at 70.0 percent.

**Table 11***ANOVA Statistics for Leave Arrangement Practices and Employee Commitment*

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1719.685	4	429.921	95.638	.000 ^b
	Residual	710.254	158	4.495		
	Total	2429.939	162			

a. Dependent Variable: Employee Commitment

b. Predictors: (Constant), Leave Programs)

The summary of the multiple regression model (ANOVA) is found in Table 11 above. The findings indicate that the model fits and can be used to explain employee commitment of County Administrators in Western Region Kenya ($P=0.000$). These values suffice to indicate that the model fits well in explaining the variations in the dependent variable (employee commitment) due to the variations in the predictor variable.

Table 12*ANOVA Table for the Hierarchical Regression (with Moderator)*

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1719.685	4	429.921	95.638	.000 ^b
	Residual	710.254	158	4.495		
	Total	2429.939	162			
2	Regression	1728.311	5	345.662	77.347	.000 ^c
	Residual	701.628	157	4.469		
	Total	2429.939	162			
3	Regression	1743.947	9	193.772	43.218	.000 ^d
	Residual	685.992	153	4.484		
	Total	2429.939	162			

a. Dependent Variable: Employee Commitment

The ANOVA table 12 provides a detailed breakdown of the variance explained by the models through the Sum of Squares, degrees of freedom (df), and associated statistical significance. In Model 1, which includes the predictors leave programs, the Regression Sum of Squares (1719.685) indicates the portion of variance in employee commitment explained by these predictors. The Residual Sum of Squares (710.254) reflects the unexplained variance. The Mean Square for the regression is 429.921, and the F-statistic of 95.638 is highly significant ($p < 0.001$), suggesting that this model strongly predicts employee commitment.

In Model 2, organization culture is added as an additional predictor. The Regression Sum of Squares (1728.311) increases slightly, indicating a marginal improvement in the model's ability to explain the variance in employee commitment. The Residual Sum of Squares (701.628) decreases slightly, while the Mean Square for the regression drops to 345.662 due to the additional predictor. The F-statistic of 77.347 is still significant ($p < 0.001$), showing that the model remains a good fit, but the improvement over Model 1 is minimal, as reflected in the relatively small changes in the sum of squares and F-statistics (Korir, 2019).

In Model 3, interaction terms between the predictors and organization culture are added. The Regression Sum of Squares (1743.947) increases further, but again, only slightly, reflecting that these interaction terms explain some additional variance. The Residual Sum of Squares (685.992) continues to decrease, which is a sign that more variance is being captured by the predictors. However, the Mean Square for the regression drops to 193.772 due to the increased number of predictors ($df = 9$). The F-statistic of 43.218 is significant ($p < 0.001$), but it indicates that the model's explanatory power has diminished as complexity increases, with lower mean square values and fewer degrees of freedom (Yaşlıoğlu, 2020).

In summary, while all three models are significant ($p < 0.001$), Model 1 offers the simplest and strongest predictive power. Model 2 and Model 3 add complexity with additional predictors and interaction terms, but the improvement in explained variance is minimal and not practically significant. The F-statistics progressively decrease from 95.638 in Model 1 to 43.218 in Model 3, indicating that the gains from adding more predictors do not sufficiently justify the increased complexity of the model.

The findings from the hierarchical regression models align with a significant body of literature that explores the factors influencing employee commitment. Research consistently shows that work-related factors such as remote work, flexible working arrangements, and organizational benefits (e.g., leave and welfare programs) play a pivotal role in



shaping employee commitment. Remote working, for instance, has been shown to enhance employee engagement and commitment by providing greater autonomy and work-life balance (Golden, 2022). However, flexible work arrangements can have a paradoxical effect, with some studies indicating that excessive flexibility may lead to reduced commitment due to a lack of connection to the organization or work-life imbalance (Allen *et al.*, 2023). Similarly, employee benefits like leave and welfare programs positively correlate with organizational commitment, as they foster a sense of support and security (Joo & Park, 2020). Organizational culture, though relevant, may not always exert a direct effect on commitment, particularly when other organizational factors like work arrangements and benefits are more dominant (Kotter & Heskett, 2021). Additionally, the moderation effects observed in the models, where some predictors lose significance when organizational culture is introduced, are consistent with the literature on moderating variables, which suggests that such interactions can sometimes obscure or weaken direct relationships (Aiken & West, 2022). Thus, the findings are well-supported by prior research on the complex dynamics between work conditions, employee benefits, and organizational culture.

The regression analysis demonstrates that leave programs account for a significant variation in employee commitment. The unstandardized coefficient ($B = 0.638$) indicates that for each unit increase in leave programs, there is a corresponding increase of 0.638 units in employee commitment. The constant ($B = 11.282$) represents the baseline level of employee commitment in the absence of leave programs. This variation suggests that leave programs are key factors influencing employee commitment, and enhancing these programs could result in notable improvements in employee engagement and loyalty. The strength of this relationship highlights the importance of leave programs in explaining the variation in commitment levels within the organizations studied.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusion

The regression analysis provides insight into the effect of various work-life balance practices namely, leave programs on employee commitment. The results show that each of these practices has a positive influence on employee commitment, though their effects vary in magnitude. For instance, leave programs also contribute to fostering employee loyalty, with the analysis showing that these practices are instrumental in influencing engagement.

However, when organization culture is factored in as a moderator, the analysis reveals that its moderating effect on the relationship between work-life balance practices and employee commitment is not statistically significant. None of the work-life balance practices whether it be flexible working arrangements showed a significant effect on employee commitment when organization culture was introduced. This suggests that, while these work-life balance practices are beneficial in enhancing employee commitment in general, their effectiveness is not strongly moderated or enhanced by the prevailing organizational culture within county administrations.

Moreover, organization culture itself does not have a direct, significant effect on employee commitment, as indicated by the analysis. This lack of significance points to the possibility that other structural or operational factors beyond work-life balance practices and organization culture play a more dominant role in shaping employee commitment in the context of county government employees in Western Kenya. While work-life balance practices are important for improving employee commitment, they may not be sufficient by themselves when considered alongside organization culture. To improve commitment effectively, county administrations might need to look beyond these practices and consider other aspects of the organizational environment, such as leadership, communication, career development, or job security, which could have a more profound effect on fostering employee engagement and loyalty.

5.2 Recommendations

Based on the findings from the study and the conclusions drawn from the study, several recommendations for enhancing employee commitment within county governments in Western Kenya are proposed: Enhance Leave Programs: The significant variation in employee commitment due to leave programs indicates the need for improved leave policies. Increase the flexibility of leave options, including parental, personal, and sick leave, to accommodate diverse employee needs and enhance their overall commitment. Strengthen Organizational Culture: Despite its non-significant direct effect, fostering a positive organizational culture can indirectly support employee commitment. Promote transparency, inclusivity, and open communication within the workplace to create a supportive and engaging environment for employees.



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Markov chain modelling of meteorological drought return periods: A case of Mberengwa district, Zimbabwe

Ever Moyo¹

¹everlmoyo@gmail.com/moyoe@zou.ac.zw

¹<https://orcid.org/0009-0006-9375-2018>

¹Zimbabwe Open University, Zimbabwe

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ABSTRACT

This study applies a first-order Markov chain modelling approach to Standardised Precipitation Index data derived from 2011 to 2021 annual rainfall data collected across the 37 wards in Mberengwa District, Zimbabwe, to assess its meteorological drought return period patterns. The study aims to estimate the meteorological drought return periods using the steady-state probabilities and calculate multiple-year drought probabilities and the expected duration of drought, providing a probabilistic understanding of drought dynamics to support effective drought risk management and climate adaptation planning in the district and other arid areas. The Standardised Precipitation Index values were classified into drought, normal and wet states based on their magnitudes. The transition probabilities were used to calculate the steady-state probabilities, which were used to estimate the return periods. The Markov Chain Property (Memoryless Property) and stationarity assumptions were validated using the autocorrelation graph and chi-square distribution, respectively. Each validation resulted positively supported the Markov chain assumptions, suggesting that the local authorities could rely on the model's predictions for planning and resource management. The findings indicated that drought conditions occur 23% of the time with a corresponding return period of approximately 4.35 years, normal conditions occur 59% of the time with a corresponding return period of approximately 1.69 years, and wet conditions occur 18% of the time with a corresponding return period of approximately 5.56 years. The probabilities of the multi-year droughts revealed a 24.7% chance of a drought lasting approximately 2 years, diminishing to 0.37% for five consecutive years. The expected length of drought was estimated to be 1.33 years, suggesting that while droughts are a concern, they often resolve relatively quickly. This study emphasises the need for local authorities to develop comprehensive emergency preparedness plans, invest in water conservation infrastructure and foster community engagement to enhance resilience against the impacts of climate variability.

Keywords: Climatic Variability, Drought Return Periods, Markov Chain Modelling, Standardised Precipitation Index, Steady-State Probabilities, Transition Probabilities

I. INTRODUCTION

Droughts are a recurrent challenge in Zimbabwe, particularly in semi-arid areas such as Mberengwa District and regions depend heavily on rain-fed agriculture, making them particularly vulnerable to meteorological droughts. (Moyo et al., 2021). The increased frequency and severity of droughts in recent years have necessitated a deeper understanding of drought return periods, which refer to the average time intervals between occurrences of droughts of similar intensity. Drought is one of the inseparable elements of climate fluctuation that causes a lot of damages every year. Drought is basically caused by the lack of precipitation events in a region over a period and can be regarded as an extreme climatic event. The early stages of accumulated precipitation deficiencies are referred to as meteorological drought being a region-specific natural event, since the atmospheric conditions that result in deficiencies of precipitation are highly variable from region to region (Dalezios et al., 2017). Considering the effects of drought on different parts of the environment, agriculture, natural resources, wildlife, etc., drought forecast can be useful for managing the crisis and reducing its damages (Javadinejad et al., 2023).

Meteorological droughts are characterised by a significant lack of precipitation, have wide-reaching impacts, including crop failures, water shortages and social instability. In Mberengwa District, repeated drought episodes have led to crop failures, reduced water availability and heightened food insecurity, underscoring the need for effective drought monitoring and management tools. Despite the growing need for such analysis, few studies have applied Markov chain modelling to drought assessment in Zimbabwe, and even fewer have focused on the district level, where local adaptation strategies are most needed. Droughts are complex, multifaceted, slow-onset hazards that can last for several months or years, affecting wide geographic areas and a lot of people, with severe consequences for human lives, the environment, and the economy (Hagenlocher et al, 2019). Prediction of drought class transitions has been received

increasing interest in the field of water resource management and Markov chain models are effective prediction tools that are widely used to analyse drought class transitions by describing the temporal dependency of drought events (Yang et al., 2020).

Quantitative analysis provides an objective assessment of meteorological drought conditions and impacts, reducing personal biases and subjective interpretations (Wilhite & Glantz, 1985). It also enables comparisons across different time periods, locations and drought events, facilitating the identification of patterns and trends (Svoboda & Fuchs, 2016). This research aims to address this knowledge gap, by using a quantitative approach which is objective and scalable to understand the meteorological drought return periods and impacts in Mberengwa. While SPI provides a snapshot of drought intensity (Quiring, 2009), it does not directly capture the temporal dynamics or transitions between drought and non-drought states. To address this gap, Markov chain modelling offers a statistical approach to analyse (Paulo & Pereira, 2007) the dynamics of drought occurrence, persistence and return periods. By estimating the likelihood of moving from one climate state to another over time, Markov models provide deeper insights into drought risk patterns essential for early warning and adaptation planning. Over recent decades, Zimbabwe has faced increased climate variability and frequency of extreme weather events, including severe droughts. Studies have linked these changes partly to global climate change, which has altered rainfall distribution and intensified dry spells in many parts of southern Africa

1.1 Statement of the Problem

Meteorological droughts have become increasingly frequent and severe in Mberengwa District, Zimbabwe, disrupting agricultural productivity and threatening water security and rural livelihoods. The current methods for predicting drought and assessing their return periods may not fully capture the complex and stochastic nature of drought events in the region. This gap hampers effective drought risk management and adaptive planning. This study addresses these challenges by applying Markov chain modelling (Yang et al., 2020), Javadinejad et al., 2023) to model drought as a sequence of transitions between drought, normal and wet states, measurement of drought dynamics and provide actionable knowledge for building resilience in Mberengwa District, Zimbabwe

1.2 Research Objectives

- i. To calculate the steady-state probabilities derived from transition probability matrix for understanding the long-term behaviour of meteorological droughts return periods.
- ii. To calculate the return periods of meteorological drought events for evaluating their frequency and implications for resource management.
- iii. To investigate the probabilities associated with multi-year drought occurrences for drought risk assessment.
- iv. To calculate the expected duration of drought events based on transition matrix analysis to inform planning and preparedness efforts in affected areas.

II. LITERATURE REVIEW

2.1 Theoretical Review

Meteorological drought is defined by Wilhite and Glantz (1985) in terms of four basic approaches to measuring drought: *meteorological*, *hydrological*, *agricultural* and *socioeconomic*. The first three approaches focus on ways to measure drought as a physical phenomenon. The last deals with drought in terms of supply and demand, tracking the effects of water shortages in socioeconomic systems. Meteorological drought is usually defined depending on the degree of dryness (in comparison to some “normal” or average amount) and the duration of the dry period and must be considered as region-specific since the atmospheric conditions that result in deficiencies of precipitation are highly variable from region to region (Wilhite & Glantz, 1985)

Socio-economic impacts of meteorological drought return periods are devastating. They severely affect agricultural productivity and revenue, leading to crop failures, reduced yields, livestock deaths, increased food prices and malnutrition among vulnerable populations such as children and the elderly (Food and Agricultural Organization [FAO], 2017; World Food Programme [WFP], 2020). Drought also causes migration and displacement of communities in search of water and livelihoods leading to increased poverty and mental health among the vulnerable populations and (WHO, 2018). Moreover, drought enhance the increase the risk of water-borne diseases, respiratory problems and other health issues related to poor air quality and dust..

Ayugi et al. (2022) examined the state of meteorological drought over Africa, focusing on historical trends, impacts, mitigation strategies and future prospects. The resultant impact was evidenced in the decline of agricultural activities and water resources and the environmental degradation across all subregions. They suggested efficient delivery service to drought-prone hotspots, strengthening drought monitoring, forecasting, early warning, and response systems and improved research on the combined effects of anthropogenic activities and changes in climate in Africa today and in the future.

Bekana (2025) examined the critical drought impacts and its risk management in Ethiopia, a country that faces recurrent droughts fanned by climate change, significantly impacting millions of people, particularly in rural areas. They recommended the integration of drought management strategies that combine government initiatives, community engagement and international support to enhance resilience among vulnerable populations.

2.2 Empirical Review

2.2.1 Drought Monitoring Tools

The Standardized Precipitation Index (SPI) has become a widely accepted tool for quantifying drought conditions by standardizing rainfall anomalies over various time scales. There are many drought indicators and indices being used around the world and noted that it is recommended by the World Meteorological Organization to be used in monitoring and assessment of meteorological droughts, although it may not be accepted as the only and absolute index (Dalezios et al., 2017).

Mahmoudi et al. (2021) compared the performance of the Standardized Precipitation Temperature Index (SPTI) with the commonly used drought indices, the Standardized Precipitation Index (SPI) and Standardized Precipitation Evapotranspiration Index (SPEI) for 17 meteorological stations of Khyber Pakhtunkhwa (KPK) province in Pakistan. They found that SPTI is strongly correlated with SPI and performed better than SPEI in low temperature regions for detecting and monitoring drought conditions over different time scales.

Kubicz (2018) assessed the occurrence and intensification of meteorological drought conditions in both surface and groundwater systems using the standardized SPI index. Kubicz (2018) discovered that applying SPI for hydrogeological drought monitoring required to assess the significance and level of the correlation between drought indices in the test area and then to calculate the probability of correct determination of drought in surface and groundwaters with the use of SPI.

Brunner et al. (2019) assessed the short-term and long-term drought severity in Saudi Arabia using the Standardized Precipitation Evapotranspiration Index (SPEI) at multiple time scales and applied advanced statistical methods, including Innovative Trend Analysis (ITA), Wavelet Transform, and Bivariate Copula Models, to analyse drought patterns, periodicity and return periods. They revealed that vegetation and water resources are vulnerable to prolonged dry conditions, underscoring the urgent need for adaptive water management strategies.

2.2.2 Markov Chain Models

The Markov Chain Models have been employed to predict drought probabilities. Azimi et al (2020) presented a steady-state Markov chain model to predict the long-term probability of drought conditions. They proposed a rigorous framework for statistical analysis of drought characteristics and its trends over time for a large area of aquifers and plains in Iran. They revealed a rising trend in drought conditions with steady-state drought probabilities increasing.

Yeh and Hsu (2019) used the Standardized Precipitation Index (SPI) and the Standardized Groundwater Level Index (SGI) and employed the first-order Markov chain model and Wavelet transform to determine the drought characteristics and propagation, including the steady-state probabilities of drought events and the mean duration for the stations in southern Taiwan basins.

Javadinejad et al. (2023) calculated monthly droughts based on the standard precipitation index (SPI) in several stations in the south of Iran during the years 1980–2020. They used the Markov chain to forecast the monthly drought for the years 2020 to 2040. Most of the stations had normal, moderate and severe drought conditions. The transition probability matrix showed the probability of passing from wet to dry state was high while the probability of transition from dry to wet was low in all stations

2.2.3 Drought Return Periods and Severity

Zhou et al. (2022) used, the Palmer drought severity index (PDSI) method, in which the meteorological factors less influenced by human activities were taken as the input to determine the dry/wet states and the PDSI value at each period firstly in Huaipei Plain, China. They considered the drought severity and peak intensity as drought characteristics and the joint return periods of the characteristics were estimated based on the Gumbel-Hougaard copula function. Their results showed that the most severe droughts identified by PDSI had a good consistency with the actual drought situations, drought severity and peak intensity were applicable to reflect the drought impacts.

Brunner et al. (2019) analysed the 2018 drought in Switzerland across meteorological, hydrological, agricultural and groundwater types, focusing on discharge and soil moisture deficit and deficit duration through univariate and bivariate frequency analyses. Their results showed that the 2018 drought event was especially severe in north-eastern Switzerland in terms of soil moisture, with return periods locally exceeding 100 years. They concluded that the return period estimates depended on the region, variable, and return period considered.

Montaseri et al. (2018) evaluated systematically two Unconnected Drought Runs (UDR) and Connected Drought Runs (CDR) procedures in modelling the joint probability of drought duration and severity investigations using 24 rain gauges in Lake Urmia basin, Iran. Their results demonstrated a significant comparative advantage of the new

approach compared to the traditional approach. They concluded that the new method could enable them to estimate the joint/conditional probabilities of drought duration and severity and significant reduction in uncertainty for modelling more accurately.

2.2.4 Climate Change and Drought in Zimbabwe

Manyakaidze et al. (2025) determined the climate change impacts on farmer-managed wetland agroecosystems and evaluated the resilience-building strategies in semi-arid rainfall marginal areas, focusing on Nyororo wetland in Mberengwa district, Zimbabwe. Resilience-building strategies, including adopting seasonal livelihood programmes, ecosystems-based adaptation (EbA) strategies such as wetland farming, protection of wetland water sources, harvesting wetland goods for selling and anticipatory action planning (AAP), including planting drought-tolerant, short-seasoned food crops, proved effective in the sustainable management of wetlands agroecosystems. Hence, they recommended the tailoring of financial mechanisms to suit the needs of local communities' conservation and resilient livelihoods and that stakeholders should implement the promising wetland agroecosystem resilience-building strategies that bring positive outcomes for people, nature and climate.

Mupepi and Matsa (2022) assessed the seasonal spatio-temporal dynamics of agro-meteorological drought between 2017 and 2020 in Mberengwa and Zvishavane districts, Zimbabwe. Their results showed that both Mberengwa and Zvishavane districts experienced an increasing trend in spatial coverage of drought from 2017 to 2019 before a slight decline in 2020. From 2017, drought severity increased in terms of spatial coverage in both Mberengwa and Zvishavane districts between 2018 and 2020. Therefore, they concluded that drought is worsening in both Mberengwa and Zvishavane districts, hence, long-term drought resilience interventions are required to improve drought resilience of communities in these areas.

Kwami et al. (2018) assessed the impact of climate change on agriculture and the adaptation strategies by the farmers in a selected area in Mberengwa District, Zimbabwe. They identified increased incidences of livestock and crop pests and diseases, shorter rainy seasons and insufficient seasonal rains characterised by mid-season dry spells and more frequent severe floods which often destroyed crop fields. They suggested increasing the number of agricultural extensions, facilitation of the access to low-interest loans by eligible farmers to boost capital and small-scale irrigation schemes through the construction of small dams or the drilling of boreholes to improve water management in the area.

Muzerengi et al. (2023) explored the impacts of climate change on household food security among the vulnerable populations of Matande communal lands, Mwenezi district in Zimbabwe guided by the Sustainable Livelihoods Framework (SLF). The results demonstrated that climate change propelled increases of pests and diseases for both livestock and crops, reduction of meals uptake per day, biodiversity loss and dwindled crop production. They suggested adaptive measures for sustainable management.

III. METHODOLOGY

3.1 Research Design and Approach

This study employed a quantitative approach, using historical annual rainfall data and Markov Chain Modelling to analyse meteorological drought return periods in Mberengwa District, Zimbabwe. The data analysis was conducted using JASP (version 0.19.3.0) and Microsoft Excel.

3.1.1 Study Area

Mberengwa district is one of the eight districts in Midlands Province. It is in the southern part of the province. The district has a total area of 494,340 hectares and comprises 37 administrative wards as shown in Figure 1 below. Mberengwa District is a semi-arid region with low seasonal rainfall below 650mm. Precipitation falls from November to March, with the greatest amounts falling between December and February. The district is prone to drought and prolonged mid-season dry spells. Temperatures are generally high, usually reaching a maximum of above 38⁰C. Most of the households in Mberengwa rely on subsistence farming and livestock rearing for their livelihoods. Crop production is low due to moisture stress. ([Mberengwa-District-Profile.pdf,2023](#)).

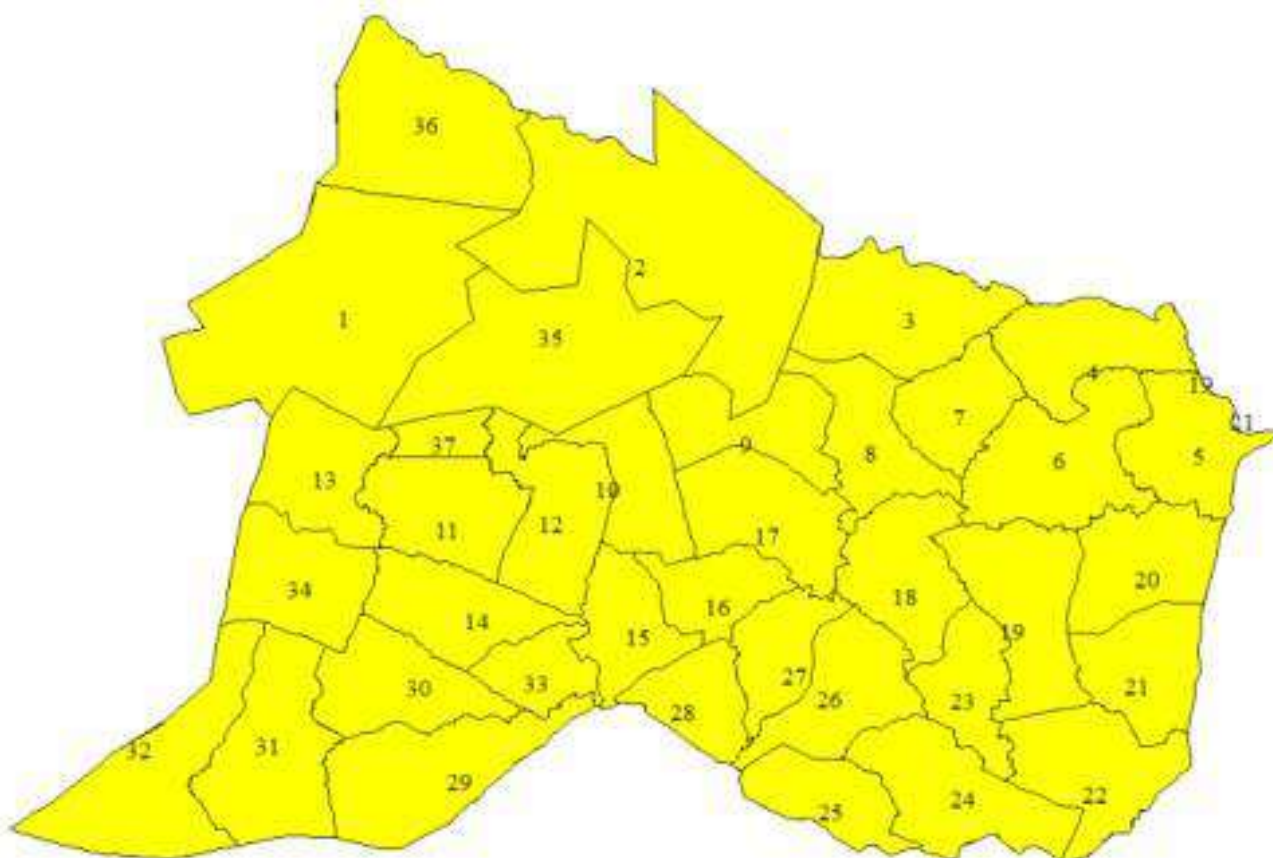


Figure 1
Mberengwa Administrative District Map
 Source: Mberengwa Rural District Council (n.d.)
<https://mrdc.org.zw/index.html>

3.2 Sampling Strategy

The study considered the 37 administrative wards in Mberengwa district, Zimbabwe. The annual rainfall data were sourced from the Meteorological Services Department of Zimbabwe, covering the years 2011 to 2021. The data collected from all wards provided a comprehensive view of rainfall patterns across the district.

3.3 Data collection

The annual rainfall data were obtained from the Meteorological Services Department of Zimbabwe and local climate databases in Mberengwa District, Zimbabwe. The data covered an 11-year period from 2011 to 2021. The annual Standardised Precipitation Index (SPI) was calculated from the Weibull-fitted rainfall data to analyse meteorological drought return periods. Markov Chain modelling was then applied to estimate drought transition probabilities; drought return periods and the expected length of drought for the district.

3.4 Data Analysis

3.4.1 Fitting the annual Rainfall Data to the Weibull Distribution

The annual rainfall data was first fitted to a Weibull distribution, which is suitable for modelling skewed hydrological variables like rainfall. The Weibull distribution was chosen because the Mberengwa rainfall data has frequent dry periods (zero rainfall) and moderate extremes, aligning with Weibull flexibility. Its shape parameter (k) allows it to model diverse rainfall events like zero rainfall and heavy precipitation events.

3.4.1.1 Parameter Estimation

The shape (k) and the scale (λ) parameters of the Weibull distribution were estimated using the Maximum Likelihood Estimation (MLE) in JASP (version 0.19.3.0) software.

3.4.1.2 Calculation of the Weibull Cumulative Distribution Function

The Weibull Cumulative Distribution Function was calculated using the formula:

$$F(x) = 1 - e^{-\left(\frac{x}{\lambda}\right)^k}$$



Where:

- $F(x)$ = cumulative probability of rainfall amount $\leq X$
- λ = scale parameter
- k = shape parameter
- x = observed fitted rainfall amount.

3.4.1.2 Converting Cumulative Distribution Function to Standard Normal Distribution

The cumulative probabilities were converted to a standard normal distribution using the inverse normal distribution. The resulting z-values represented the Standardised Precipitation Indexes, (SPIs), which indicates the number of standard deviations from the mean precipitation calculated from the annual rainfall data.

$$\text{Standardised Precipitation Indexes (SPI)} = \Phi^{-1}(F(x))$$

Where:

- Φ^{-1} is the inverse normal distribution function.
- $F(x)$ is the cumulative probability

3.4.2 Developing the Markov Chain Model

A Markov Chain model is a mathematical framework used to model stochastic (random) systems that transition between discrete states over time, where the probability of moving to a future state depends only on the current state, memoryless (Markov) property.

The SPI values were classified into three states based on their magnitudes: Drought (D): $\text{SPI} \leq -1$, Normal (N): $-1 < \text{SPI} < 1.0$ and Wet (W): $\text{SPI} \geq 1.0$. The Drought (D), Normal (N) and Wet (W) states smoothen the short-term SPI fluctuations, capturing persistent drought signals. These states align with operational drought management: Drought triggers water restrictions, Normal represent the baseline conditions and Wet represent flood risk or reservoir replenishment. The SPI values near ± 1 mark statistically significant deviations from the mean and ensure a balanced class size. The three states were chosen in line with the standardized drought classification. Fewer states reduce Markov Chain complexity. These states simplify to a 3×3 transition matrix which is easier to interpret and validate than larger matrices and avoids sparse transition probabilities with limited data.

3.4.2.1 Constructing the Transition Probability Matrix (TPM), (P)

The historical SPI time series data were used to calculate the probabilities of transitioning between drought, normal and wet, to form the Transition Probability Matrix (TPM), (P). The following steps were taken:

Recording count transitions

The possible nine count transitions between states were recorded:

$$D \rightarrow D, D \rightarrow N, D \rightarrow W$$

$$N \rightarrow D, N \rightarrow N, N \rightarrow W$$

$$W \rightarrow D, W \rightarrow N, W \rightarrow W \text{ where D is Drought, N is Normal, and W is Wet.}$$

The number of transitions between each pair of states was counted from one state to another in consecutive years.

Calculating Transition probabilities

The first-order Markov transition probabilities were calculated using:

$$P_{ij} = \frac{\text{Number of transitions from state } i \text{ to state } j}{\text{Total number of transitions from state } i}$$

The Transition Probability Matrix, a square matrix of order 3, from the three states, where rows sum to 1 was constructed. Transition probabilities p_{ij} representing the likelihood of moving from one state i at time t to state j at time $t+1$ were estimated:

$$P = \begin{bmatrix} P_{Drought,Drought} & P_{Drought,Normal} & P_{Drought,Wet} \\ P_{Normal,Drought} & P_{Normal,Normal} & P_{Normal,Wet} \\ P_{Wet,Drought} & P_{Wet,Normal} & P_{Wet,Wet} \end{bmatrix}$$

On the Transition Probability Matrix, rows represent the current state (drought, normal, wet) and columns represent the next -year state (drought, normal, wet)

3.4.2.2 Assumptions of the Markov Chain Model

Markov property (Memoryless): It assumes that future drought depends only on the current state not earlier states. *Stationarity Assumption* The model assumes that transition probabilities between the states (drought, normal, wet) remain constant over time. *Spatial homogeneity assumption:* It assumes that a single transition matrix is applied uniformly across the regions.



3.4.2.3 Validation of the Assumptions of the Markov Chain Model

The ACF (Autocorrelation Function) graph was used to test the Markov chain property in JASP (version 0.19.3.0) software, in which the Drought, Normal and Wet states were used as dependent values against Time (2011 to 2021) for Mberengwa district. The data exhibited the Markov property, which implies that future states depend only on the current state, not on the sequence of events that preceded it. The stationarity assumption was also validated using the chi-square distribution goodness-of-fit test, in which the observed transitions data were compared with the expected data using Microsoft Excel.

3.4.2.4 Drought return periods analysis

Calculating the Steady-State Probabilities, π

The steady-state probabilities represent the long-term proportion of time the system spends in drought, normal or wet states. They are calculated using the Transition Count Matrix data in Table 1. The steady-state probabilities are denoted by the vector:

$$\pi = [\pi_1, \pi_2, \pi_3, \pi_4 \dots, \pi_n]$$

The long-term probabilities were $\pi_{Drought}$, π_{Normal} and π_{Wet} where:

$\pi_{Drought}$ represents the proportion of time the district is expected to be in the drought state in the long run.

π_{Normal} represents the proportion of time the district is expected to be in the normal state in the long run.

π_{Wet} represents the proportion of time the district is expected to be in the wet state in the long run.

To find the long-term probabilities, $\pi_{Drought}$, π_{Normal} and π_{Wet} we solved:

$$\pi = \pi P \text{ where } P \text{ is the Transition Probability Matrix.}$$

This results in the system of equations:

$$\pi_1 P_{11} + \pi_2 P_{21} + \pi_3 P_{31} = \pi_1$$

$$\pi_1 P_{12} + \pi_2 P_{22} + \pi_3 P_{32} = \pi_2$$

$$\pi_1 P_{13} + \pi_2 P_{23} + \pi_3 P_{33} = \pi_3$$

$$\pi_1 + \pi_2 + \pi_3 = 1.$$

The linear equations were solved to find:

$$\pi_1 \text{ for the drought state, } \pi_2 \text{ for the normal state and } \pi_3 \text{ for the wet state.}$$

It was solved using numerical solvers in Microsoft Excel. Once calculated, the steady-state probabilities remained constant over time under the assumptions of the Markov process.

Computing the Drought Return Periods

The drought return period, also known as the recurrence interval, is the average time between occurrences of drought conditions that meet a specific severity threshold. It can be calculated using steady-state probability. The reciprocal of the steady-state probability gives the drought return period, T_i :

$$T_i = \frac{1}{\pi_i}, \text{ so } T_{Drought} = \frac{1}{\pi_{Drought}}$$

$$T_{Normal} = \frac{1}{\pi_{Normal}}$$

$$T_{Wet} = \frac{1}{\pi_{Wet}}$$

It indicates the frequency of drought, normal or wet occurrence respectively.

3.4.2.5 Drought Persistence Forecasting

Drought Persistence Forecasting involves predicting the likelihood that a drought state will persist over subsequent time periods based on transition probabilities in drought state.

The probability distribution of states after n steps, $\pi^{(n)}$ is used to predict the drought behaviour over n years. It is given by:

$$\pi^{(n)} = \pi^{(0)} \times P^n$$

$$\pi^{(n)} = \text{predicted state distribution after } n \text{ years}$$

$$\pi^{(0)} = \text{the initial state distribution}$$

$$P^n = \text{the transition matrix raised to the } n^{th} \text{ power.}$$

The one-step prediction, two-year step prediction and multi-step forecasting were estimated.

One-Year Persistence

It is the probability that drought will continue next year.

$$P(Drought) = P(Drought \text{ at } t + 1 | Drought \text{ at } t)$$

Two-year persistence

It is the probability that drought will continue for 2 more years.

$$P((Drought)^2) = P(Drought \text{ at } t + 1 \text{ and } t + 2 | Drought \text{ at } t)$$

Multi-year drought probability



A multi-year drought occurs when the drought state persists for 2 or more consecutive years.

K-year drought probability

Probability of a drought persisting k years (from time t to t+k-1):

$$P((Drought)^{k-1}) = P(Drought \text{ for } k \text{ years} | \text{start in Drought})$$

Probability of multi-year drought ending

It is the probability that a drought ends in the k^{th} year:

$$P((Drought)^{k-2}) \times (1 - P(Drought)) = P(Drought \text{ for } k - 1 \text{ years, exists})$$

3.4.2.6 Expected Length of a Drought (E(L))

The Expected length of a drought (E(L)) is the expected drought duration. It is calculated as the sum of probabilities of remaining in drought over successive years. The expected drought duration is calculated using the formula:

$$E(L) = 1 + P(Drought) + P((Drought)^2) + P((Drought)^3) + P((Drought)^4) + P((Drought)^5)$$

The formula indicates that the expected duration is a cumulative measure of the length of the persistence of the drought conditions.

3.5 Ethical Considerations

In conducting this study, ethical considerations were observed to ensure responsible research practices. All information obtained from the local climate databases and the Meteorological Services Department were used strictly for academic purposes without any manipulation or misrepresentation. Since the research involves no direct interaction with human participants, issues of privacy and consent were minimal. However, community -level information was anonymised to prevent stigmatisation of the wards which were perceived as highly drought-prone. The integrity of the data was also a focal point, adhering to ethical standards to accurately represent and cite all data sources while acknowledging potential biases in the analysis. The research aims to contribute positively to understanding drought patterns in Mberengwa District, Zimbabwe, by generating knowledge that informs adaptation strategies and enhances resilience to climate variability for better agricultural practices and policy decisions to benefit the local community.

IV. FINDINGS & DISCUSSION

4.1 Pre-processing of Data

It involved transforming, cleaning and formatting data to prepare it for analysis or modelling. The data was organised in chronological order in a spreadsheet in Microsoft Excel, with each row containing the year and its corresponding SPI value. The missing SPI entries were identified and imputed appropriately. No outliers were identified. It emphasises the importance of data integrity in drought analysis as mentioned by Mahmoudi et al. (2021) in their research.

4.2 Transition Count Matrix

Table 1

Transition Count Matrix

From/To	Drought	Normal	Wet	Total
Drought	24	53	20	97
Normal	58	149	34	241
Wet	15	39	15	69

Table 1 above shows the observed number of transitions between states (Drought, Normal, Wet). The Transition Count Matrix provided the insights into how the states transitioned from one to another over 11 years (2011 to 2021). It shows that Drought → Drought transitions occurred 24 times, Drought → Normal transitions occurred 53 times, which is more than that remaining in Drought (24), indicating that it is feasible to recover from drought, but it is not guaranteed, aligning with Ayugi et al.(2022), who noted the dynamic nature of drought conditions in Africa. Drought → Wet transitions occurred 20 times, suggesting that such extreme recovery is less frequent. Normal → Drought transitions occurred 58 times, which shows a large risk of returning to Drought from Normal. It has relevance for policy planning and water resource management as suggested by Bekana (2025). Normal → Normal transitions occurred 149 times, Normal → Wet transitions occurred 34 times, Wet → Drought transitions occurred 15 times, Wet → Normal transitions occurred 39 times, Wet → Wet transitions occurred 15 times. The Normal state exhibits a larger number of transitions (241) with a strong inclination to remain in Normal (149). This implies that the average climatic conditions are the most stable state. The matrix represents a dynamical system in which the climate alternates between states emphasizing the importance of monitoring climatic changes and preparing for potential drought risks.



4.2 Transition Probability Matrix (P)

Table 2

Transition Probability Matrix (P)

From/To	Drought	Normal	Wet	Total
Drought	0.247	0.547	0.206	1
Normal	0.241	0.618	0.141	1
Wet	0.217	0.566	0.217	1

Table 2 shows a transition probability matrix, with probabilities calculated from the transition count matrix from Table 1. It presents the likelihood of transitioning between drought, normal and wet conditions over 11 years (2011 to 2021), based on a Markov chain model. The rows represent the current state, Drought, Normal or Wet, while the columns indicate the probability of transitioning to each respective future state. The probability of staying in the Drought state from Drought is 0.247. It indicates that drought conditions may persist for a significant portion of the time, reflecting the concerns highlighted by World Health Organization [WHO], (2018) regarding mental health impacts and community displacement. The Local Authorities should prepare for prolonged droughts with emergency plans, such as water rationing and public awareness campaigns about conservation. The probabilities of staying in the Normal state and Wet state from the Drought state is 0.547 and 0.206, respectively. The relatively high probability suggests that, while drought conditions can persist, recovery is more likely. The local authorities can focus on implementing water conservation measures and enhancing water resource management during drought periods, resonating with Bekana’s recommendations for community engagement in water management. The probability of staying in the Drought state from the Normal state is 0.241. It is significant, hence indicating a considerable risk of reverting to drought conditions, emphasising the need for monitoring and proactive management strategies. The probability of remaining in the Normal state and Wet state from the Normal state is 0.618 and 0.141, respectively. It suggests that normal conditions are stable, and local authorities can use this information for long-term planning, ensuring that infrastructure and resources are maintained and encouraging sustainable land use practices during normal periods to mitigate the risk of future droughts. The probabilities of remaining in the Drought state and transitioning from the Wet state to the Normal state are 0.217 and 0.566, respectively. Hence the possibility of reverting to drought from wet conditions exists, highlighting the need for balanced water management. Local authorities should implement strategies to retain moisture and manage runoff effectively to reduce the risks of reverting to drought. The probability of remaining in the Wet state is 0.217. It shows a low likelihood of a wet period persisting, indicating that the area is prone to droughts. The community can build reservoirs, tanks or ponds to store water for future use, plant drought resistance crops and use irrigation technologies to mention a few. It enhances the community’s drought management strategies, preparedness and ensure sustainable resource allocation, leading to better resilience against the impacts of drought.

4.3 Validating the Markov Chain Assumptions

4.3.1. Validating the Markov Chain Property (Memoryless Property)

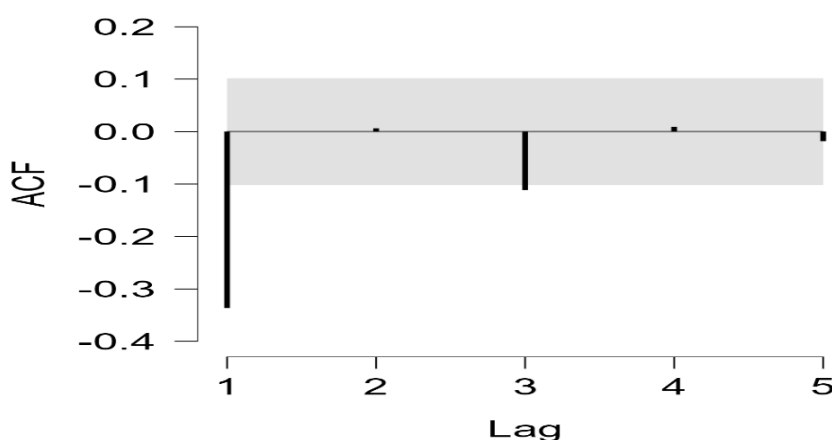


Figure 2

Autocorrelation Graph

The X-axis (Lag) represents the lag values, which indicate the time intervals at which the autocorrelation is measured. In this case, lags 1 to 5 were used. The Y-Axis (Autocorrelation Function (ACF) Values) shows the autocorrelation coefficients for each lag. Values range from -0.4 to 0.2. The shaded area around zero indicates the confidence interval (at 95%). If the ACF values fall within this interval, they are considered statistically insignificant.



Fig.2 shows that the autocorrelation at lag 1 is significantly negative as it fell outside the confidence interval. This suggests a strong negative correlation between consecutive observations, indicating that the current state is inversely related to the previous state. The autocorrelations for lags 2 and higher are near zero and within the confidence interval. This suggests that there is no significant correlation between observations that are two or more-time steps apart. The Markov property implies that the process is memoryless, meaning the next state depends only on the current state. The ACF graph indicates that while there is a dependency between consecutive states (lag 1), there is no significant dependency beyond lag 1. This pattern is consistent with a first-order Markov chain property of memoryless, where only the most recent observation influences the next state. It aligns with the theoretical framework presented by Azimi et al. (2020) who confirmed that historical data does not strongly influence current transitions after the immediate past state. This suggests that the series can be modelled as a Markov process, where the future state is primarily determined by the present state rather than past states.

4.3.2 Validating the Stationarity Assumption

It was done using the Transition Count matrix in Table 3 below:

Table 3

Transition Count Matrix

From/To	Drought	Normal	Wet	Row Total
Drought	24	53	20	97
Normal	58	149	34	241
Wet	15	39	15	69
Column Total	97	241	69	Grand Total=407

H_0 : There is no significant difference between the observed frequencies of transitions and the expected frequencies, that is, the transition probabilities between states (Drought, Normal, Wet) are stationary.

H_1 : There is a significant difference between the observed frequencies of transitions and the expected frequencies; that is, the transition probabilities are not stationary.

Sample size:407 transitions (provided a reasonable representation of the climatic states under study)

Degrees of freedom (df)= (3 rows -1) (3 columns -1) = 4

Significant Level/Critical Value is $\alpha = 0.05$

$$Chi - square Table Value = X_4^2(0.05) = 9.488$$

Decision Rule: Reject H_0 if $X_{calculated}^2 < 9.488$ otherwise, we fail to reject H_0 .

Calculating the Expected Frequencies

$$Expected Frequency = \frac{Row Total \times Column Total}{Grand Total}$$

$$24: \frac{97 \times 97}{407} = 23.12 ; 58: \frac{241 \times 97}{407} = 57.44 ; 15: \frac{69 \times 97}{407} = 16.44 ; 53: \frac{97 \times 241}{407} = 57.44 ;$$

$$149: \frac{241 \times 241}{407} = 142.71 ; 39: \frac{69 \times 241}{407} = 40.86 ; 20: \frac{97 \times 69}{407} = 16.44 ; 34: \frac{241 \times 69}{407} = 40.86$$

$$24: \frac{69 \times 69}{407} = 11.70$$

Table 4

Chi-Square Test Results

From/To	Observed (O) Frequencies	Expected (E) Frequencies	$\frac{(O - E)^2}{E}$
Drought → Drought	24	23.12	0.0335
Drought → Normal	53	57.44	0.3432
Drought → Wet	20	16.44	0.7709
Normal → Drought	58	57.44	0.0055
Normal → Normal	149	142.71	0.2772
Normal → Wet	34	40.86	1.1517
Wet → Drought	15	16.44	0.1261
Wet → Normal	39	40.86	0.0847
Wet → Wet	15	11.70	0.9308
Total	407	407	$X_{calculated}^2 = 3.724$

Since $X_{calculated}^2 = 3.724 < 9.488$ we fail to reject H_0 and conclude that the transition probabilities are stationary.

The results in Table 3 above support stationarity in the transition probability. This means that the transition probabilities among Drought, Normal and Wet states remain constant over the 11 years under study. This supports the work of Zhou et al (2022), who emphasized the importance of stable probabilities in effective drought forecasting and

management strategies. It means that the Markov chain model is valid for predicting future states based on current conditions. The Local authorities can rely on the model's predictions for planning and resource management since its consistency allows for better forecasting and preparation for drought conditions.

4.4 Markov Chain Analysis

The analysis of the transition matrices covered the calculation of the steady-state probabilities, calculating return periods, probabilities of multiple-year droughts and the Markov chain predictions. This enables the understanding of meteorological drought persistence, recurrence and long-term behaviour.

4.4.1 Calculating the Steady-State Probabilities

Using Table 2: The Transition Probability Matrix, (P), a system of equations (Equation 1 to 4) was formed:

$$\pi_{DROUGHT} = 0.247\pi_{DROUGHT} + 0.241\pi_{NORMAL} + 0.217\pi_{WET} \quad \text{Equation [1]}$$

$$\pi_{NORMAL} = 0.547\pi_{DROUGHT} + 0.618\pi_{NORMAL} + 0.566\pi_{WET} \quad \text{Equation [2]}$$

$$\pi_{WET} = 0.206\pi_{DROUGHT} + 0.141\pi_{NORMAL} + 0.217\pi_{WET} \quad \text{Equation [3]}$$

$$\pi_{DROUGHT} + \pi_{NORMAL} + \pi_{WET} = 1 \quad \text{Equation [4]}$$

Solving the system of equations above gives the steady-state probabilities below:

$$\pi_{DROUGHT} \approx 0.23 \text{ (23\%)}$$

$$\pi_{NORMAL} \approx 0.59 \text{ (59\%)}$$

$$\pi_{WET} \approx 0.18 \text{ (18\%)}$$

The steady-state probabilities above represent the long-term equilibrium distribution of the system across the Drought, Normal and Wet states. These probabilities indicate the proportion of the time the system is expected to be in each state over the long run. The results shows that the district is expected to experience drought conditions 23% of the time, supporting the findings of Brunner et al. (2019) regarding the frequency of drought conditions in Switzerland. It indicates that drought will persist from one period to the next in the long run. Hence, the community can implement water rationing policies, developing early warning systems and enhancing community education on water conservation. The normal state is expected to prevail 59% of the time, indicating that it is the most stable condition. Local authorities can plan for infrastructure and resource management based on this predominant state. Wet conditions are less common, occurring 18% of the time. The local authorities should establish flood management and water retention strategies. This ensures that excess water during wet periods is managed effectively to prevent damage and support agriculture. These probabilities provide a framework for long-term environmental planning. Authorities can use this data to develop policies that promote sustainable water use, conservation practices and climate adaptation strategies.

4.4.2 Calculating the Return Periods (T)

The return periods were calculated as the reciprocal of the steady-state probabilities. They provide insights into how frequently different climatic states (Drought, Normal, Wet) are expected to recur. The return period, T, for the states are:

$$T_{Drought} = \frac{1}{0.23} \approx 4.35 \text{ years}$$

$$T_{Normal} = \frac{1}{0.59} \approx 1.69 \text{ years}$$

$$T_{Wet} = \frac{1}{0.18} \approx 5.56 \text{ years.}$$

The results show that drought conditions are expected to recur approximately once every 4.35 years, relating with studies by Bekana (2025) who highlighted the variability of drought occurrences. The Local Authorities can implement early warning systems and response strategies to mitigate the impacts of drought, such as public awareness campaigns, implementing efficient irrigation systems and water rationing. This relatively frequent occurrence signifies that drought management and preparedness are critical. The average return period for normal conditions is shorter, suggesting that normal weather patterns can be expected more frequently, once every 1.69 years. This highlights the stability of normal conditions, which are vital for planning and resource allocation. Wet conditions are expected to recur approximately once every 5.56 years. Although these periods are less frequent, they can have significant impacts, such as flooding or water surplus, necessitating proactive management strategies. Knowledge of return periods encourages the adoption of sustainable farming practices. Farmers can be guided to implement drought-resistant crops and efficient irrigation techniques, enhancing food security and reducing vulnerability to climate variability. Engaging the community fosters a culture of resilience and proactive behaviour in resource management and that the community responses are appropriate and effective in addressing climatic challenges.

4.5 Calculating the Probabilities of Multi-Year Droughts

We will now compute: Probability of k-year continuous droughts, Probability that a drought ends in year k and the expected length of a drought.



4.5.1 Calculating the Probabilities of k-Year Continuous Droughts

From Table 2: The Transition Probability Matrix (TPM), $P(\text{Drought}) = 0.247$. The probability that a drought lasts for 1,2,3,4 and 5 years is given in Table 5 below.

Table 5
Probabilities of Drought Duration

Duration	Probability Formula	Value
1 year	Start in Drought	1
2 years	$P(\text{Drought})$	0.247
3 years	$P((\text{Drought})^2)$	$(0.247)^2=0.061=6.1\%$
4 years	$P((\text{Drought})^3)$	$(0.247)^3=0.0151=1.5\%$
5 years	$P(\text{Drought})^4$	$(0.247)^4=0.0037=0.37\%$

The probabilities provided in Table 5 above illustrate the likelihood of a drought lasting for consecutive years, based on the transition probability $P(\text{Drought})=0.247$. This probability represents the chance of remaining in a drought state from one year to the next. The probability of experiencing a drought for at least one year is certain (1). This serves as a baseline for understanding subsequent years. The probability of a drought lasting exactly two years in Mberengwa district is 0.247. This means that there is a 24.7% chance that if a drought starts, it will extend into the second year. The probability of a drought lasting three consecutive years is 0.061. This indicates a diminishing likelihood as the duration increases. The probability of a drought lasting four years is 0.0151 or 1.51%. This shows a further decrease in the probability of prolonged drought conditions. The probability of a drought lasting five years is 0.0037 or 0.37%. This indicates that extended droughts are quite rare. These results are consistent with the trends observed by Manyakaidze et al. (2025), who suggested that while short-term droughts are common, longer droughts are rare. Table 4 above shows that the drought persistence drops off quickly after 5 years due to a relatively low self-transition probability (0.247). The probabilities show a clear trend that, as the duration of the drought increases, the probability of it occurring decreases significantly. This reflects the increasing uncertainty and rarity of prolonged drought conditions. Understanding these probabilities is vital for local authorities in planning and resource management. Knowing that extended drought conditions are rare (0.37% chance of lasting for five years) allows policymakers to focus their efforts on shorter-term drought mitigation strategies while remaining vigilant for longer-term impacts. These probabilities provide a framework for assessing risk. Authorities can use this information to evaluate the potential impacts of drought on water resources, agriculture and community health, allowing for more informed decision-making. While longer droughts are less probable, their impact can be severe. Authorities should consider this in their long-term planning, ensuring that infrastructure and resources are adaptable to both short-term and rare, prolonged drought conditions. Hence, local authorities and policymakers can develop effective resource management strategies, prepare for emergencies, and implement sustainable practices that mitigate the impacts of drought on communities.

4.5.2 Calculating the Probabilities that a Drought Ends in year k

The probabilities calculated for a drought ending in year k were derived using the formula: (Drought ends in year k) = $P(((\text{Drought})^{k-2}) \times (1-P(\text{Drought})))$

Using results from Table 4 above we computed for k=2,3,4 and 5 years.

Table 6
Probabilities that Drought ends in year k.

Ends in year	Formula	Value
2nd year	$1-0.247=0.753$	$0.753=75.3\%$
3 rd year	$(0.247)(0.753)$	$0.186=18.6\%$
4 th year	$(0.0161)(0.753)$	$0.046=4.6\%$
5 th year	$(0.151)(0.753)$	$0.0114=1.14\%$

Table 6 above shows that if a drought begins, there's a 75.3% chance it will not last beyond the second year, reinforcing the findings of Mupepi and Matsa (2022), who identified the need for proactive measures during early drought stages. This indicates a high probability that a drought starting in the first year ends in the second year. It also shows that there is an 18.6% probability that a drought lasts exactly three years. It combines the chance of remaining in drought for two years followed by a transition to normal conditions. The probability of a drought lasting four years and then ending is 4.6%. This reflects the diminishing likelihood of prolonged droughts. The probability that a drought will last for five years and then end is 1.14%. It is low, reinforcing the rarity of such extended drought conditions. The results

highlight that the droughts (75.3%) are likely to end within the first two years. This information is crucial for local authorities as it emphasizes the need for proactive measures during the early stages of drought. As the duration of drought increases, the probability of it ending decreases significantly. This indicates that while short-term droughts are common, longer droughts are rare, which can inform risk management strategies. Knowing that most droughts are likely to end relatively quickly allows local authorities to focus their resources and response strategies accordingly. This can help in effectively managing water supplies and ensuring community preparedness. The probabilities for drought ending in years three to five, while lower, still highlight the necessity for emergency preparedness. The Local Authorities should have strategies in place for longer droughts, even if they are less likely, to mitigate potential impacts. Communicating these probabilities to the public can foster a better understanding of drought dynamics and encourage proactive water conservation practices. Awareness campaigns can focus on the importance of being prepared for both short-term and potential long-term drought scenarios. This proactive approach is vital for mitigating the impacts of climate variability on water resources and community health.

4.5.3 Calculating the Expected Length of a Drought (E(L))

The expected length of drought is derived from the probabilities of staying in drought for one year and the subsequent years. It was calculated using Table 4 results.

$$E(L) = 1 + 0.247 + 0.061 + 0.0151 + 0.0037 \approx 1.33 \text{ years} . \quad \text{Equation [5]}$$

Equation [5] shows that when a drought starts, it lasts about 1.33 years before transitioning to another state. The analysis indicates that droughts are likely to end quickly, within 1-2 years. It suggests that while droughts are a concern, they are often of shorter duration, allowing for quicker recovery. This aligns with the discussions by Javadinejad et al. (2023), who highlighted the importance of understanding the duration of drought for effective resource management and planning. Knowing the expected length of drought helps the Local Authorities to mobilise and allocate resources (like water and financial support) effectively. Farmers can also plan for drought duration by adjusting crop selection, irrigation and harvesting strategies. It provides valuable information for informed decision-making. It also enables proactive measures to reduce drought impacts on communities, agriculture and ecosystem. While the average drought lasts just over a year, authorities should still be mindful of the potential for longer droughts.

4.7 Limitations and impacts of using First Order Markov Chain Model

Using a first-order Markov chain model for predicting drought return periods has several limitations, including its memoryless property, simplicity assumptions and limited predictive power. These limitations can lead to oversimplification of complex systems, loss of valuable information and inaccurate predictions. As a result, the model may not be suitable for systems with long-term dependencies or complex dynamics, leading to inadequate planning and preparedness for droughts. To address these limitations, alternative approaches such as higher-order Markov models or machine learning techniques may be considered to capture more complex relationships and patterns in the data.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The analysis of the Markov chain modelling of meteorological drought return periods in Mberengwa District, Zimbabwe, reveals significant insights into the dynamics of drought, normal and wet conditions from 2011 to 2021. The Transition Count Matrix revealed significant insights into climatic transitions, showing a feasibility of recovering from drought, though not guaranteed. The Transition Probability Matrix confirmed that the drought conditions may persist, but recovery is more likely, emphasising the need for proactive resource management. The validation of the Markov Chain assumptions demonstrated that the process is memoryless, supporting the applicability of the model. The analysis also confirmed the stationarity of the transition probabilities, allowing for reliable predictions of the future states. The steady-state probabilities suggest that drought conditions are expected to occur 23% of the time, with normal conditions prevailing 59% of the time and wet conditions occurring 18% of the time. Furthermore, the expected return periods for each state indicate that droughts are anticipated approximately once every 4.35 years, while normal and wet conditions recur more frequently. The findings highlight the importance of proactive resource management, particularly in preparing for potential droughts, given their recurring nature and significant impact on agriculture and water resources.

5.2 Recommendations

From the study results, the community and the policy makers are suggested to embrace the following recommendations:

Emergency Preparedness: Local Authorities should develop comprehensive emergency plans to manage drought conditions effectively, including water rationing and public awareness campaigns. *Water Conservation Strategies:* Implementing water conservation measures like efficient irrigation, rainwater harvesting, crop residue management and intercropping, during normal conditions is essential to mitigate the impact of future droughts.

Infrastructure development: Authorities should invest in infrastructure that can manage water during wet periods, including reservoirs and efficient irrigation systems. *Community Engagement:* Educating the public about drought dynamics and encouraging sustainable practices can enhance community resilience. *Monitoring and Evaluation:* Continuous monitoring of climatic conditions and regular reassessment of the Markov Chain mode will aid in more accurate predictions and timely interventions. *Adaptive management:* Policies should be adaptable to changing climatic conditions, ensuring that resources are allocated efficiently based on the current state of the environment.

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The big data and accounting in the era of a pandemic: A desk research perspective

Samuel Ataribanam^{1*}
Abudu Dawuda²
Daniel Azerikatoa Ayoung³
Awineyesema Abiire⁴
Isaac Luke Agonbire Atugeba⁵
Felix Ayine Anabila⁶

^{1*}sataribanam@bolgatu.edu.gh

^{1,2,3,4,5,6}Bolgatanga Technical University, Ghana

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ABSTRACT

Is it possible for businesses to establish accounting procedures to make the most of big data and gain a competitive intelligence advantage in order to endure and thrive in a COVID-19 environment? This paper employed a desk research or systematic literature review approach to explore the difficulties and potential benefits of big data analytics for businesses during and after the COVID-19 pandemic. The study reveals that the most effective way to manage fluctuating consumer demand and potential losses is to have a plan in place for handling critical situations. Again, big data is viewed as an intangible asset that can be utilised to plan for and implement important contingencies that will increase a company's chances of surviving a pandemic. This study clearly demonstrates that incorporating big data into accounting methods, such as recording, measuring, valuation, risk assessment, materiality, intelligence, audit, and reporting, can enhance competitive intelligence, leading to new forms of trust and responsibility, and ultimately, effective internal governance. This study contributes to accounting research by presenting new and important insights into how accountants perceive the applications, opportunities, and challenges of big data beyond the COVID-19 pandemic. It provides an in-depth examination of the predictive analytics of big data as an intangible asset from an accounting perspective. This research includes policy and expert recommendations for developing new accounting perspectives on big data analytics to ensure organisations' financial viability throughout and beyond the COVID-19 situation.

Keywords: Accounting, Big Data Analytics, COVID-19, Intangible Assets, Intelligence

I. INTRODUCTION

The massive surge in internet service access was a direct result of the COVID-19 pandemic and the global lockdown conditions. For example, global giants such as Amazon, AliExpress, Google, and Microsoft all reported an unprecedented increase in online activities and ordering for goods and services. This inevitably led to the hiring of more workers in order to service the huge volumes of customer demand. Several sources and methods at varying depths contributed to the emergence of business data. Due to the specific requirements of handling terabytes, petabytes, and even zettabytes of data, methods for managing this quantity of information are evolving (Panneerselvam et al., 2015). The accounting industry will experience both immediate and long-term effects from the widespread use of data analytics and big data, both of which will benefit from the incorporation of corporate data (Vasarhelyi et al., 2015). To develop a deeper understanding of their audience, national health authorities, internet platforms, social media, and virtual enterprises all primarily rely on big data (Mesa, 2019; Arnaboldi et al., 2017; Janvrin & Watson, 2017). To aid in decision-making, businesses generate a plethora of data, both structured and unstructured, that is infeasible to manage using conventional data management systems. To aid businesses in analysing and gaining insights related to decision-making processes, data analysis software is necessary (Ranjan & Foroapon, 2021; Janvrin & Watson, 2017). Organisations, regulators, and individuals all face new challenges as a result of the generation and use of big data in informing decision-making (Zarsky, 2016). Increased ties between big data and cutting-edge technology (Hintze et al., 2017). Now, the size of large data sets exceeds ten zettabytes (10 billion terabytes) and doubles every two years. Therefore, many corporations face substantial ethical and accountability difficulties due to the production and use of big data. The efficiency, security, and privacy of all users and massive data brokers could not be guaranteed by current accounting methods alone (Dillard & Vinnari, 2017).

Few studies have examined the potential benefits of integrating big data into accounting and other business processes (Fiorini et al., 2018). In addition, both the theory and practice of studying big data are in their infancy, and



the field is still relatively fragmented (Frizzo-Barker et al., 2016). To help organisations thrive through and beyond the COVID-19 conditions, this study aims to overcome this knowledge gap by proposing an accounting paradigm that treats big data as an intangible asset. In light of this, the paper's findings contribute to the academic and professional literature on improving accounting methods to handle big data within the accounting process. As a first step, we aim to gain a crucial understanding of accounting for intangible assets, including the predictive analytics of big data. Second, our research investigates how accounting procedures can utilise big data to generate competitive intelligence in response to the COVID-19 pandemic. The third objective is to learn more about utilising big data to enhance accounting procedures and governance. Finally, we conducted a thorough evaluation of an accounting paradigm that treats big data as an intangible asset and utilises it to help firms navigate the COVID-19 pandemic and beyond.

We base our study on integrating the frameworks provided by Theodorakopoulos, et al. (2024), Al-Htaybat, et al. (2017), and Cockcroft and Russel (2018) to determine the advantages and disadvantages of utilising big data in corporate reporting, accounting, and finance. We build on the work of Al-Htaybat and Alberti Alhtaybat (2017), which was presented within the context of corporate governance reporting, and isolate the key ideas behind applying big data to accounting within this context. Our research aims to determine how companies may best prepare for and recover from COVID-19 by leveraging big data to gain competitive intelligence advantages. We have also introduced two additional elements: Risk and Audit, as well as internal governance. One of the most challenging aspects of modern accounting is learning how to assess the risks associated with the use or misuse of large datasets in people's daily lives, as illustrated in Figure 1. This is especially true in the corporate world, where big data is having an increasingly significant impact on the decisions made by customers, managers, shareholders, lenders, suppliers, and staff. Therefore, many other factors, such as social media, cutting-edge goods, and online marketplaces like Amazon and eBay, are having an increasingly significant impact on the way books are sold. This study examines the growing trend of accounting as a management and organising tool for big data in commercial settings, a trend driven by the need to address the aforementioned agenda (Janvrin & Watson, 2017). In recent years, big data has become a significant topic in various fields, including medicine, computing, social media, and accounting (Arnaboldi et al., 2017). Decision-making and resource-allocation systems have benefited from the availability of big data.

The study given in this article emphasises the growing significance of big data in diverse industries, such as accounting, in light of the COVID-19 pandemic and the ensuing upsurge in online activity. Nevertheless, while the increasing significance of big data in the field of accounting is evident, a noticeable gap exists in the scholarly literature regarding the evaluation and control of risks associated with the use of big data in accounting procedures (Al-Htaybat et al. 2017; Theodorakopoulos et al., 2024).

The article addresses the need to evaluate risks associated with big data in the field of accounting and acknowledges the challenge of comprehending these risks. However, it does not provide an in-depth analysis of the particular risks, their possible ramifications, or effective techniques for risk mitigation. Hence, there is a notable research gap in understanding and mitigating the risks, challenges, and ethical considerations associated with integrating big data into accounting procedures. Beyond that, this study examines the potential of big data as an intangible asset, both during and after the COVID-19 pandemic (Theodorakopoulos et al., 2024). Based on the research gap, this paper aims to address the following question: What are the precise dangers and obstacles associated with incorporating big data into accounting procedures, particularly within the context of the COVID-19 pandemic and the increased prevalence of online activities? What is the influence of these risks on decision-making and resource allocation in the field of accounting and financial management? This inquiry addresses the potential consequences of improper use or misuse of extensive datasets in accounting practices, as well as the strategies that can be employed to mitigate these issues (Al-Htaybat et al. 2017).

The use of big data as an intangible asset in accounting raises several ethical issues. Organisations must ensure the ethical usage of this data to maintain integrity and uphold societal values. What are the potential methods and governance structures that may be formulated to improve the efficiency, security, and privacy of users and data brokers within the realm of big data-driven accounting? Exploring these study inquiries will enhance scholarly understanding of the obstacles and opportunities associated with integrating big data into accounting methodologies, particularly in the aftermath of the COVID-19 pandemic, while also providing significant insights for both the academic community and the accounting industry (Al-Htaybat et al. 2017; Theodorakopoulos et al., 2024).

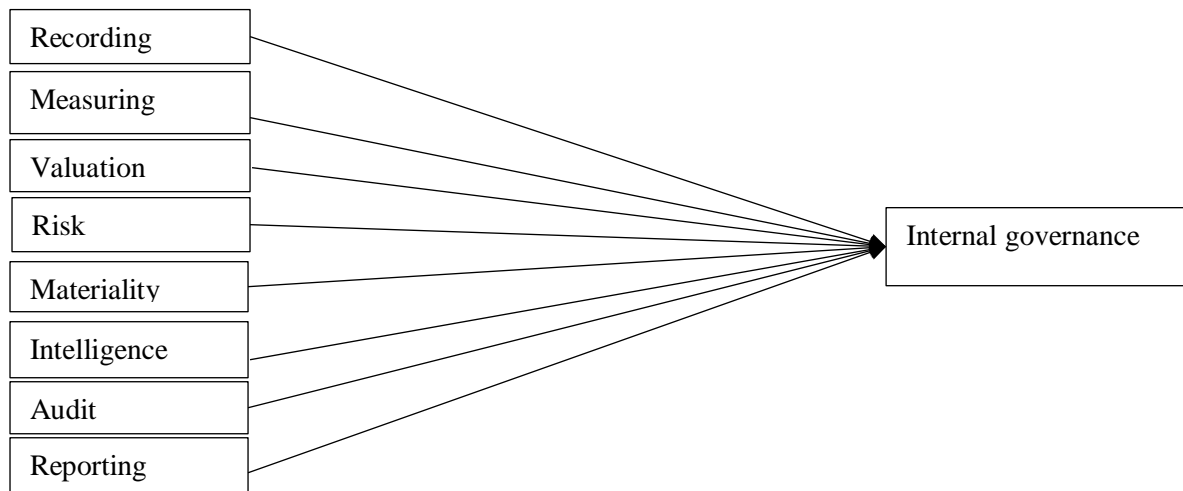


Figure 1

A modified Integrated Framework of the Accounting process

Source: Al-Htaybat et al. (2017) and Theodorakopoulos et al. (2024)

1.1 Research Objectives

This paper seeks to address the following objectives:

- To determine the precise dangers and obstacles linked to the incorporation of big data into accounting procedures, especially within the framework of the COVID-19 pandemic and the heightened prevalence of online activities.
- To find out the influence of these risks on decision-making and resource allocation in the field of accounting and financial management.
- To determine the possible ramifications that may arise from the improper utilisation or mistreatment of extensive datasets within the realm of accounting practises, as well as the strategies that may be used to alleviate these issues.

II. LITERATURE REVIEW

2.1 Theoretical Review

Due to their absence from financial statements and other business reporting, the study of internally created intangible assets is becoming increasingly important (Lim et al., 2020). A company's intangible soft assets are assets that are both one-of-a-kind and dependent on its specific environment. They are valuable resources that are interconnected to produce results and effects (Wataya & Shaw, 2019). Organisational value creation is demonstrated through the measurement and management of long-term investment decisions (Kang & Kim, 2014). According to Perrons and Jensen (2015), big data is an organisation's most valuable strategic intangible asset that can be used to obtain a competitive edge (Adesemowo, 2021). Debt finance and financial leverage can be supported just as well by intangible assets as they can by physical ones (Lim et al., 2020). For instance, the COVID-19 pandemic has only served to strengthen the competitive advantage of online retailers like Amazon, Google, and Microsoft, thanks to their streamlined procedures. As a result of their new role in mitigating the repercussions of the worldwide pandemic, including social distancing, online remote schooling, and the use of communication technologies, big data and data analytics software have become more influential intangible assets. A new use for big data emerged during the 2019 COVID-19 pandemic, described as a collection of organisational resources used to manage and support businesses (Adesemowo, 2021; Lim et al., 2020). Some research on managing and quantifying the influence of big data on company activities and transactions tends to gloss over the organisational interpretation of big data as an intangible asset, as presented below.

2.1.1 Value Creation and Measuring Big Data

In the past, the value of big data was evaluated based on metrics such as significant growth advantages, renewability, efficiency, stability, and co-value generation (Wataya & Shaw, 2019). With the use of big data, decision-making processes are bolstered by increased competitive intelligence in the form of high-performance analytics and data management tools (Panneerselvam, 2015). Big data's true worth as an intangible asset lies in the competitive information it provides. Increased profitability, expanded market share, and lasting success have all resulted from its application (Greco et al., 2013). De Mauro et al. (2018) emphasise the significance of big data as an intangible asset that can be leveraged by innovation management to yield better results. Big data can benefit businesses by facilitating the production of value and enhancing the beneficial impact of businesses through social media customer relationship management



systems. Value creation through social media contact and communication is a modern phenomenon. Particularly in the context of COVID-19, it is crucial to recognise and address the challenges of misusing big data through the development of cohesive governance and accountability measures. The internet and other digital technologies have emerged to facilitate modern life (Sein, 2020). Beyond the disease, however, this emerging digital environment will be leveraged to shape the way we conduct business. As part of this process, the organisation will need to develop new methods of sharing information with its various stakeholder groups to leverage big data and generate more distinctive organisational values.

Utilising big data as intangible assets, we propose that authorities and accounting standards setters should step in to modify impairment and amortisation methods. Individual, corporate, and national perspectives are all relevant when evaluating amortisation strategies and time frames (Ferramosca & Allegrini, 2021). Disagreement centres on whether or not to use an amortisation model or an impairment-only approach (Wen & Moehrle, 2016). That is why a large data accounting model based on amortisation is essential. The annual testing process (Wen & Moehrle, 2016), the impairment mechanisms (Ferramosca & Allegrini, 2021), and the risk exposure of improperly exploiting big data should all be accounted for in this model (Panneerselvam, 2015). We present three arguments against the widespread adoption of big data amortisation models. First, how to assess the usable economic life of big data as intangible assets by identifying the duration of big data usage, collecting, and processing periods using relevance-based methodologies (Park & Jang, 2021). Second, how big data is perceived and evaluated by those outside the organisation. Third, authorities and those responsible for setting accounting standards should determine how to assign a value to intangible benefits derived from big data, such as competitive intelligence, governance, revenue generation, and decision-making support.

2.1.2 Framework for Controlling and Organizing

Various regulatory frameworks typically structure and control traditional intangible assets. To provide a fair and honest portrayal of financial transactions, accountants have developed a set of rules and practices, as well as made adjustments to the way society operates (Riahi-Belkaoui, 2004). According to Leiwy and Perks (2013), one of the most significant difficulties in developing accounting standards is the prevalence of creative accounting. Standard-setters in the field of accounting are becoming increasingly stringent in an effort to eliminate and minimise discretionary accounting treatments and increase compliance monitoring and enforcement measures (or implementation). Modest and gradual adjustments to accounting rules and standards are part of creative accounting (Leiwy & Perks, 2013). We argue that, within certain accounting norms, creative accounting remains a functional and appropriate practice. Several options exist for businesses to track and report on their long-term effect and value generation in the wake of the pandemic. Despite this, the primary difficulty was in summarising and concluding the comprehensive accounting standards to ensure the simplicity of the implementation process in commercial institutions.

Both mandatory and voluntary regulations govern the use of big data. In the era of big data, the General Data Protection Regulation (GDPR) provides the necessary foundation (Tamburri, 2020). The adoption and implementation of the GDPR, however, have a far-reaching impact on how institutions utilise data analytics tools.

Specifically, the Global Reporting Initiative (GRI) II (GRI, 2013) and the United Nations Environment Programme Finance Initiative (UNEP FI) discussed the voluntary principles and protocols for tracking extensive data as intangible assets (UNEP FI, 2011). International institutional entrepreneurs, such as the United Nations, non-governmental organisations, professional accounting bodies, and social associations, have, however, produced these voluntary and organised principles. Utilising big data as intangible assets has been the subject of several studies in the field of accounting (Lim et al., 2020; Greco et al., 2013). In addition, Lim et al. (2020) argued that professional accounting bodies and other influential international organisations generally need accepted standards for the management of global guidelines, which are essential for the effective implementation of these guidelines, particularly in the context of intangible assets (e.g., the GRI reporting model). The widespread adoption of these global principles and organisational efforts to apply them in business activities expands accounting as a field of action for stakeholders.

2.1.3 Mechanisms for Recording Big Data

Financial business transactions (including intangible assets) were recorded using a double-entry recording technique in order to generate financial statements and regulatory reports (Leiwy & Perks, 2013). Since the 1600s, accountants have employed the double-entry bookkeeping technique to track their clients' finances (Crowther, 2010). The UK government commissioned the creation of this data logging system to track and address various national and federal requirements. To meet these requirements, the government had to undertake a wide range of tasks, including monitoring tax revenues used to finance the Napoleonic Wars and railway construction, as well as enforcing legal protections for company shareholders and creditors. As the following remark indicates, the double-entry technique was first used to track money transactions. In Ghana, the government has, over the past five years, attempted to implement and promote the digitalisation of all government transactions across various agencies. Big data could be a critical source of data mining for this initiative.



The 'double aspect convention' is one of the more common ones. As a result, every transaction requires two separate entries, one for the debit side and one for the credit side. This is a key tenet of accounting and is sometimes referred to as "double-entry bookkeeping." Historically, and especially before the widespread availability of standardised computer packages, the double-entry approach was used to record financial transactions reliably. As stated on pages 28–29 of Crowther's (2010), a critical aspect in keeping the balance sheet and other financial accounts in check is using the double-entry recording method (the equality of debits and credits).

2.1.4 Big Data Reporting

Financial statements are typically distributed to internal and external users, where information about intangible assets is reported (Alexander et al., 2003). We suggest that value drivers, institutional links, expertise, and organisational culture are all part of the value relevance reasoning that should be used when reporting on the big data value generation processes and mechanisms to stakeholders (Greco et al., 2013). Nonetheless, managers may learn whatever they need to know from other employees. However, users from outside may resort to negotiation or legal means to obtain the information they need. To secure the social licence to operate, accounting standards setters and regulators must address this tension (Mansell, 2013).

Voluntary reporting frameworks structure the vast majority of big data reporting procedures. Big data reporting can be viewed in at least two ways, each contributing to a distinct understanding of the intangible value it provides. The initial impetus for doing so was the requirement to establish standard operating procedures for the company. Second, the organisation may have reported its effect and transparency by actively consulting and communicating with its most influential stakeholders (Park & Jang, 2021). The real behavioural evolution of management strategies and information systems is one of the key goals of big data reporting. Some of the organisational externalities and the effects of economic activity can be managed by big data reporting techniques, which represent new accounts of the social contract (Mansell, 2013). Understanding corporate accountability requires taking into account the legal, ethical, and sociological factors inherent in the information flow of this contract (between a corporation and its stakeholders). Therefore, sharing information (e.g. value relevance, transparency, and accountability) about an organisation's effect on society is central to big data reporting standards.

2.1.5 Valuation of Big Data

When determining the value of a company's big data, it is essential to consider how the organisation leverages that data in the form of business strategies, decisions, and outcomes (Park & Jang, 2021; Greco et al., 2013). Until recently, the accounting literature lacked a discussion of the non-monetary value of large data. However, the term "big data valuation" can be used in two different contexts. These are the official and informal interpretations. The formal definition of integrated reporting as a means of creating value has been the primary emphasis of the International Integrated Reporting Council (IIRC, 2013). In its more colloquial sense, integrated reporting refers to the practice of explaining how businesses can report both financial and non-financial information together (Leiwiy & Perks, 2013).

The value of big data analytical programmes can be described using various big data valuation approaches. For instance, Lim et al. (2020) claimed that businesses should analyse the outcomes of big data analysis in order to gauge the effectiveness of value creation procedures. This method of valuing, however, fails to account for the long-term consequences of improperly utilising big data for businesses. To further determine the extent to which organisations are answerable for their actions, an analysis of their influence was conducted using social contract theory (Mansell, 2013). The interactions between stakeholders and management should be used to evaluate this aspect of responsibility.

2.1.6 Big Data and Risk Management

The corporate governance codes in the United Kingdom prioritise risk management as a key management responsibility. The use of big data has the potential to enhance risk management in several ways, including improved monitoring and coverage, as well as the creation of models to support risk decisions. Because of its unique characteristics, big data has the potential to enhance not only fraud detection but also risk assessment, prediction, and measurement. The "Volume" and "Variety" aspects, for instance, will provide a plethora of internal and external data, as well as financial and non-financial data, in various formats (Theodorakopoulos et al., 2024).

With its big data technology, Alibaba Group can constantly track and evaluate potential fraud threats. Despite recent progress, further study is needed to determine whether or not big data can indeed enhance fraud detection and prevention (Cockcroft & Russel, 2018; Aboud & Robinson, 2022). Conventional methods of auditing and analysing financial reporting may be insufficient for detecting fake financial reporting. This means that cutting-edge analytic technologies could be used to boost assurance and audit quality.

2.1.7 The Materiality in Using Big Data

To determine which pieces of accounting data are most crucial for a company to share with its stakeholders, the concept of materiality was developed (Alexander et al., 2003). We contend that there could be tension between



management's goals and those of other users in how an organisation handles this sort of materiality. Therefore, conventional intangible assets (such as patents and copyrights) are concerned with gauging the value creation and direct values of these intangibles (Lim et al., 2020). The value of competitive intelligence and the risk of misusing big data — two aspects closely related to the use of big data as intangible assets — are often disregarded.

The materiality criterion guides businesses in disclosing the most important information to their stakeholders (Alexander et al., 2003). Stakeholders' attitudes and preferences regarding an organisation's operations and services may be affected by the organisation's selection of relevant information. Therefore, a process is necessary to identify the demands of the most influential stakeholders in order to publish the most relevant and required information about big data, thereby determining what information is material.

2.1.8 The Internal and External Reporting

The purpose of financial reporting is to disseminate information about a company's financial health to both internal and external stakeholders. The essential big data capabilities for organisational activities were interpreted and understood with the help of financial reporting (Hatherly, 2013). We believe that preferences are at play in how organisations distribute information to users of big data, in an effort to influence their behaviour. To present a credible picture of their overall operations to institutional investors, businesses, for instance, share data from corporate analytics (Greco et al., 2013).

Some scholarly efforts have also been made to evaluate the reporting procedure of big data outside of financial reports (Pei & Vasarhelyi, 2020). To address the inefficiency of traditional accounting methods and to make financial reports more meaningful, Pei and Vasarhelyi (2020) designed a new system. However, the dynamics and priorities of employing big data in the COVID-19 disease are overlooked in this endeavour.

2.1.9 Audit Evidence and Big Data

Big data and its analytics can improve the efficiency and quality of audit activities (Theodorakopoulos, et al., 2024; Institute of Chartered Accountants in England and Wales [ICAEW], 2014). Yoon et al. (2015) state that big data will play an important role in auditing. Big data enables auditors to obtain the required evidence in real-time, as it can be created and processed at a very high speed. According to the International Standard on Auditing (ISA), "Audit Evidence" refers to all the information used by the auditor, whether contained in accounting records or other information.

2.1.10 Precincts

The primary focus of traditional accounting is the monetary aspects of company transactions, with considerable attention also paid to non-monetary matters such as the impact of big data and the importance of financial reporting (Maynard, 2013). A company's future strategic organisational performance may be influenced by factors beyond its financial statistics, such as the way its management views climate change and environmental concerns (Hatherly, 2013). To produce value for present and future generations, integrated corporate reporting links financial and non-financial data to link business services, strategy, data governance, and the application of big data (IIRC, 2013). However, the interconnection between the financial components of corporate performance and the use of big data to support intangible assets, business operations, and decisions appears to be ignored by the boundaries of conventional accounting (Kastouni & Lahcen, 2022).

III. METHODOLOGY

In this work, we employed a desk study approach to investigate the difficulties and potential benefits that may arise as businesses utilise big data analytics to weather the COVID-19 storm and beyond. Desk research has been widely used in the past to review and discuss the work of others in a specific field of study (Bawole & Ibrahim, 2016; Albitar et al., 2020). Utilising big data as a business strategy offers new perspectives for applying big data techniques in organisations beyond the COVID-19 pandemic (Fiorini et al., 2018). We employed thematic analyses of the literature on big data analytics to demonstrate how this intangible asset can be leveraged to develop crucial alternative plans and gain a competitive advantage. This study's approach was selected for its potential to yield detailed insights into the unique circumstances and significant issues related to good accounting methods and governance across various organisations. The in-depth content analysis of the case studies was essential in enhancing the trustworthiness of the research results, as it aligned perfectly with the study's objectives. This data underwent analysis as it was deemed the most appropriate method. This method enabled the researchers to select relevant publications for the study (Kynge et al., 2020). After gathering extensive data, the researcher performed a thorough synthesis of the study's findings, narrowing the article pool from 1200 to 80–90 (Sachs & Kujala, 2021; Pedrini & Ferri, 2019). The publications included in this investigation covered the years 2011 to 2021, as indicated in Table 1. This study employed an exclusion and inclusion strategy, as illustrated in the first column. This study exclusively utilises articles published within the last nine years; articles older than ten years were excluded from consideration. The third column of Table 1 presents the keywords



utilised for data collection in this research. Column 2 presents the web databases and search engines employed to obtain the data pertinent to this research. This study commenced in November 2022 and concluded in November 2024. The two-year duration was due to the large number of articles involved that needed to be read.

Articles Published	Databases/Search engines Used	Keywords Used
From 2011 to 2021	Web of Science	Accounting Methods
Excluded 9 years or above	Science Direct	Big Data Analytics
Included 10 years or Less	Scopus	Artificial Intelligence
	Taylor and Francis online	COVID-19 Pandemic
	Wiley and Sons	Intangible Assets
	Springer Nature	Africa
	Google Scholar	Europe
	ResearchGate	Asia
	Sage Publication	Qualitative methods
	Emerald Publication	Financial Reporting

IV. FINDINGS & DISCUSSION

4.1 Big Data Implications in the Accounting Profession

By definition, Big Data consists of "the information assets characterised by such great volume, velocity, and variety to necessitate specific technology and analytical procedures for its transformation into value" (De Mauro, et al., 2016). Vast volumes, varied content, large sizes, varied natures, complicated structures, and high levels of complexity are all examples of what this phrase alludes to when discussing data (Varsarhelyi et al., 2015). It also alludes to the widespread adoption of a tacit understanding of the character of e-commerce in the wake of the global shutdown brought on by the COVID-19 pandemic in 2020/21 (Fiorini et al., 2018). Big data management tools include data mining, text mining, sentiment analysis, data modelling, and data analytics, all of which are used by businesses to inform their decision-making processes more effectively (Frizzo-Barker et al., 2016). Big data is influencing organisational strategies and policies (George et al., 2014). Due to the absence of a tangible good, financial service providers can benefit in ways that other businesses cannot, thanks to the availability of big data (Turner et al., 2013). It starts by determining what a firm needs, and then utilises existing resources, such as hardware, software, data, and analytics, to support that work. The use of non-traditional data sources necessitated a shift in accounting and auditing norms, which was made possible by the advent of big data (Vasarhelyi et al., 2015). The areas of security, risk, privacy, trust, accountability, real-world predictive analytics, data visualisation, ethics, data management, and data quality will be at the centre of this shift toward using big data in accounting and finance (Cockcroft & Russell, 2018).

Future research can also benefit from focusing on information governance, corporate reporting (Al-Htaybat & Alberti, 2017), and customer insights (Clarke, 2016). The most studied aspects of big data concerned trust, danger, and responsibility (Cockcroft & Russell, 2018; Al-Htaybat & Alberti-Alhtaybat, 2017; Vasarhelyi et al., 2015). Therefore, the purpose of this article is to investigate how companies and other organisations improve their accounting procedures by leveraging big data to generate competitive intelligence, enabling them to thrive in the face of and after the COVID-19 pandemic.

4.2 The Use of Big Data and its Implications: Accountability, Risk and Trust

Because data reliability is a crucial factor in data processing and administration, businesses are concerned about significant data risk and compliance management (Panneerselvam et al., 2015). Due to its tremendous integration, complexity, and variety, big data presents a significant danger of missing or abusing data (Bdaily, 2013). The auditing of big data and accounting tasks in businesses is complicated in many ways, including the risk of security breaches and data leaks (Ramamoorti et al., 2016). Business accountability through the use of social media networks and other online platforms is closely linked to the auditability of big data (Cockcroft & M. Russell, 2018). The reputation of any company, its ability to connect with its customers and other stakeholders, can both benefit from the use of social media and big data (Arnaboldi et al., 2017).

However, maintaining a company's good name requires more robust corporate governance and accountability than ever before. Reusing information gleaned through social media platforms comes with personal and societal hazards that may impact an organisation's standing in the public eye (Clarke, 2016). When it comes to boosting a company's bottom line and stock price, a positive online reputation is a crucial aspect (Ramos & Casado-Molina, 2021). A company's credibility may be compromised if the big data it collected was not used for its intended purpose (Clarke, 2016). Companies' social media presence will be used as a barometer of their economic success as the sharing economy gains popularity (Ramos & CasadoMolina, 2021).



Accounting and accountability methods have been advocated as a result of the use of social media and big data in businesses (Arnaboldi et al., 2017). Stakeholder expectations from various interest groups must be managed transparently as part of corporate accountability (Unerman & Bennett, 2004). More participation from those who matter most was achieved by incorporating their varied perspectives within a big data environment. This sort of activity is indicative of a corporation's controlled (kept) social licence to operate and survive.

A variety of arguments were made to defend the potential of maintaining a certain level of trustworthiness in managing large amounts of big data, as people came to comprehend the reliability of big data (Symons & Alvarado, 2016). Another obstacle to preserving trustworthiness and dependability is the social, legal, and political implications of leveraging big data to create value from corporate activity. Big data is being utilised by businesses to generate consumer value, but the exact form of this asset remains uncertain (Zerbino et al., 2018). Financial records and reports must be relied upon, documented, analysed, depreciated, audited, and reported on with respect to this asset. Financial statements are one tool used by traditional accounting to provide information about businesses to audiences beyond the management team (Alexander et al., 2003). Management can obtain any necessary information from within the company, whereas outsiders may need to resort to negotiation or regulations to obtain the details they require. Management and regulators face a significant task in resolving this conflict to earn the public's trust and approval, which is necessary before they can conduct business legally. Therefore, it is important to establish accounting standards for the administration and reporting of massive amounts of data within commercial enterprises. The next stage of this requirement is for businesses to adopt ethical and legal responsibility methods for commercialising big data to generate organisational values.

4.3 The COVID-19 Environment, Big Data and Corporate Governance

The healthcare sector, international trade, and the economy as a whole have all been severely impacted by the COVID-19 pandemic (He et al., 2021). The COVID-19 pandemic has resulted in a dearth of scientific contributions to big data governance. In this section, we examine the literature on the most important methods for handling the accounting side of big data governance during the COVID-19 pandemic. In the corporate world, big data has been utilised as a market-based tool to support decision-making (Al-Badi et al., 2018). One such market-based instrument for governing large datasets is competitive intelligence. To stay ahead of other businesses and provide valuable insights to your own, you need competitive intelligence (Ranjan & Foropon, 2021). The end goal is to build a centralised knowledge base for organisational decision-making by amassing, analysing, interpreting, and disseminating large amounts of data from rival institutions (Acharya et al., 2018). Business operations were supported by competitive intelligence tools, including benchmarking procedures (Jeong et al., 2021) and strategic planning processes (Tyson, 1998). To meet the privacy and transparency standards of public stakeholders, such as policymakers and regulators, organisations using big data for competitive intelligence must enhance their governance levels (Shamim et al., 2020). The term "big data governance" refers to the process by which an organisation handles and utilises massive amounts of data for strategic decision-making (Al-Badi et al., 2018). To guarantee dependability, trust, and consistency, big data governance must be carefully orchestrated and implemented.

However, big data can be manipulated, especially in the context of the COVID-19 disease environment, to influence corporate orientation (Rosado et al., 2021). This would be consistent with the core values of wealth accumulation and profit maximisation in current capitalism. Thus, in the face of the COVID-19 disease, it is necessary to manage big data governance and secure societal consent for this accumulation of wealth in order to obtain the licence to continue operations (Kaletsky, 2010). Legitimacy theory's tenet of a social compact (Mansell, 2013) is congruent with this position (Deegan & Blomquist, 2006). Business ties with various members of society are described in the social contract. Most businesses will likely last for quite some time and continue operating, but only the strongest will survive into the next generation. From an accounting standpoint, however, it is unclear how businesses manage big data governance to secure organisational legitimacy from stakeholders (society) in order to endure and accept their goals for profit development and wealth accumulation in the face of a pandemic. Managing the governance of big data has been employed as a strategy to enhance business profitability and support business survival through the development of new products and processes (Ortiz-Villajos & Sotoca, 2018). The factors driving this corporate innovation present more opportunities to create governance-based instruments for building accountability mechanisms to regulate wealth accumulation and profit maximisation in the face of the COVID-19 pandemic. This means that in the age of algorithms and the COVID-19 pandemic, the regulatory (Kempeneer, 2021) and informational technologies (He et al., 2021) present yet another crucial facet of controlling the governance and usage of big data (Kempeneer, 2021). However, there remains a lack of clarity regarding the description, key uses, classification, and utility of big data during the COVID-19 pandemic in terms of full governance and accountability. The following section examines the primary distinctive features of big data as an intangible asset from an accounting viewpoint.



4.5 Implications, Opportunities, and Challenges on Accounting Perspectives of Big Data

The purpose of this study is to create a unified analysis for an accounting framework that utilises big data to ensure the long-term viability of business enterprises in the face of and after the onset of COVID-19 conditions. The purpose of this section is to provide a literature study that demonstrates how the COVID-19 disease has influenced the evolution of accounting methods for the purpose of managing large amounts of data within commercial organisations. Before understanding the origins of these accounting procedures, it appears important to examine the historical context of big data's emergence as an intangible asset. For businesses, big data has proven to be a valuable resource for boosting profits and cutting expenses (Kastouni & Lahcen, 2020). Additionally, there is a significant need for accountants and auditors to acquire data analytics skills in order to effectively utilise big data in the field (Fay & Negangard, 2017). The scope and purpose of accounting with big data are still poorly defined and poorly understood.

Furthermore, several types of accounting procedures have been studied in diverse settings within the big data literature. Kastouni and Lahcen (2020) are just two authors who stress the importance of investigating the potential and actual applications of big data in accounting procedures across various organisational levels. A variety of organisational models are proposed in this work to comprehend better these procedures (De Maura et al., 2016).

To create and comprehend the utilisation of big data as a soft asset in corporate organisations, accounting practices offer analytical insights from a mix of fresh theorisations, constructivism, and empirical observations (Wataya & Shaw, 2019). To implement this recommendation effectively, it is necessary to conduct an open inquiry into the primary argument against treating big data as an intangible asset. The objective of this review is to elaborate on the benefits of these emerging intangible resources. To address the shortcomings of traditional accounting methods, businesses must first determine why they require these intangible assets and how they will be utilised (Sarkar et al., 2021). The qualities of big data from an accounting perspective have been identified using the interpretive-hermeneutic circle. We are now able to define the conceptual framework for using big data as an intangible or soft asset. The hermeneutic circle is a method for making sense of muddled concepts by honing our ability to differentiate between them. As shown in Figure 1, the hermeneutic circle was utilised to determine the most important aspects of big data in light of the actual reality of accounting procedures. Big data is an intangible asset, and this highlights its distinctiveness from more conventional intangible assets. This separation necessitates significant mental and practical disentangling between the two forms of intangible property. The ontological methods, the materiality of the critical themes, and the explanation of each framework are the intellectual parts of this differentiation. Each framework's description, measurement, organisational bodies, controlling and regulating framework, methods, communication, ultimate outputs, and difficulties comprise the concrete aspects of these intangible assets.

There are enticing upsides to treating big data as a form of intangible or soft asset. One of these advantages is the opportunity to prepare for the COVID-19 pandemic by building a strong infrastructure and unified organisational accounts that utilise big data to support businesses (Ahmed et al., 2021; Amankwah-Amoah & Adomako, 2019). This is why, in the sections that follow, we will delve further into the connections between traditional intangible assets and big data as a new tangible/soft asset.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

To help businesses weather the COVID-19 pandemic and beyond, this research has hypothetically explored how big data applications may be employed as soft, intangible assets. The following are some ways this study, which employed a desk study approach, contributes to the lively discussion in accounting about big data. As the paper's first significant contribution, it presents a novel theoretical framework for treating big data as any other high-value intangible asset. According to this theoretical framework, big data is an intangible asset that businesses can monitor and manage to help them acquire a competitive edge and generate new forms of value. Second, the study theorises how companies and other organisations might deal with the accounting repercussions of the system it proposes. Importantly, it provides guidance on how to account for big data as an intangible asset. Third, it suggests novel insights into how big data can help businesses thrive after COVID-19. As a fourth contribution, this study sheds light on the governance and risk of leveraging big data for competitive intelligence benefits, offering a fresh perspective on an established topic. Fifth, the paper emphasises the fundamental structure of the proposed accounting system for managing big data applications by providing a contemporary theoretical comparison of big data as valued intangible assets and traditional intangible assets. Beyond COVID-19, it offers novel accounting considerations for implementing big data strategies in corporate settings.

By delving into the primary modern accounting considerations for exploiting and misusing big data during and beyond the COVID-19 pandemic, this article offers practical implications for standard setters, accounting practitioners, corporate managers, and academics. Some motifs from the classical type of institutionalism are involved in the expert management of these pragmatic considerations. Beyond the era of the COVID-19 pandemic, this type of institutionalism provides the formal structure, norms, and values necessary to enhance company processes. From an accounting



perspective, this article also outlines the competencies and capacities that businesses require to manage big data effectively.

5.2 Recommendations

In this paper, we propose several important avenues for future study. The first step in managing big data as a valuable intangible asset and vital component of the social contract between enterprises and society is to conduct qualitative research through methods such as interviews and observations to determine the necessary organisational values and norms for doing so. Second, further research is needed to determine how accounting can utilise big data to enhance resource allocation, risk management, capital cost, earnings management, financial performance, and decision-making. Third, beyond the scope of the COVID-19 disease, more foresighted research ideas could be developed to describe the role of big data in bridging the gap between traditional accounting procedures and the needs of the modern market.

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The impacts of deposit growth on the profitability of commercial banks in Tanzania: A case of CRDB Bank Plc, Arusha City Council

Ngasa B. Ng'humbu¹

¹ngasa.nghumbu@iaa.ac.tz

¹Institute of Accountancy Arusha (IAA), Tanzania

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ABSTRACT

This study examines the relationship between deposit growth and profitability at CRDB Bank Plc in Tanzania, using Return on Equity (ROE) as a profitability indicator. The commercial banking sector in Tanzania faces considerable challenges in maintaining profitability due to fluctuating economic conditions and increased competition. Factors such as credit risk management, optimization of capital structure, macroeconomic influences (for example, deposit growth), regulatory compliance, and rapid digital transformation contribute to this complexity, highlighting the need for a deeper understanding of profitability dynamics. Despite a notable rise in deposits, academic literature lacks insights into the direct impact of deposit growth on bank profitability in Tanzania. To fill this gap, the research focuses on CRDB Bank Plc, aiming to shed light on the subtle interaction between deposit levels and ROE. The current study utilized liquidity preference, financial intermediation, and modern portfolio theories. By analyzing quarterly secondary data from 2014 to 2023 and applying correlation and regression analyses on 37 observations, the findings suggest a weak positive correlation between deposit growth and profitability, with a low R-squared of 1.87%. The average ROE was 17.90%, compared to an average deposit growth of 13.08%, indicating that deposit growth is not a significant factor influencing ROE. Therefore, the study recommends exploring additional factors affecting bank performance, including macroeconomic conditions and regulatory compliance, to improve strategic decision-making. Future research should also compare CRDB's performance against industry standards to identify potential improvements, ultimately aiming to support the development of a resilient banking environment that promotes economic growth in Tanzania.

Key words: Commercial Banks, Deposit Growth, Monetary Examiners, Policymakers, Profitability, Tanzania

I. INTRODUCTION

Commercial banks in Tanzania encounter substantial obstacles in sustaining profitability within a swiftly transforming economic landscape, characterized by variable conditions and escalating competition (Qin, 2012; Francisca, 2025) emphasizes that the intricacies inherent in this sector are multifarious, encompassing elements such as credit risk management, optimization of capital structure, macroeconomic factors, adherence to regulatory frameworks, and the rapid evolution of digital technologies. These factors not only impede the operational efficiency of banks but also engender a context in which comprehending the dynamics of profitability becomes increasingly paramount. Notwithstanding the considerable increase in deposits noted in recent years, there exists a considerable gap in the academic literature concerning the direct effects of such deposit growth on the profitability of commercial banks within the Tanzanian framework (Goodhope et al., 2023). As financial institutions endeavor to broaden their portfolios and augment their lending capacities, a sophisticated understanding of these interrelations is crucial for formulating effective strategies that enhance financial performance and resilience.

For the remedy of this knowledge gap, the present study should concentrate on CRDB Bank Plc, a pivotal entity in Tanzania's banking landscape, to investigate the intricate interplay between deposit growth and profitability (Moga & Patrick, 2021). Through a meticulous examination of this phenomenon, the research aspires to furnish significant insights that may assist commercial banks in refining their operational methodologies (Bueno et al., 2024). Specifically, the study endeavors to clarify how heightened levels of deposits can facilitate improved lending capabilities, thereby promoting broader economic advancement by rendering credit more accessible to both individuals and enterprises. Furthermore, by acknowledging that deposit growth constitutes a fundamental catalyst for liquidity, this analysis aims to illuminate the strategic ramifications for banks striving to navigate the challenges posed by a competitive marketplace (Ademe, 2023). Comprehending these dynamics is essential for informing policy-making and nurturing a resilient banking environment that can underpin economic development in Tanzania.



1.1 Statement of the Problem

Tanzanian commercial banks strive to be profitable in the face of shifting market dynamics and heightened competition. Credit risk management, capital structure, macroeconomic variables, market dynamics and rivalry, regulatory compliance, and technological innovation and digitization are some of the difficulties faced by commercial banks (Dacre et al., 2024). Although deposits have increased, little is known about how deposit growth impacts Tanzanian commercial banks' profitability. With a particular focus on CRDB Bank Plc, this study attempts to investigate the connection between deposit growth and Tanzanian commercial banks' profitability. By exploring this issue, the study hopes to shed light on the connection between deposit growth and profitability, which would help commercial banks in Tanzania develop better financial performance plans (Chrisostom et al., 2024). As a result, an increase in deposits boosts a commercial bank's capital, expanding its lending to both individuals and companies and ultimately contributing to economic growth. Additionally, Garr (2021) highlights that increasing deposits enhances banks' liquidity and helps their primary function of financial intermediation by creating relationships that help rescue borrowers. Additionally, it results in increased profitability and revenue.

1.2 Research Objective

To evaluate the impacts of Deposit Growth on Commercial Banks' Profitability in Tanzania, the case of CRDB Bank Plc in Arusha City Council.

II. LITERATURE REVIEW

2.1 Theoretical Review

The current study utilized liquidity Preference, Financial Intermediation, and Modern Portfolio Theories.

2.1.1 Liquidity Preference Theory

John Maynard Keynes introduced the theory of liquidity preference in 1936. It states that investors want more liquidity and that banks must manage liquidity since they must always be ready to meet withdrawal requests. John explained this concept in his revolutionary book, *The General Theory of Employment, Interest, and Money*. This theory focuses on the increase in deposit improving liquidity, and the banks' ability to more profitably invest while still meeting reserve requirements. During uncertain times, individuals prefer liquid assets over illiquid ones. The reward for losing liquidity is the interest, and people want more interest for holding illiquid assets (Ang & Papanikolaou, 2014). Keynes explained the three reasons or motives that prompt individuals to hold money and that help avoid assets. The three motives are transaction, for everyday payment, precautionary, for unplanned expenses, and speculative, to be used in future profit opportunities.

2.1.2 Financial Intermediation Theory

Financial Intermediation Theory was introduced by John G. Gurley and Edward S. Shaw in 1956. This theory highlights the essential function of banks as intermediaries, linking individuals and businesses with surplus funds (depositors) to those requiring financial resources (borrowers). As the amount of deposits in a bank rises, the institution's capacity to provide loans increases correspondingly, fostering a beneficial cycle of financial activity (Trung, 2021). With an increased availability of capital for lending, banks can access a broader array of potential borrowers, which not only promotes economic growth but also improves their revenue streams. As a result, this expansion in lending capacity can lead to increased interest income, making a significant contribution to the bank's overall profitability. Ultimately, the connection between deposit levels and lending ability illustrates the fundamental principles of banking and its influence on the wider economy.

2.1.3. Modern Portfolio Theory (MPT)

Modern Portfolio Theory abbreviated as MPT was initially established by Harry Markowitz in 1952 through his seminal paper titled *Portfolio Selection*, published in the *Journal of Finance*. This theory of diversification asserts that distributing investments across a wide array of assets can significantly reduce overall risk while simultaneously enhancing potential returns. This concept is especially pertinent in the banking sector, where the accumulation of larger deposits enables financial institutions to expand their lending and investment opportunities. With the acquisition of greater deposits, banks are afforded the flexibility to diversify their loan portfolios. This allows them to extend credit across a variety of borrowers in different sectors, such as residential, commercial, and industrial loans, rather than concentrating their resources in just one or two areas. Such diversification diminishes the risk of default; even if one sector faces a downturn, others may remain stable or profitable, thus providing a buffer against potential losses.

The study by Olayinka (2022) commends that increased deposits enable banks to pursue a wider range of investment strategies. They can allocate funds across a mix of assets, including government securities, corporate bonds,

and equity investments. This strategic flexibility not only increases the likelihood of higher returns but also assists banks in managing their risk exposure more effectively. For example, while equities may present greater growth potential, bonds can offer a consistent income stream. By blending these diverse investment types, banks can establish a more balanced risk-reward profile. This study emphasizes the impacts of deposit growth on Banks' profitability to increase in CRDB Plc bank using the theories mentioned and with the use of a quantitative approach.

2.2 Empirical Review

Moga and Patrick (2021) examined the elements influencing the profitability of commercial banks in Tanzania. His research highlighted the importance of efficient asset utilization along with deposit growth to boost profitability, stressing the need for banks to optimize their asset management practices. The study also underlined the role of cost management and loan performance in shaping profitability, necessitating that banks strike a balance between deposit mobilization and effective risk management. By concentrating on these crucial aspects, banks can enhance their financial performance and competitiveness within the market. Efficient cost management and loan performance are vital parts of a bank's overall strategy for maximizing profitability. Banks that effectively manage these elements are more likely to realize improved financial results and long-term sustainability.

The study by Trung (2021) at Moshi University & Ardhi University focused on determinants of commercial bank profitability using the CAMEL model and regression analysis. The study's findings highlighted the significance of liquidity, capital adequacy, and asset quality in promoting profitability in commercial banks. Liquidity, often driven by deposit levels, capital adequacy, and asset quality, was a significant profitability driver. Effective management of these factors is essential for banks to maintain. Therefore, banks need to strike a balance between deposit growth and prudent lending practices to ensure long-term profitability.

The research conducted by Nur et al. (2023) in "The Effect of Deposits and Non-Performing Loans on Bank Profitability," which focused on conventional commercial banks listed on the Indonesia Stock Exchange from 2015 to 2021 and utilized a purposive sample of 41 data points, showed that both savings and non-performing loans significantly impact profitability. This outcome indicates that banks should prioritize the management of deposit growth and non-performing loans to enhance their financial results. Proper management of deposits can supply banks with the funds needed to engage in profitable ventures, while reducing non-performing loans can help mitigate the risk of financial losses. The findings of this study carry important implications for bank management and policy makers, underscoring the need to maintain a stable financial environment. By comprehending how deposits and non-performing loans affect profitability, banks can formulate strategies aimed at optimizing their financial performance. Overall, the study offers meaningful insights into the elements that affect bank profitability within the Indonesian landscape.

The study by Jilenga (2021) examined the factors, including real interest rate, Inflation, Bank deposits, Bank operating expenses and non-performing loans, which influence the Profitability of Commercial Banks in Tanzania, a Case Study of CRDB Bank Plc. The results indicate that bank-specific factors, such as bank deposits, non-performing loans, and bank expenses, are statistically significant on bank profitability. On the other hand, macroeconomic factors were found to be insignificant on bank profitability. The implication for this study is that commercial banks' policies should be geared towards bank-specific factors in enhancing profitability rather than concentrating on macroeconomic factors, which contribute to banks' profitability. The bank deposits mobilized should be used effectively in realizing profitability. In addition, bank expenses should be cost-effective to enhance bank profitability.

Noorani (2020) in the study of the Impact of Macroeconomic Variables on the Profitability of Commercial Banking in Pakistan, the researcher analyzed factors such as exchange rate, inflation rate, interest rate, and financial deepening that have an impact on the commercial banks' profitability in Pakistan. The conclusion was that money supply has a positive and insignificant relation with ROE, inflation has a negative and insignificant relation with ROE, exchange rate has a negative and significant relation with ROE, and interest has a negative and significant relation with ROE.

Ndiege et al. (2016) in their study of the link between financial performance and loan repayment management in Tanzanian SACCOS. In their study, they utilized financial statements data for the year 2012, from 36 SACCOS in Kilimanjaro Region, Tanzania, and used descriptive statistics and regression models in the analysis. They examined the relationship between financial performance and loan repayment capacity. It thus examines the extent to which SACCOS are capable of recovering the loan issued and also the financial ratios that explain loan repayment capacity in SACCOS. The study depicts that there is a severe financial risk management problem among Tanzanian SACCOS. Focusing on sustainability is significant for improvements in loan repayment, but focusing on profitability in SACCOS results in adverse loan repayment. The study asserts that the primary focus of SACCOS should not be profit but members' wealth maximization and sustainability of the institution.

The current study examined the influence of deposit growth on the profitability (ROE) of commercial banks, particularly CRDB Plc in Tanzania.

III. METHODOLOGY

3.1 Research Design

This study adopts a comprehensive quantitative methodology, leveraging secondary data regarding deposit growth for CRDB Bank from the first quarter of 2014 through the first quarter of 2023. The information, sourced from credible financial reports and databases, forms the basis for the analysis. The main objective of the research is to assess CRDB Bank's profitability, evaluated through essential financial indicators, particularly focusing on return on equity (ROE). Importantly, CRDB Bank's annual report for 2024 reveals an impressive ROE of 27.7%, signifying robust financial performance. By analyzing the trends in deposit growth alongside ROE, this study seeks to offer insights into the bank's financial stability and strategic decision-making (Ng'weshemi, 2021). To investigate the interplay between growth deposits and profitability, this study utilizes advanced statistical methods, including correlation and regression analysis, which facilitate a comprehensive evaluation of the relationship within the designated time period (Ruxhoa, 2024).

The quantitative approach adopted in this research demonstrates a careful and systematic method for analyzing the influence of growth deposits on CRDB Bank's profitability (Chusi, 2022). By leveraging extensive financial data and employing sophisticated statistical techniques, the study seeks to offer a detailed understanding of the complex relationship between deposit growth and the bank's financial performance, thus providing significant insights into the broader context of banking dynamics in Tanzania.

3.2 Targeted Population

The targeted population for this study is the CRDB Bank Plc, potentially focusing on quantitative data obtained from documents and an online database.

3.3 Study Location

The researcher decided to conduct this research in the Arusha City Council (ACC), focusing on how deposit growth has an influence on the profitability of commercial banks in Tanzania, a case study of CRDB Bank Plc.

3.4 Sampling Techniques and Size

This study employed a probability sampling technique to select a respondent. In this method, each member has an equal chance of being chosen. Additionally, a purposive sampling approach was used to select a bank with reliable data availability. Similarly, time-series sampling was utilized to select financial data for the specified period referenced. This method facilitated an in-depth analysis of trends and patterns in the bank's financial performance over time. By employing time-series data, the research can uncover correlations and relationships among financial metrics, offering valuable insights into CRDB's financial well-being and strategic decision-making.

3.5 Data Collection Methods

Since the study employed a quantitative approach, the researcher utilized a secondary data collection method. The data were sourced from CRDB Plc in the form of annual reports, publications from the Bank of Tanzania, and financial databases covering the periods from 2014 to the first quarter of 2023.

3.6 Statistical Data Analysis Techniques

The thorough examination of the data reveals significant trends and patterns related to growth deposits and their ensuing effect on CRDB Bank's profitability. Utilizing correlation coefficients and regression models allows us to accurately measure both the strength and direction of the relationship between these variables. This statistical methodology facilitates our understanding of how variations in growth deposits influence the bank's financial performance (Melecky & Rutledge, 2013). Furthermore, a time-series analysis illuminates the evolving characteristics of this relationship throughout the entire duration of the study, allowing us to detect changes and trends over time. This comprehensive investigation not only enhances our comprehension of the elements influencing profitability but also aids in forecasting future financial results based on past data (Ogunwole et al., 2024). Ultimately, these insights serve as crucial tools for strategic decision-making within the bank. The findings underscore the importance of effective deposit growth management in fostering the bank's overall financial health (Ibrohimovich, 2025).

IV. FINDINGS & DISCUSSION

4.1 Quarterly Trends in Return on Equity (ROE) and Deposit Growth

Table 1 shows the Quarterly Trends in Return on Equity (ROE) and Deposit Growth from 2014 to 2023, analyzing the Relationship between Bank Profitability and Deposit Expansion over Time.



Table 1

Quarterly Trends in Return on Equity (ROE) and Deposit Growth from 2014 to 2023: An Analysis of the Relationship between Bank Profitability and Deposit Expansion Over Time

YEARS	ROE(X)	Dep Growth(Y)
2014q1	0.255	0.036
2014q2	0.255	0.036
2014q3	0.34	0.01
2014q4	0.17	-0.01
2015q1	0.247	3.61
2015q2	0.22	0.12
2015q3	0.28	0.07
2015q4	0.24	0.03
2016q1	0.252	-0.03
2016q2	0.188	0
2016q3	-0.12	0.01
2016q4	0.08	0
2017q1	0.14	-0.07
2017q2	0.07	0.07
2017q3	0.064	-0.071
2017q4	0.067	0.133
2018q1	0.075	0.004
2018q2	0.099	0.008
2018q3	0.115	0.016
2018q4	0.083	0.034
2019q1	0.15	-0.073
2019q2	0.173	0.147
2019q3	0.146	-0.032
2019q4	0.143	0.073
2020q1	0.142	-0.028
2020q2	0.142	0.077
2020q3	0.173	0.147
2020q4	0.168	0.083
2021q1	0.176	-0.028
2021q2	0.169	0.14
2021q3	0.285	-0.018
2021q3	0.338	0.08
2022q1	0.291	0.012
2022q2	0.25	0.09
2022q3	0.238	0.069
2022q4	0.264	0.058
2023q1	0.256	0.0361

*Note that q1 to q4 indicate the quarters of a year from 2014 to 2023

4.2 Correlation Coefficient (r)

The correlation coefficient between ROE (Y) and deposit growth (X) is given by the Pearson correlation coefficient formula. $r = \frac{\sum (X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum (X-\bar{X})^2 \sum (Y-\bar{Y})^2}}$

The following steps are required in calculating the correlation coefficient between ROE and Deposit growth. List the data. There are 37 provided pairs of (X, Y) values. Compute means. The mean for ROE is the sum of all entries for ROE divided by the number of observations. And the mean for deposit growth is given by the sum of all entries for the deposit growth divided by the number of observations. Note that, the number observation is 37.

Mean of ROE (X) \approx 0.1790

Mean of deposit growth (Y) \approx 0.1308

4.3 The Computation of Deviations

(X- \bar{X}), (Y- \bar{Y})



Compute products and squares of the deviations for both ROE(Y) as a dependent variable, and for deposit growth(X) as an independent variable. Where $(X-\bar{X})(Y-\bar{Y})$ as the Product of deviations, and $(X-\bar{X})^2, (Y-\bar{Y})^2$ as the squares of the deviations for both ROE and deposit growth. Later, summation $(X-\bar{X})(Y-\bar{Y})$ and $(X-\bar{X})^2, (Y-\bar{Y})^2$ should be computed and then inserted in the formula. $r = \frac{\sum (X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum (X-\bar{X})^2 \sum (Y-\bar{Y})^2}}$. Finally, the result after plugging numbers into the formula, the Pearson correlation coefficient between ROE and deposit growth is approximately $r \approx 0.137$. This is equivalent to 13.7%. From the result above, this correlation is positive but weak. Suggestion to the ROE is that as it increases, Deposit growth slightly tends to increase, and the relationship is not strong or consistent.

4.4 Regression Coefficients

In Table 2 of the regression coefficient analysis, ROE represents as the dependent variable, while deposit growth is the independent variable.

Table 2
Regression Coefficients

ROE	Coef	Std. Err	t	p> t	[95% Conf. Interval]	
Dep. Growth	0.0214193	0.026257	0.82	0.420	-0.0318853	0.0747239
Constant	0.1762257	0.0156851	11.24	0.000	0.1443832	0.2080681

The current study's findings regarding the effect of deposit growth on the profitability (ROE) of CRDB Plc in Tanzania are in line with the findings that were previously published. In the regression coefficient analysis's Table 2. With a coefficient of 0.0214193, the research demonstrates a positive relationship between deposit growth and ROE, suggesting that a 1% increase in deposit growth is associated with an increase in ROE. The expected gain in ROE is 0.0214%. However, at typical thresholds, the p-value of 0.420 indicates that the link between deposit growth and ROE is not statistically significant.

This conclusion aligns with Jilenga (2021) who indicated that, although deposit growth may have a beneficial impact on ROE, it is not a major factor in the profitability of CRDB Plc. The consistent term, which reflects the predicted ROE value when deposit growth is zero, is statistically significant, suggesting that variables other than deposit growth are affecting ROE. The study's conclusions are in line with earlier studies that have produced contradictory results regarding the link between deposit growth and bank profitability. According to Kwoon et al. (2022), banks like CRDB Plc may need to concentrate on additional elements, such as asset quality, operational effectiveness, and macroeconomic environment, to increase their profitability. The findings of this research suggest that to increase profitability, CRDB Plc and other commercial banks in Tanzania may need to change their strategies rather than depending just on deposit growth. In addition, Lotto (2016) asserted that when creating rules and regulations, legislators and regulators may need to take into account the impact of macroeconomic variables on bank profitability. In general, the study enhances our knowledge of the connection between deposit growth and bank profitability in the Tanzanian banking industry, as well as the importance of additional investigation into the variables impacting bank performance in the area.

A regression model representing ROE as a measure of profitability alongside Deposit Growth is shown below.

$ROE = B_0 + B_1 (\text{Deposit Growth}) + \mu_i$, where B_0 represents the constant of the regression model, and B_1 denotes the coefficient of the deposit growth from Table 4. The regression equation for ROE and Deposit Growth is as follows

$$ROE = 0.1762257 + 0.0214193(\text{Deposit Growth})$$

4.5 Summary Statistics

The analysis of summary statistics in **Table 3** can be interpreted as follows: The summary statistics for Deposit Growth and ROE give useful information about the performance of Tanzanian commercial banks, notably CRDB Plc.

Table 3
Summary for ROE and Deposit Growth

Variables	Obs	Mean	Std. Dev	Min	Max
ROE	37	0.179027	0.09226605	-0.12	0.34
Dep. Growth	37	0.1307865	0.5909152	-0.073	3.61

The banks in the sample had an average ROE of 17.90%, which shows that they made good use of their equity to create profits. The variety of ROE values (-12% to 34%), on the other hand, demonstrates significant variations in performance between banks, suggesting that some banks struggled while others did remarkably well. Similarly, the average deposit growth rate of 13.08% indicates that deposits increased substantially over the course of the research. But a standard deviation of 0.5909 implies significant variation in deposit growth rates, with certain banks seeing huge



increases (up to 361%) while others saw decreases. Some people experienced drops (as high as -7.3%). The current research, which looked at how deposit growth affected the profitability (ROE) of commercial banks, notably CRDB Plc in Tanzania, is impacted by these results. In support, Garr (2021) stated that variations in deposit growth rates and ROE indicate that banks may encounter diverse difficulties and possibilities, and that deposit expansion may not always be a desirable outcome. Consistent driver of profitability among all banks. The variability in deposit growth rates and ROE values may affect the study's results regarding the relationship between deposit growth and ROE. For example, the positive link between deposit growth and ROE may be explained by banks that saw large increases in deposits and a rise in ROE. Conversely, a drop in deposits may have had a detrimental impact on a bank's ROE.

4.6 Regression Analysis of the Relationship between Return on Equity (ROE) and Deposit Growth

The regression analysis results in Table 4 provide insight into the correlation between deposit growth and profitability (ROE) of CRDB Plc in Tanzania.

Table 4

Regression Analysis of the Relationship between Return on Equity (ROE) and Deposit Growth

Source	SS	df	MS
Model	0.005767197	1	0.005767197
Residual	0.303327776	35	0.008666508
Total	0.309094973	36	0.008585971
Number of Obs = 37	Prob> = 0.4202	Ajd R-square = 0.0094	
F(1, 35) = 0.67	R-square = 0.0187	Root MSE = 0.099309	

The positive coefficient of 0.0214193 indicates a correlation between deposit growth and ROE, implying that a 1% rise in deposit growth is related to an increase in ROE, with a 0.0214% rise in ROE. But at typical thresholds, the p-value of 0.420 suggests that there is no statistical correlation between these connections. This discovery is in line with Mukami et al. (2025) who implied that, although deposit growth may have a beneficial impact on ROE, it is not a major factor in the profitability of CRDB Plc. The constant term, which reflects the expected value of ROE when deposit growth is zero, is statistically significant, suggesting that variables other than deposit growth are affecting ROE. The study's results have ramifications for lawmakers and bank administrators. The fact that deposit growth and ROE are positively but statistically insignificant connected implies that CRDB Plc may need to concentrate on other variables to boost profitability. The statistically significant constant term suggests that ROE is influenced by variables other than deposit increase. This study's findings support prior studies (Feng, 2024; Dacre et al., 2024) that have shown varied correlations between deposit growth and bank profitability. The results imply that banks like CRDB Plc may need to broaden their approach in order to increase profitability, rather than just relying on deposit growth.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Deposit Growth has a positive but statistically insignificant relationship with ROE. The constant term is statistically significant, indicating that other factors not included in the model may be driving ROE. Further analysis may be necessary to identify additional variables that influence ROE. The performance of banks in the study. The average ROE of 17.90% suggests that banks in the sample generated reasonable returns on equity. However, the range of ROE values (-12% to 34%) indicates significant variability in performance across banks. Similarly, the deposit growth rates show high variability, with some banks experiencing significant growth while others experience declines. These findings may have implications for bank management and policymakers seeking to understand the factors driving bank performance.

Therefore, deposit growth has now been identified as a variable that affects commercial bank's profitability for the chosen sample of commercial banks in Tanzania at a slight little rate. This has been observed in a regression equation that for every one unit increase in deposit growth, ROE increases by 0.0214193 or 2.14% which is very small increase. Other researcher stated that, deposit growth is significantly affects commercial banks' profitability but the rate of effect is not stated. It might be that there are other variables that affect commercial banks' performance. Other researchers examined other factors example loan as a variable that affects commercial banks' profitability. Therefore, more research is necessary required to identify other variables that influence the return on equity (ROE). The macroeconomic environment, bank-specific features, and industry-specific elements are just a few of the potential factors that might affect ROE. By studying these elements, researchers and lawmakers may gain a better grasp of the causes of bank profitability and create policies to raise it.



5.2 Recommendations

Conduct a comprehensive investigation of CRDB Bank's budgetary execution, it's essential to incorporate additional important factors that seem to impact Return on Equity (ROE). Looking at patterns over a longer period can offer assistance in recognizing designs that might not be discernible in shorter timeframes. A more careful understanding of the subject can be accomplished by looking at patterns over a longer time period. Short-term instability or variations from the norm may not completely delineate general designs and propensities. The likelihood of finding repetitive designs or patterns increases with the length of the inquiry. Longer lengths give a more comprehensive viewpoint, making a difference to the fundamental causes of patterns. By comparing CRDB Bank's comes about with industry benchmarks, its execution can be arranged within a suitable setting.

Administrative procedures and operational effectiveness are pivotal components affecting a corporation's financial execution and ROE. Successful administrative honing engages organizations to execute operational techniques that upgrade productivity and move forward ROE. A corporation's capacity to adapt to industry changes and improve plays a critical part in setting up its competitive edge and ROE. Advancement permits organizations to stay proactive and responsive to advancing market conditions. By grasping imaginative approaches, enterprises can capitalize on rising opportunities and upgrade their financial execution. Macroeconomic conditions, including financial stability or precariousness, have a significant impact on a corporation's financial execution and ROE. Administrative compliance and corporate administration are crucial for a corporation's long-term sustainability and budgetary astuteness.

An exhaustive understanding of the association between deposit growth and ROE at CRDB Bank is essential to reliably screen financial measurements and upgrade the investigation periodically. This ceaseless preparation empowers organizations to distinguish shifts within the relationship between these two basic measurements, advertising important bits of knowledge into the bank's financial condition and execution. By watching patterns and designs in store development and ROE, investigators can pinpoint regions of quality and shortcomings. Building up an observing plan is fundamental, with smaller organizations likely profiting from month-to-month appraisals and larger substances from quarterly or yearly surveys. Collecting exact and reliable information is additionally pivotal, requiring a comprehensive audit of budgetary explanations and solid sources. A well-organized survey handle prepares groups to remain dexterous and responsive in an always changing commerce scene. By following a normal survey schedule, bits of knowledge remain significant and valuable.

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Initiatives for the control of small arms and light weapons in East Africa and their outcomes

Isaac Mwenda Meme¹
Boniface Muoka²
Peter Wekesa³

¹isaacmmeme@gmail.com

^{1,2,3}Kenyatta University, Kenya

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ABSTRACT

The proliferation of small arms and light weapons [SALWs] in the East African region has negatively impacted national and regional security. Porous and expansive borders, corruption and instability in the region, commercialisation of cattle rustling, weak governments and the presence of ungoverned spaces in the region have facilitated the proliferation of SALWs in the region. The purpose of this research was to explore the initiatives adopted by Kenya and Uganda, both individually and collaboratively, for the control of the proliferation of SALWs in East Africa. The study was guided by the regionalism theory of interstate cooperation and a descriptive survey design. The sampled respondents, totaling 55, were drawn from security agencies, civil society members, foreign relations offices, non-state actors, and religious leaders. Instrumentation encompassed questionnaires, focus group discussions, and interviews. The qualitative data was subjected to thematic analysis and presented in its original form, while the quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS) and presented using tables and graphs. The study found that, by understanding the challenges and dynamics at play, stakeholders would certainly implement strategies that not only control the spread of the dangerous but also address the underlying causes of violence and insecurity in the study area. The article showed that various initiatives, including disarmament programmes and legislative and regulatory measures, were in place in the Kenya-Uganda border effort. Various outcomes of the control of proliferation merged, as the results show that 75% strongly agreed that, to a large extent, specific goals and objectives set for each initiative have been achieved. The study suggests strengthening human resource capacity, utilizing technology for surveillance, and enhancing the terms and conditions of security forces in the EA countries.

Keywords: Control, East Africa, Initiatives, Outcomes, SALWs

I. INTRODUCTION

The proliferation of Small Arms and Light Weapons (SALWs) has become more prominent in the 21st century. Proliferation of SALWs constitutes a global security threat with a global estimate of over 975 million weapons under illegal possession, of which over 30 million of such weapons are in sub-Saharan Africa and held by unlicensed holders (Alley, 2019). According to United Nations Office on Drugs and Crime (2016), globally, there is a 59 percent proliferation of illegal SALWs with about 80 percent found in Europe. Estimates place the number of SALWs in public hands in Kenya at 750,000, Uganda at 331,000 and Tanzania at 427,000. It is known that over 650 million firearms are in public hands, preferably legally or illegally, posing a serious threat to public safety (Detzner, 2017). SALWs are frequently produced for use by law enforcement and military personnel. Yet in developing nations across Africa, the Middle East, Latin America, and Asia, these weapons have consistently ended up in the possession of vigilantes, militia groups, rebels, war profiteers, and private individuals who align with either the state or private citizen ideologies. This ongoing situation continues to impede efforts to mediate conflicts in these regions (Jacqmin, 2017).

The proliferation of SALWs in the East African region has negatively impacted on national and regional security in the region. Porous and expansive borders, corruption, and instability in the region, commercialization of cattle rustling, weak governments and the presence of ungoverned spaces in the region, have facilitated the proliferation of SALWs in the region (Bankale & Uchegbu, 2021). Nevertheless, the failure of governments in the East African region to guarantee the security and protection of their residents and their belongings is a significant factor contributing to the widespread presence of Small Arms and Light Weapons (SALWs) disguised as security measures. While governments have carried out remarkable disarmament programs, there are concerns that the governments are unable to assure the people of their security. This has been witnessed through numerous violent conflicts in pastoral areas and increasing crime rates in urban centres committed using SALWs. Due to partial or

thereof lack of implementation of national regional and international legal frameworks, the proliferation of SALWs has continued to be an endemic problem that threatens the region's security, economic and political stability and prosperity.

This article presents the findings on the initiatives adopted by Kenya and Uganda, both individually and collaboratively for the control of the proliferation of SALWs in East Africa. The specific research questions included: What initiatives adopted by Kenya and Uganda at the domestic levels? What are Kenya-Uganda collaborative efforts against proliferation of SALWs? What is the Kenyan domestic initiative against proliferation of SALWs?

II. LITERATURE REVIEW

2.1 Theoretical Framework

The study was based on Regionalism Theory.

2.1.1 Regionalism Theory

This theory was first propounded by the German American political scholar Ernst Haas in 1962. According to Regionalism theory, regional and sub-regional arrangements provide the basis for states to address common socio-economic and political issues for the overall common good of state parties involved. It alludes to the regionalization of a region or sub-region where a crucial factor like security can be examined. According to Bevan (2008), regionalism is viewed as a strategy for establishing a regional order, resolving local problems, and preventing further outbreaks of interstate and intrastate hostility. Since the end of the Cold War, regionalism has grown to be a significant component in many conflicts and situations. The Soviet Union and the United States supported rival groups in battles outside of their nations during the Cold War, engaging in proxy warfare. A shared interest in the stability of the region is created by such a projected relationship. In terms of international relations, regionalism is the manifestation of a commonality of purpose and identity together with the development and use of structures that represent an identifiable grouping and guide collective action within a geographical region. One of the three components of the international financial system is the concept of regionalism. This idea holds that regional and sub-regional organisations have a more significant role in preserving peace and security in their respective geographic areas or sub-regions. Proponents of regional agreements assert that regional economic and political integration are conflict-mitigating elements for both interstate and intrastate disputes, in addition to sub-regional organisations' involvement in conflicts.

Furthermore, they keep emphasising how regional mechanisms for resolving disputes could offer a systemic strategy for dealing with persistent disputes. Regional organisations may be described as official or informal procedures or methods developed by regional or sub-regional organisations to handle conflicts in their regional or sub-regional territories for this study. Regionalism is a thorough, diverse, and multidimensional dynamic that entails a specific region becoming more homogeneous. The international community also has a part to play in the effort to find a remedy for human misery, including the spread of SALWs. In the same spirit, other international players are better placed to handle the need for humanitarian assistance and financial support. Given their knowledge of the regional, domestic, and cultural dynamics, regional actors continue to play a decisive role. However, suffice it to say that due to cultural affinities. The foundation of this thesis is the fact that regional players are familiar with local circumstances. Additionally, past events have demonstrated that imported solutions rarely provide long-lasting fixes. Most crucially, as opposed to outsiders, mediators from the area typically have a personal connection to the issue.

In this study, Regionalism theory would help in understanding the changing dynamics and the need for interstate cooperation against the proliferation of SALWs. While faced with a common security challenge of the proliferation of SALWs, the theory helps to understand why governments of both states must partner together about the implementation of the 2004 Nairobi Protocol. It also helps to unearth the basis for bilateral cooperation initiatives, the operational aspects and, subsequently, why implementation of the Protocol is key in the fight against the proliferation of SALWs between the two countries. The regional theory, however, was not adequate in explaining the global dynamics and interconnectedness that shape the proliferation of SALWs. Additionally, the theory assumes that states are willing and able to overcome their national interests to pursue common regional objectives in terms of curbing the proliferation of SALWs. However, in reality, national interests often shape state behaviour, making it difficult to achieve meaningful regional cooperation in curbing SALWs.

2.2 Empirical Review

Breslauer (2019) investigates the reasons why the Soviet Union and the US have consistently provided differing responses to the topic of arms control. During the Cold War, when the US and the USSR were engaged in an arms race. Breslauer (2019) argues that superpowers have undergone some kind of arms control, whose sources and consequences are much different. He explores US policymakers in implementing mechanisms of arms control and how such frameworks play a significant role in influencing arms control in other parts of the globe. In arms control, Soviet arms control behaviour has changed since the cold war period. Russia's new policies are evidence of

fundamental reconceptualization of the relationship between nuclear power, weapons and security. Breslauer's (2019) studies distinguish between learning and adoption of arms control. It, therefore, provides tenacity of the cold war paradigm in shaping actions of the US-Soviet relationship. However, this study does not provide insight into arms control from the East Africa region. His studies, therefore, will be important in providing a historical analysis of arms control since the inception of the cold war.

Greene and Marsh (2012) examine the inter-relationship between arms and availability, private, on-state actors and militia groups and the dynamic of fragile states. Greene and Marsh use the Philippines as a case study and make references to wider international research and experience, the inter-state state relations between SALWs, armed groups, and non-state actors and the fragility of the state has been a concern for SALWs control in Asia. Additionally, (Greene & Marsh, 2012) investigate the connections between the availability of weapons, militia organisations, and private, non-state actors, and also the dynamics of weak nations. Moreover, the study does not give a comparative analysis of external actors in arms control in the East Africa region. Their study is important in understanding the role of external actors in curbing arms flow in Asia.

Bankale and Uchegbu (2021) examine the practical arms control or disarmament measures taken by Mali. A SALWs Convention was signed by Economic Organization of West African States [ECOWAS] member nations. The convention is far-reaching since it has prohibited SALWs transfers within the region. Bankale and Uchegbu (2021) argue that the convention contains measures on civilian possession of firearms and ammunition. Nonetheless, their study gives an account of ECOWAS efforts in limiting SALWs as a result. They recognize steps that various multilateral and other external actors take to regulate arms control in West Africa. Bankale and Uchegbu (2021) do not give information on the role of external actors such as the European Union, donors and other stakeholders in arms control in the case of East Africa.

According to Nganga (2017), the African Union (AU) is the principal regional body consisting of all the African governments. He argues that the Bamako Declaration, which was ratified in 2000 to stop the spread of SALWs, serves as the foundation for many of the present AU actions. African heads of state have typically taken diplomatic precautions to link their anti-illicit arms trade activities with AU decisions (Nganga, 2017). He notes that AU has remained a slow-moving institution with very little authority on the issue of SALWs. Although some African states are harmonising their policies concerning SALWs proliferation, it is, however, the slow nature of the African Union enacting policies to prohibit the illicit flow of arms. Consequently, it is a serious problem for the AU since it renders it impossible for African governments to effectively integrate their regulations, providing illegal arms traffickers opportunity to expand their business. The goal of Nganga's study is to provide basic information about the AU's involvement in reducing the use of weapons throughout Africa; yet it does not focus specifically on the East Africa region.

According to Green and Rynn (2010), there has been an enormous spike in the flow of SALWs into the Southern African portion of the continent. The signatories to the Protocol were successful in creating regional standards for small weapons marking before it entered into force in 2004. This would consequently make it easier to track down SALWs trafficking and establish and carry out various national action plans that adhere to the standards suggested. In contrast to previous regional initiatives, Southern African Development Cooperation [SADC] has made an effort to limit the trafficking of SALWs by implementing improved internal controls. Despite the fact that the policy adopted by SADC member states has been successful in the region, a significant issue with border and customs personnel has persisted (Green & Rynn, 2010). They do not give much thought to the significance of stopping illegal cross-border trading, which leaves open the possibility of continuing the trade in SALWs. Although these findings will be applied to the East Africa region on which this study is based, the study plays a significant role in analysing the function of SADC in preventing the proliferation of SALWs.

Grip (2017) examines the historical background of the Nairobi Protocol, an international agreement that states in the region of East and Central Africa established to handle issues related to the growth of SALWs. The ongoing militarization and increasing numbers of SALWs trafficked through various regional borders are alarming. For the Nairobi Protocol to be effective, proper control of borders is needed. Moreover, this study will be important in identifying policy frameworks which can be adopted by RECSA. To fill the gap, the study explores why the East Africa region remains a hot spot for continued arms trafficking despite several sub-regional initiatives enacted.

III. METHODOLOGY

3.1 Research Design

This research employed a descriptive survey design. This design usually involves larger sample sizes to ensure representativeness and requires careful selection of participants to reflect the target population. It may use random, stratified, or systematic sampling methods depending on research goals. The design was suitable as it allowed the researcher to gather comprehensive and objective data that accurately characterizes a certain phenomenon.



3.2 Study Location

This research study was undertaken in Northwestern Kenya and North Eastern Uganda. The Pokot, Turkana, and Marakwet inhabit the region of Northwestern Kenya. The expansive region covers Baringo County, Turkana County, West Pokot County, and Elgeyo-Marakwet Counties. North-Western Kenya is an Arid and Semi-Arids Land (ASAL) region

3.3 Target Population

The research focused on staff of security agencies including security services such as the Kenya Police, Kenya Defence Forces (KDF), and the Uganda National Police. In addition, the study includes community elders, opinion leaders, political and administrative authorities, and local and international non-governmental organisations engaged in regulating SALWs. The population used in this study consisted of 204 people

3.4 Sampling Technique

The sampled respondents totalling 55 were drawn from the security agencies, members of civil societies, foreign relation offices, non-state actors and religious leaders. Purposive sampling was utilized to select respondents for the study’s Key Informants. In this regard, their selection was based mostly on their breadth of knowledge on the proliferation of SALWs. Additionally, since the study was dealing with sensitive issues, the knowledge of the insiders was required; therefore, this was obtained through snowballing.

3.5 Data Collection Instruments

The data collection methods employed encompassed questionnaires, focus group discussions, interviews, as well as the evaluation of secondary sources such as journals, books, and government documents.

3.6 Data Analysis

The qualitative data was subjected to thematic analysis and presented in its original form, while the quantitative data was analysed using the Statistical Package for Social Sciences (SPSS) and presented through the use of tables and graphs.

IV. FINDINGS & DISCUSSION

4.1 Initiatives Adopted by Kenya and Uganda at the Domestic Levels

In order to address the concerns of the objective, the researcher sought to get the respondent views on the initiatives that both Kenya and Uganda have enacted at the domestic level. These responses were focused on the respondent’s rate of agreements with the list of initiatives undertaken by the respective countries in terms of disarmament programmes, legislative and regulatory measures, capacity building programs, border control measures, public firearm destruction, relinquish and reregistration of firearms, information and dissemination among stakeholders and collection and destruction of SALWs. The statements from the respondents were measured on a 5-point Likert Scale between 1—strongly agree and 5—strongly disagree. The data was analysed, and the findings were presented using Table 1.

Table 1

Kenya and Uganda Domestic Initiatives for the Control of SALWs

Initiatives	SD%	D%	N%	A%	SA%	TOTAL %
Disarmament programs	9	34	43	12	2	100
Legislative and regulatory measures	8	34	34	22	2	100
Capacity-building programs	9	23	44	12	12	100
Border control measures	18	23	32	20	7	100
Public firearm destruction	16	33	33	12	6	100
Relinquish and reregistration of firearms	7	43	23	21	6	100
Information dissemination among stakeholders	6	44	31	18	1	100
Collection and destruction of SALWs	85	0	0	15	0	100

Table 1 shows variations in responses across different measures adopted by both Kenya and Uganda at their domestic levels. Disarmament programs received the most mixed responses, with 9% and 34% of the respondents strongly agreeing and agreeing respectively to the effectiveness of such initiatives. 43% of the respondents were neutral towards such initiatives while 12 and 2% of the respondents Disagreed and strongly disagreed respectively to the existence and effectiveness of such initiatives. From the data on disarmament, it can be adduced that though the two countries have embarked on the disarmament initiatives, their effectiveness still remains a challenge.

The mixed responses on disarmament programs in Kenya and Uganda (Table 1) suggest limited public confidence in their effectiveness. While 43% of respondents were neutral, only 34% agreed, and 14% disagreed, indicating ambivalence (Bevan, 2008). This aligns with studies showing that voluntary disarmament often struggles due to weak enforcement and community distrust (Musa, 2022). The high neutrality rate (43%) may reflect insufficient awareness or perceived inefficacy. These findings underscore the need for stronger stakeholder engagement and transparent implementation to enhance trust in disarmament initiatives (United Nations Development Programme [UNDP], 2021).

From the key informant interviews, it was revealed that there has been notable progress made by the individual states in the implementation of the disarmament strategies for accelerating the control of SALWs. In particular, a respondent reported that:

“Both Uganda and Kenya have implemented various measures, including the establishment of the National Focal Point on Small Arms and Light Weapons and the development of a National Action Plan on SALWs. These efforts focus on improving legislation, enhancing law enforcement capacity, and promoting community awareness and engagement in disarmament initiatives. Specifically, Uganda has been actively involved in disarmament campaigns, particularly in regions like Karamoja, where the possession and use of illegal firearms are prevalent. The government has implemented stringent laws under the Firearms Act to regulate the possession, manufacture, and sale of firearms” (KI 11 Female, 38 years, CSO staff, 26th November 2023).

This statement highlights the proactive steps Uganda and Kenya have taken to control the proliferation of Small Arms and Light Weapons (SALWs) through disarmament initiatives. Both countries have established dedicated bodies (National Focal Points) to coordinate these efforts and have developed comprehensive National Action Plans. These measures aim to strengthen laws, improve law enforcement capabilities, and involve communities in disarmament activities to build awareness and cooperation.

In Uganda, especially in Karamoja, the government has focused on disarmament campaigns to tackle the high prevalence of illegal firearms (Mkutu, 2008). They have enforced strict regulations under the Firearms Act to control the possession, production, and distribution of these weapons. This multifaceted approach is crucial for reducing violence and enhancing security, demonstrating the effectiveness of well-coordinated disarmament strategies (Uganda Ministry of Internal Affairs & UNDP, 2022).

Regarding supportive measures from legislative and regulatory standpoints, the response was divided; 8% and 34% Strongly Agree and Agree respectively to the existence of such initiatives. On the other hand, 22 and 2% of the respondents Disagreed and Strongly Disagreed respectively while 34% were neutral on existence and effectiveness of legislative and regulatory initiatives in the control of SALWs. The findings were triangulated with interview findings. One key informant noted;

“East African states have shown willingness to address the SALW menace by signing the ATT, which regulates the international trade in conventional arms. However, ratification and full implementation remain a challenge. Countries like Kenya and Uganda have developed National Action Plans on SALWs, focusing on improving legislation, enhancing law enforcement capacity, and promoting community awareness and engagement in disarmament initiatives” (KI 17, Security Officer in Nairobi 28th November 2023).

The interview statement implies that East African states, by signing the Arms Trade Treaty (ATT), have shown their commitment to regulating the international trade of conventional arms, which is a positive step towards addressing the SALW issue. Despite this commitment, there are significant hurdles in fully ratifying and implementing the ATT. This suggests difficulties such as political, logistical, or resource-related challenges that hinder effective enforcement.

With reference to “Capacity building programs” as initiative adopted to address proliferation, Table 1 shows that almost half (44%) were neutral about the statement. However, over 32% disagreed with the statement. For border control measures, 41% disagreed that it was an effective measure in addressing proliferation of SALWs. About public firearm destruction, 49% disagreed that it was an effective measure. About 50% of the respondents disagreed that relinquishing and reregistration of firearms was an effective initiative. The table also shows that still half of the respondents (50%) disagreed that information and dissemination among stakeholders was an effective initiative in addressing proliferation of the SALWs. Finally, collection and destruction of SALWs was rated strongly disagreed with most of the respondents (85%).

The findings reveal widespread public scepticism toward SALW control initiatives, with particularly strong disapproval (85%) of collection and destruction programs (Small Arms Survey, 2002). Neutral responses (44%) toward training programs suggest ambivalence or lack of awareness, while 32% disagreement indicates perceived ineffectiveness (Wepundi et al., 2012). Border security measures faced 41% disagreement, highlighting enforcement gaps. Half of respondents doubted firearm registration processes, reflecting systemic distrust (UNDP, 2023). The overwhelming rejection of destruction programs (85%) underscores a crisis of confidence in state-led disarmament. These results demand urgent policy reforms, including community engagement and transparent implementation to restore public trust (Organization for Economic and Cultural Development [OECD], 2022)



Qualitative findings through Key informant interviews and FGDs showed complementary information relating the above quantitative findings. One discussant posted'

"... presents a concerning pattern regarding the effectiveness of various SALW control initiatives. There are few participants for capacity building programs, found these programs effective, highlighting a significant credibility gap in training and institutional strengthening efforts" (FGD 04, Male Participant, Aged, 68 years, Turkana, 11th November 2023).

Through the interviews, one KI observed;

"... due to scepticism, there is little effectiveness. This suggests potential issues with porous borders, inadequate resources, or corruption in border management systems. The high level of disagreement (49%) regarding public firearm destruction programs indicates possible issues with transparency, public trust, or program implementation" (KI 01, Male Aged, 52 years), Turkana, November 2, 2023).

The 50% disagreement rate for both firearm reregistration and information dissemination initiatives suggests systematic failures in administrative processes and stakeholder communication. Furthermore, the notably high disapproval rate (85%) for collection and destruction programs indicates a fundamental breakdown in public confidence regarding SALW disposal methods.

The findings imply that current approaches to SALW control may need significant revision and that there's a need to understand why these initiatives are perceived as failing. The findings also form new strategies or substantial modifications to existing ones may be necessary. This implies that more stakeholder engagement might be needed in designing control measures. This data suggests a serious gap between policy intentions and practical effectiveness in SALW control initiatives.

On the more optimistic end of this spectrum, public firearm destruction had 33% agreement and 16% strong agreement, meaning some level of support; relinquish and reregistration showed somewhat better numbers with less opposition as well (43% neutrality) but are purely seen as potentially effective by some and nothing else. The trend is repeated for communication among stakeholders, with 44% stating they agreed and 31% neutral. An 85% majority in favour of the collection and destruction of SALWs expressed the highest consensus across all questions, suggesting that this initiative was widespread among respondents (strongly agree).

In this study, an analysis of the Kenya-Collaborative initiatives was conducted from both the questionnaire and the KIIs and FGDs. The questionnaire required the respondents to rate their level of agreement with a list of statements on Kenya-Collaborative initiatives. The results were presented in Table 2

Table 2
Kenya-Collaborative Initiatives

Initiatives	SA%	A%	N%	D%	SD%	TOTAL%
Legislative measures	22	34	39	3	2	100
The Firearms Act	12	13	54	12	9	100
Stockpile management	23	12	65	0	0	100
Record keeping and gun marking	22	23	54	1	0	100
Licensing Policy	21	27	45	4	3	100
Public Education and Awareness Program	20	21	55	2	2	100
Military Measures and Civil Society-Based Approaches	3	13	63	11	10	100

Table 2 presents the respondents' typologies of opinion for various Small Arms and Light Weapons (SALWs) control programs at Kenya-Uganda collaborative levels and through Kenyan domestic strategies. Among the Kenya-Uganda collaborative aspects, a substantial number (22% strongly agree; 34% agree) view that GSL indicates Joint legal frameworks in addressing SALWs. However, other measures, such as the Firearms Act and record keeping and gun marking, received a more neutral 54% of responses in regard to a measured response yay or nay, indicating that people were unable to come up with an opinion yet (or did not hear much about these socialist actions).

The findings reveal significant public ambivalence toward SALW control measures, particularly regarding stockpile management, where 65% neutrality suggests limited public awareness or engagement with these initiatives (Greene & Rynn, 2010). This could indicate either poor communication from authorities or the technical nature of stockpile management being less visible to communities. In contrast, public education programs received more balanced approval (41% combined agreement), though the majority (55%) remained neutral, highlighting the need for more impactful outreach strategies (McDonald & Valasek, 2018).

Military-led security measures faced scepticism, with 63% neutrality reflecting uncertainty about their effectiveness. This aligns with studies critiquing top-down approaches in SALW control, which often lack transparency and community involvement (UNDP, 2023). Conversely, legislative efforts and SALW destruction programs garnered relatively higher approval, suggesting trust in formal, tangible actions over militarized interventions.

The data underscores a critical gap: while some initiatives (e.g., public education) are moderately trusted, others suffer from low visibility or perceived inefficacy. To enhance public confidence, policymakers must prioritize: Transparent communication to demystify stockpile management and military operations. Community-centric approaches, leveraging civil society to bridge trust deficits (OECD, 2022). Regular feedback mechanisms to assess and adapt programs based on public perceptions.

4.2 Kenya-Uganda Collaborative Efforts against Proliferation of SALWs

The Kenya-Uganda border security collaboration demonstrates a proactive regional approach to SALW control and conflict reduction (Maroa, 2013). By prioritizing coordinated operations and intelligence sharing, both nations address key challenges like illicit arms production and livestock rustling. The establishment of EAPCO further institutionalizes multinational cooperation, extending beyond Kenya and Uganda to include other East African states (EAC, 2022). However, the effectiveness of such initiatives depends on sustained resource mobilization and operational transparency. While promising, long-term success requires addressing trust deficits among member states and ensuring local community participation in border security measures (UNDP, 2023).

The governments of Kenya and Uganda have been collaborating to diminish the availability of weapons to nomadic groups. Uganda is engaged in a collaborative disarmament initiative aimed at restoring peace within these communities. Kenya has implemented a comprehensive community-based approach to limit the proliferation of firearms and promote a culture of non-violence. The measures encompass public awareness campaigns, community safety initiatives, the establishment of alternative livelihood options, disarmament, and the eradication of illegal guns.

The study established that, in Uganda there were multi-sector and integrated efforts aimed at combating SALW proliferation, especially in the North West Uganda. Uganda's efforts to address the spread of SALW are composed of legislative measures, military actions, and ways involving civil society, as outlined in the comments from the respondents.

Uganda's multi-sectorial approach to combating SALW proliferation in North West Uganda demonstrates a comprehensive strategy integrating legislative, military, and civil society efforts (Detzner, 2017). While legislative measures provide a legal framework, military actions offer immediate security responses, and civil society engagement ensures community participation (Mwenda, 2021). However, the effectiveness of this integrated model depends on sustained coordination among stakeholders and adequate resource allocation. Challenges such as trust deficits between security forces and communities, as well as inconsistent policy implementation, may hinder progress (UNDP, 2023). Future efforts should prioritize local ownership and transparent monitoring to enhance impact.

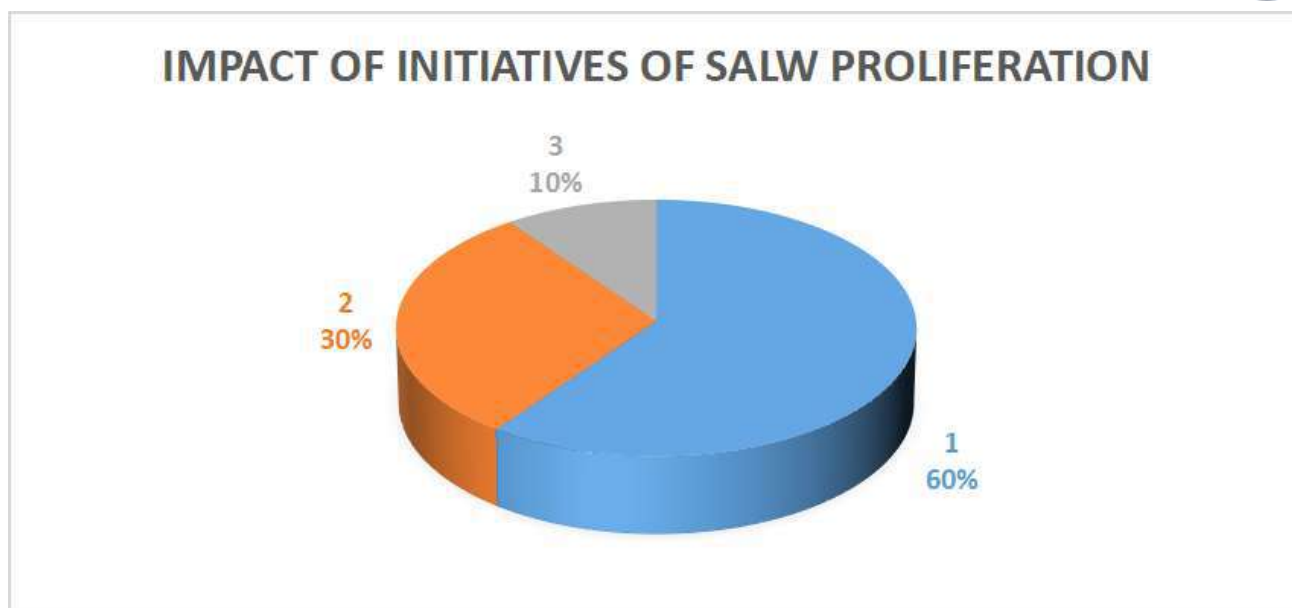
The study also found that several laws and regulations in Uganda have provisions that are applicable to the control of SALW as well as terrorism. The laws in question encompass the Firearms Act of 1970, which has been modified in 2005. This legislation specifies the penalties for unlawful possession of weapons, as well as other offenses relating to firearms. One respondent familiar with legal issues on arms proliferation commented;

“The amendment implements the government's strategy to regulate the proliferation of SALWs. The implementation of the act is carried out through the utilization of the National Action Plan, the National Action Plan on Arms Management and Disarmament, and the National Focal Point” ... (KI14, Kaabong, 13th November 2023).

The revelation by the KI highlights the government's efforts to control SALW proliferation through an amendment and associated action plans. Additionally, it underscores the importance of coordinated action and policy frameworks in addressing security challenges posed by SALWs. Further, the study noted that, following the widespread illegal use of small arms including in cattle rustling in the Karamoja region and crimes of opportunity between 2000 and 2008, the Firearms Act was amended to align it with the severity of the threat.

The findings demonstrate Uganda's responsive policy approach to SALW proliferation, particularly through legislative reforms like the Firearms Act amendment following Karamoja's security crises (2000-2008). This reflects adaptive governance in aligning laws with emerging threats (McDonald & Valasek, 2018). The emphasis on coordinated action plans underscores the recognition that isolated measures are ineffective against cross-border security challenges (Jacqmin, 2017). However, long-term success requires: 1) consistent enforcement, 2) community-sensitive implementation beyond military solutions, and 3) regional cooperation to address transnational arms flows (UNDP, 2023). While policy reform is crucial, its impact depends on addressing root causes like poverty and inter-communal tensions that fuel arms demand.

Uganda's local community members were asked whether the amendment bore any fruits, and sixty percent of the respondents strongly agreed that indeed there were positive results. Thirty percent agreed that the amendment had borne desired results and 10 percent disagreed that the amendment resulted in anything meaningful. This was as presented in Figure 1.

**Figure 1**

Impact of Initiatives of SALW Proliferation

On the whole, as shown in Figure 1 what this means is that the amendment is largely seen as successful by the local community, with 90% of respondents acknowledging positive results (either strongly or moderately). However, there is a small minority (10%) who did not see any beneficial impact. This feedback is valuable for understanding different perspectives within the community and addressing any concerns or issues raised by the dissenting minority.

The local community were subjected further questions on specific initiatives by the government and other stakeholders, and the responses were mixed and diverse. The questions were on a range of initiatives including, legislative measures, the Firearms Act, stockpile management, record keeping and gun marking, licensing Policy, Public Education and Awareness Program, Military measures and Civil Society-Based Approaches.

The amendment facilitated the development of a collaborative task force comprising the Uganda Police (UPF), Uganda Peoples Defence Forces (UPDF), the External Security Organization (ESO), and Internal Security Organization (ISO) to address the issues of proliferation through coordinated operations and sharing of intelligence. Furthermore, the government initiated an interagency security operation called Operation Wembley, which effectively decreased the prevalence of illicit firearms in the Karamoja region. This was achieved by the implementation of cordon and search operations, snap check points, and the enforcement of some aspects of the amnesty law.

The results demonstrate strong community approval (90%) of Uganda's Firearms Act amendment, validating its effectiveness in curbing SALW proliferation through coordinated security operations like Operation Wembley (UPF, 2023). However, the dissenting 10% highlights persistent gaps in localized impact, possibly reflecting uneven implementation or unmet socioeconomic needs (UNDP, 2022). Mixed responses to specific initiatives—such as stockpile management and civil society engagement—suggest varying degrees of trust in different measures. While interagency collaboration (UPF/UPDF/ISO/ESO) has bolstered intelligence-sharing and enforcement (Casey-Maslen, 2021), long-term success requires addressing minority concerns through inclusive dialogue and transparent monitoring of disarmament outcomes.

The operation was based on the requirements of the Uganda Firearms Act and received assistance from international partners. A key informant from the Ministry of foreign affairs opined;

“The government of Uganda has put in place harsh regulations and laws to deter illegal ownership and use of firearms. These legislations include the Fire Arms Act 1970, the UPDF Act of 2005, and the Anti-terrorism statute of 2002 that reinforces the existing laws and thus making it an act of terrorism, having arms”... (KI15, Ministry of Foreign affairs, Kaabong, Uganda, 24th November 2023)

This underscores the government of Uganda's commitment to combatting illegal firearms possession and usage through the implementation of stringent regulations and laws. Significantly, it highlights the importance of legal frameworks and enforcement mechanisms in addressing security challenges associated with firearms proliferation.

4.3 Kenyan Domestic Initiative against Proliferation of SALWs

In compliance with the 2004 Nairobi Protocol on the control of proliferation of SALWs, the study found that Kenya has developed its own domestic initiatives. This is according to key informants and participants in FGDs. For example, through extensive discussions, it was disclosed that Kenya has been actively implementing disarmament

programs with the goal of fostering stability. Since gaining independence, the Kenyan government has implemented various measures to tackle the issue, particularly focusing on the disarming and destruction of firearms that have been found. Subsequent administrations have been dedicated to the endeavour of diminishing illegal firearms in circulation in order to enhance human security. The disarmament operation Dumisha Amani (Sustain Peace) was meticulously planned with a comprehensive and all-encompassing multi-sector strategy. It involved communities voluntarily surrendering their weapons, while also providing them with incentives such as alternative employment opportunities and the restoration of local infrastructures.

The findings highlight Kenya's sustained commitment to SALW control through domestic initiatives aligned with the 2004 Nairobi Protocol. The Operation Dumisha Amani model exemplifies a progressive, multi-sectoral approach combining voluntary disarmament with community incentives (Mwangi, 2023). While these efforts demonstrate policy continuity since independence, their effectiveness hinges on addressing root causes of arms demand, such as unemployment and infrastructure deficits (UNDP, 2022). The participatory approach (FGDs/KIIs) reveals local ownership but underscores the need for transparent monitoring to ensure long-term impact. Comparative regional studies suggest such programs succeed when paired with cross-border cooperation (Saferworld, 2023)

Reviewed literature supported by field data are both indicative that, Kenya has undertaken numerous and multifaceted national initiatives to address the proliferation of SALWs. Prominent ones being enactment of stringent laws to control the possession, use and trafficking of firearms, conducted several disarmament exercises to collect and destroy illegal firearms, launched public awareness campaigns to educate citizens about the dangers of SALWs. Another important effort has been active engagement with regional neighbouring countries. The Nairobi Protocol for the Prevention, Control, and Reduction of SALW in the Great Lakes Region and the Horn of Africa being one such initiative. Notable events include the destruction of 8,299 firearms in 2003 and 3,800 firearms in 2005 (Nation). Additionally, the government has encouraged and sponsored training programs for police and other security personnel focused on improving skills in detecting and intercepting illegal arms and managing arms stockpiles.

Majority of the key informants generally agreed that Specific aspects of SALW proliferation control initiatives aim to address are known to the local community, while a paltry 25 % disagreed with the perspective. On whether legislative and regulatory measures had been implemented to control SALWs in East Africa were well understood by the local communities, 55% agreed, 45 disagreed and only 10 percent strongly agreed. Similarly, 85 % representing the majority of the respondents strongly held the view that, capacity-building programs have been conducted to enhance effectiveness of relevant stakeholders involved in SALW control. Twenty percent (5%) disagreed and only five percent (5%) strongly disagreed that capacity-building programs have ever been conducted.

The general interpretation of the foregoing reveals that while there is a strong general awareness and positive perception of SALW control initiatives and capacity-building programs, there is still a significant need to improve communication and education regarding legislative and regulatory measures to ensure a more comprehensive understanding among all community members. The data suggests that most people recognize and value the efforts made, but a focused approach is needed to address the concerns and gaps highlighted by the dissenting minority.

The Dumisha Amani operation, conducted from 2005 to 2010, resulted in the seizure of 3,499 weapons and 6,083 rounds of ammunition. The Dumisha Amani disarmament program commenced in 2005 and has been in progress ever since. At the commencement of the campaign, a total of 2,433 firearms and 5,260 rounds of ammunition were retrieved. From 2006 to 2007, the process utilized amnesty and voluntary surrender methods. In 2008, the government-initiated Operation Okota (collect), which involved a more assertive strategy implemented by security services. Subsequently, the government implemented Dumisha Amani 2 to proceed with the disarmament process.

The *Dumisha Amani* operation demonstrates Kenya's evolving approach to SALW control, transitioning from voluntary surrender (2005-2007) to assertive enforcement (*Operation Okota*, 2008) and sustained efforts (*Dumisha Amani 2*). The seizure of 3,499 weapons and 6,083 rounds (2005-2010) reflects tangible outcomes, though the shift in tactics highlights challenges in voluntary compliance (UNDP, 2021). The phased strategy—from amnesty to coercion—mirrors regional trends where initial goodwill requires bolstering with enforcement (Saferworld, 2021). However, long-term success demands addressing demand-side drivers (e.g., cattle rustling) to prevent rearmament, as noted in Kenya's North Rift disarmament programs (Mwangi, 2023).

The foregoing perspectives were similar to the ones expressed by one respondent as follows;

"The main goals of disarmament are to decrease the prevalence of illegal firearms, specifically among nomadic pastoralists, and to facilitate the implementation of development projects and enhance security. The outcome of disarmament has often failed to make a strong impression on the impacted communities and human rights organizations"... (KI17, Turkana 10th November 2023)

This illustrates the intentions behind disarmament efforts while acknowledging the challenges and mixed results associated with their implementation. Further, it emphasizes the importance of addressing community perceptions, human rights considerations, and broader socio-economic factors to achieve sustainable disarmament and promote peace and development. The government stands accused of breaching human rights by several stakeholders,

including community members, the media, opinion leaders, and politicians. When a community is disarmed, people have a heightened sense of susceptibility and defenselessness in the presence of their armed neighbors and adversaries.

It was further established that in order to diminish the quantity of illegal firearms in circulation, the government has repeatedly carried out public firearm destruction events. As part of the ongoing efforts to combat poaching, a total of 5,250 illicit guns weighing 120 tons were incinerated at the Nairobi National Park in November 2016. The arsenal consisted of a variety of illegal firearms and small arms, which were seized during different security operations and subsequently destroyed in Ngong Hills, located near Nairobi, the capital of Kenya. The decision was also made as a measure to combat crimes such as cattle rustling, carjacking, and to eradicate the risks posed by terrorism, human trafficking, piracy, and drug trafficking. The illicit weapons were acquired through two primary means: seizure by law enforcement authorities and voluntary relinquishment by the individuals in possession of the illegal SALWs.

Kenya's public firearm destruction initiatives, exemplified by the 2016 Nairobi National Park event (5,250 weapons incinerated), demonstrate a strategic commitment to curbing SALW proliferation through visible, symbolic actions (Kenya National Police Service [KNPS], 2017). This dual approach—combining law enforcement seizures and voluntary surrenders—aligns with global best practices for reducing illicit arms circulation (UN Office for Disarmament Affairs [UNODA], 2020). However, while weapon destruction addresses supply, sustained impact requires parallel efforts to disrupt demand drivers like cattle rustling and terrorism (Institute for Security Studies [ISS], 2022). The Ngong Hills destruction further signals governmental transparency, though critics argue such events risk being performative without complementary community reintegration programs (Saferworld, 2021).

In May 2003, a total of 8,299 weapons were disposed of, compared to 3,800 firearms in 2005. In March 2010, the government conducted a drive to eliminate illegal small guns and light weapons, which are believed to be the main cause of rising violent crime in Kenya and Africa as a whole. As part of this operation, a total of 2,545 firearms were incinerated at Uhuru Gardens in Nairobi (Bankale & Uchegbu, 2021). The rationale for arms destruction was expressed by a key informant who opined;

“Since the signing of the Nairobi Declaration in March 2000, the government has annually collected and incinerated firearms in public as a demonstration of its dedication to reducing the presence of illegal firearms and to raise awareness among the general public about the hazards of SALWs”... (KI17, Nairobi 28th November 2023)

The statement is a clear demonstration of the government's initiative-taking measures to address the issue of illicit firearms through public demonstrations of commitment, educational initiatives, and symbolic gestures aimed at raising awareness and promoting public safety.

Despite Kenya's significant disarmament achievements, persistent insecurity—including cattle rustling, terrorism (e.g., Al-Shabaab attacks), and armed crime—reveals systemic limitations in SALW control. The continued violence underscores that weapon destruction alone cannot address the root causes of arms proliferation, such as cross-border trafficking, ideological extremism, and socioeconomic marginalization (ISS, 2023). Al-Shabaab's exploitation of illicit firearms highlights the regionalized nature of the threat, demanding coordinated East African responses (United Nations Security Council [UNSC], 2022). To enhance efficacy, Kenya must integrate disarmament with community policing, border surveillance, and counter-radicalization programs, as isolated measures fail to disrupt entrenched criminal networks (Saferworld, 2023).

In yet another effort, the research suggested that Kenya has just obtained marking machines and implemented a nationwide system for record-keeping and data management. The process of labelling and registering the state's stockpile has been a continuous endeavour. In March 2019, the Kenyan government carried out a process to confirm the validity of privately owned firearms and to register them again. The gun owners were instructed to relinquish their firearms for the purpose of registering them and conducting forensic investigations. The process entails submitting an application to the firearms bureau, obtaining a clearance certificate from the DCI, and providing the application form along with valid records of the national ID card, certificate of good conduct, and a doctor's certificate to demonstrate mental and physical fitness. Only after fulfilling these requirements can one be granted clearance. This technique is the only legal means by which one can possess a handgun.

However, the study also found that the government of Kenya has a parliamentary Act in place to regulate, license, and control the manufacturing, importing, exporting, transporting, selling, repairing, storing, possessing, and using of firearms, ammunition, air guns, and destructive devices for related purposes. A firearms licensing board was created with the specific responsibility of carrying out several functions. A key respondent familiar with legal operations highlighted the roles;

“The responsibilities include verifying the eligibility of the applicant and the duration for which they will possess the firearm, granting, revoking, and terminating licenses, registering civilian firearm holders, dealers, and manufacturers, overseeing and regulating shooting ranges, and establishing, maintaining, and monitoring a centralized record management system”... (KI08, Nairobi 15th November 2023).

This response highlights the multifaceted role of the regulatory authority in managing firearm possession, licensing, registration, and oversight. These responsibilities are essential for promoting public safety, preventing



firearm-related incidents, and ensuring compliance with relevant laws and regulations. Additionally, the study observed that the Act comprehensively delineated all the offenses pertaining to the utilization, possession, production, and dissemination of guns, and the sanctions for each criminal transgression were clearly specified in the text.

The study highlights Kenya's innovative use of Community Barazas and conferences as critical tools for SALW awareness, complementing enforcement measures. These grassroots dialogues—with over 20 programs implemented—have proven effective in Northern Frontier counties, fostering voluntary weapon surrenders by addressing local perceptions of insecurity (United Nations Development Programme [UNDP], 2023). Such participatory approaches align with global evidence that community engagement enhances disarmament legitimacy and sustainability (Saferworld, 2022). However, long-term success requires scaling these efforts alongside economic alternatives to deter rearmament, particularly in pastoralist communities where cattle rustling fuels demand for weapons (ISS, 2023).

Efforts have been made to organize national conferences that aim to bring together government officials and a diverse range of national and local civil society players, regardless of their involvement in the small arms and weapons issue.

“The groups have convened to deliberate on the nature of the small arms issue in the country and explore potential strategies for both civil society and the government to address it. Convening conferences and barazas can enhance the political and popular determination and momentum to effectively address the widespread distribution of small guns...” (KI04, Lodwar 2nd November 2023)

The import of the respondent's statement is its underscoring of the value of convening conferences and barazas to engage stakeholders in addressing the small arms problem. By fostering dialogue, building consensus, and mobilizing support, these gatherings play a crucial role in advancing collective efforts to tackle small arms proliferation and promote peace and security.

The process of selecting civil society organizations to participate in a national conference is crucial. The participation must be nonpartisan and include representatives from all segments of society.

“A national conference should encompass a wide range of participants, including NGOs, professional groups, trade unions, traditional leaders and authorities, business sector representatives, MPs, and provincial and national authorities. This composition should accurately represent the organizational structure of the national focal point, which involves multiple agencies working together” (KI05, Lodwar, 14th November 2023).

This statement emphasizes the importance of inclusive representation and stakeholder engagement in national conferences, highlighting the diverse groups that should be involved and the benefits of collaborative decision-making processes.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Analysing emerging issues in addressing the proliferation of SALWs in East Africa is a critical step towards developing effective, sustainable, and coordinated responses to a complex problem that impacts security and human well-being in the region. By understanding the challenges and dynamics at play, stakeholders would certainly implement strategies that not only control the spread of the dangerous but also address the underlying causes of violence and insecurity in the study area. The article showed that various initiatives including Disarmament programs and Legislative and regulatory measures were in place in Kenya-Uganda border effort. Various outcomes of the control of proliferation merged as the results show that 75% strongly agreed that to a large extent, specific goals and objectives set for each initiative have been achieved.

5.2 Recommendations

The study recommends that the EA countries strengthen human resource capacity, harness technology in surveillance, and improve on the terms and conditions of security forces. Additionally, proper and adequate equipment for intelligence gathering and response capabilities need to be bolstered to effectively deal with proliferation of arms. This should include improvement of road infrastructure to promote accessibility to the remote parts and to enhance border control initiative.

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Grassroots - peace actors and traditional mechanisms in the management of farmer-herder conflicts in Tigania East, Kenya

Kagwiria Julie Mutuura^{1*}
Kennedy Onkware²
Graham Amakanji Oluteyo³

¹*jullykagz@gmail.com

²kenonkware@gmail.com

³amakanjig90@gmail.com

¹<https://orcid.org/0009-0002-1507-4822>

²<https://orcid.org/0000-0001-8034-1961>

³<https://orcid.org/0000-0003-0617-2551>

^{1,2}Masinde Muliro University of Science and Technology, ^{1,2,3}Methodist University, ^{1,2,3}Kenya

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ABSTRACT

The arid and semi-arid lands in Kenya (ASALs) continue to suffer farmer-herder conflicts as one of the most remarkable threats to peace, stability and development. Tigania East is one such example that is worsened by resource-rich areas, cultures, and politics, which promote conflict between groups. Whereas interventions by the government usually focus on providing security responses, the grassroots peace players have come out as important stakeholders in managing conflicts suitably. This paper examines the principles of managing the farmer-herder conflicts in Tigania East through the perspectives of the traditional mechanisms, community dialogue forums, and participatory conflict resolution models by implementing the involvement of the grassroots peace actors. Guided by Conflict Transformation Theory, the research provides insights into the ways in which local actors, whether by action or beliefs, use culturally entrenched practices to mediate, negotiate, reconcile, and transform relationships using the practices. The research adopted the descriptive research design. As this is a qualitative type of study, the target population includes elders, women's section organisations, youth leaders, religious leaders, and local administrators. The snowball sampling method and purposive method were accepted to give birth to 60 respondents to inform the findings. Data was collected using semi-structured questionnaires, oral interviews, focus group discussions and archival tools. Themes were utilised to study data. The findings also indicate that the grassroots peace-building is holistic because it focuses on solving immediate disagreements as well as structural inequalities by involving everyone in dialogue, creating awareness, community projects, and traditional reconciliation rituals. But issues like limited resources, political influence, low institutional support and socio-economic inequalities defy sustainability. The paper finds that grassroots strategies (when combined with formal institutional frameworks) are potentially potent in reshaping farmer-herder conflicts into spaces of peace-making, coexistence and developmental opportunities. The conclusion is that although the peace actors at the grassroots level are unquestionably essential, their efforts should be sustained by structural adjustments and collaboration on the multi-level basis to guarantee long-term stability. The paper recommends that there is a need for institutional support, encouragement of women and youth inclusion and mixed models of peace through judicious balance between grassroots legitimacy and state institutions.

Keywords: Farmer-Herder Conflict, Grassroots Peace Actors, Peace-Building, Traditional Mechanisms

I. INTRODUCTION

Farmer-herder conflict on the arid and semi-arid lands (ASALs) of Africa has acquired greater prominence in this area where agriculture and pastoralism way of life intersect with the conditions of low resources, high population growth, and climatic instabilities. This type of conflict has been particularly common in Kenya in areas where migration farmer-herder tracts traverse settled farming groups with stand-offs as areas, grazing areas, and water sources (Mkutu, 2008; Schilling *et al.*, 2012). Such conflicts can be quite violent, displacing people and their property, disrupting the economies of local areas, and dispelling doubts in society. In addition to tangible financial losses, they destroy cohesion in society and destroy a future of sustainable development.

Tigania East is one of the most pronounced hotspots of conflicts in Kenya. In this case, farmers of the Meru group, who predominantly practise agriculture, have constant disputes with the Borana herders as they rely on livestock

keeping as a means of livelihood. This issue is further magnified by straddling ethnicities, administrative overlay emergencies, and political instigation that further converts resource-found issues over to an inter-religious struggle (Kramon & Posner, 2011). The perpetual cycles of hatred have been aggravated by historical grievances, poorly constructed institutional structures often leading to large-scale violence, which attracts large crowds of people.

The responses of the states to such conflicts have been rather ineffective, especially the ones that are conducted with the assistance of intense security measures and force application. Although the effect of such interventions can be a temporary rise in the number of cases of suppressed violence, they in most cases ignore the underlying causes of the tension, i.e., the human nature of livelihood insecurities, a sense of marginalization, and inter-ethnic mistrust (Okumu, 2017). This void identifies the necessity to employ other strategies that are culturally based, inclusive and sustainable.

In this environment, the role of grass-root peace actors, elder people, women leaders, religious institute leaders, and community-based organizations, in managing a conflict has been launched as leading in a conflict management context. They are valid because they are part of their cultural traditions, they are supported by moral authority, and they are therefore part of the societies that have been impacted. Compared to state actors, they use more dialogue-based, reconciliation-centred, and traditional justice-based strategies that seem to reach closer to the local populations. The older provide reference to traditional laws, the females employ both the sense power and the emotional power with the help of songs and movements, the religious leaders and the younger generations contribute to the reduction of distances and enhance the mutual trust.

This paper looks into the actions undertaken by grassroots players in the peace process in Tigania East especially including traditional conflict-resolution mechanisms, inclusive dialogue and multi-purpose peace-building. With its roots in the Conflict Transformation Theory (Lederach, 1997), the study acknowledges conflict as not only a problem that needs to be addressed according to its existing principles but also as the chance to change relationships, institutions, and facilitate coexistence. Through a comparative study of the grassroots actor-mediating, reconciling, and engaging community, the study aims at illustrating the importance of long-term stability in Tigania East that may be realized through grassroots actors.

1.1 Statement of the Problem

The tensions between farmers and herders in Tigania East have continued decades after government interventions. Militarized operations have been the mainstay of state reactions, which although successful in alleviating violence in the short-term, do not target the underlying causes of violence, including resource competition, livelihood insecurity, and historical mistrust between Meru and the Borana communities. Through excessive use of coercive strategies, alternative mechanisms and community based programs that have preserved inter-ethnic harmony are relegated to the backburner. The literature reviewed up to now has had more than enough attention on structural and institutional aspects of conflict management. Security strategies related to farmer-herder conflicts are discussed by Mkutu (2008), climate variability and the lack of resources as inducers of conflicts are examined by Schilling *et al.* (2012). Okumu (2017) criticizes the lack of effectiveness of institutional peace-building activities, but those publications seldom discuss strategies of grassroot actors who are directly situated in the conflict arena. In even the few cases when traditional systems (such as the Njuri Ncheke of the Meru, the Borana Gada) have been captured, they are routinely regarded as relics of the past instead of adaptable means towards modern peace-building. In the same manner, the role of women, youth and religious leaders, who contribute to reconciliation through moral authority, activism and dialogue have not been well explored in the literature as well as in policy (Adan & Pkalya, 2005). This disconnect threatens to ignore activities by grass roots innovations that can provide more lasting solutions to peace than state minded interventions. This paper thus underscores the identification of the grassroots peace actors and the traditional processes involved in dealing with the farmer-herder conflicts in the Tigania East which further puts these under the greater perspective of Conflict Transformation Theory to shape their important role of bringing about sustainable co-existence.

1.2 Research Objectives

The objectives of this study were to:

- i. Analyze the strategies employed by grassroots peace actors in managing farmer–herder conflicts in Tigania East.
- ii. Assess the extent to which traditional mechanisms and cultural practices are integrated into grassroots peace-building approaches.
- iii. Examine the challenges faced by grassroots peace actors in sustaining conflict management initiatives.
- iv. Explore the implications of grassroots strategies for long-term conflict transformation and sustainable peace.



II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Conflict Transformation Theory (CTT)

The paper has its basis on Conflict Transformation Theory (CTT) which focuses on resolving both immediate and structural levels of conflict. Through his argument, Lederach (1997) holds that conflict is not an issue to solve but an opportunity to transform relationships, attitudes and systems. CTT incorporates social justice, relationship building, and systemic change in peace building efforts unlike the conflict resolution methods that look at short-term settlements. The grassroots peace actors share the principles of CTT because they are able to work on the ground directly with communities, engage in dialogue, and implement culturally based mechanisms that appeal to the local settings (Miall, 2004). They acknowledge that permanent peace goes beyond just ceasefires; it involves reforming in perceptions of hostility, rebuilding trust and reforming imbalanced systems of sharing resources (Galtung, 1996).

Social theories along with the CTT system, communitarianism and another one which relates to indigenous knowledge systems are also applicable. Communitarian theory emphasizes belonging to a larger communal responsibility and cultural identity coupled with a local agency and thus to tackle the social issues (Etzioni, 1993). Based on the traditional approaches in conflict resolution, the legitimacy of local institutions, including the councils of elders is emphasized as valid intermediary (Boege, 2011). These systems build in line with African philosophy of Ubuntu-focused interdependence, mutual respect of each other, reconciliation (Murithi, 2006). A combination of these theoretical sources emphasizes on the ability of grassroots actors to settle not only short-term controversy but also long-term social structures and relations in a manner that will guarantee stability and mutual coexistence.

2.2 Empirical Review

Empirical evidence concerning farmer-herder conflict shows that these conflicts are high in sub-Saharan Africa especially in places where there is a shortage of resources and weather uncertainties. Banjaminsen and Ba (2009) argue that farmer-herder conflict is based on territory and resources related to grazing land and water, which is furred by undermining the traditional institutions in Mali. On the same note, Tonah (2006) records the involvement of farmer-herder conflicts in Ghana and observes that conflicts are made worse by the growing population density and agricultural activities.

As Okoli and Atelhe (2014) established in Nigeria, the spread of small arms, the erosive approach to traditional governance and the politicization of ethnicity enhanced the farmer-herder conflicts. On the other hand, grass-roots interventions have demonstrated possible power in violence alleviation which include the community peace committees and local mediation forums (Higazi, 2016).

In Kenya, a study suggests that such conflicts between herders and farmers are common in some parts of Kenya, including Turkana, West Pokot, Baringo, and Isiolo (Mkutu, 2008; Schilling et al., 2012). These researches owed the recurrence of the conflicts to environmental stress caused by climate, herders' movements and political intervention. Interestingly, the weakness of state machineries has in many instances been replaced by grassroots interventions, such as those of the Peace Committees, women and religious leaders (Odhiambo, 2012).

Particular to Tigania East Sub County, not much academic focus has been intense towards grassroots peace actors. Nevertheless, literature acknowledges the cultural legitimacy of the old institutions like *Njuri Ncheke* (Meru council of elders) and the Gada framework of Borana that has been able to mediate disputes in the past to promote social order (Nyukuri, 1997). These together with community-based institutions, would still be very instrumental in resolving the herders-farmer conflict. In general, the reality of being provided by empirical studies is that although the role of state-centered interventions still prevails, grassroots and traditional processes provide more culturally appealing and viable avenues to peace.

III. METHODOLOGY

3.1 Research Design and Approach

The research utilized descriptive research design to investigate the existence and the role of grassroots peace players coupled with incorporation of traditional systems in the management of the farmer-herder conflict within Tigania East. The method suited the study since it allowed the researcher to obtain lived experiences, perceptions, and practices of participants in peace-building considering cultural and social realities.

3.2 Sampling Strategy

The targeted population was the elders, women groups, youth leaders, religious leaders and local administrators representing the Meru and Borana communities. Purposive and snowball sampling methods were employed to come up with the knowledgeable and substances respondents in conflict management. The selection process ended with a sample

of 60 respondents whose duties are the community leaders and grass root actors who participate directly in the peace efforts.

3.3 Data Collection

Semi-structured interviews/oral interview schedules, focus group discussions (FGDs), and key informant interviews (KIIs), were used to gather data in Tigania East. Verbatim response of the participants was well recorded to avoid loss of meaning and authenticity. Triangulation was done using secondary literature and this increased reliability and authenticity of findings.

3.4 Data Analysis

The thematic analysis was used in analyzing the data collected. Narratives transcribed were coded and placed into different categories who included the traditional mechanisms, inter-ethnic cooperation and collaboration with the state authorities. These themes were then conceptualized in the context of Conflict Transformation Theory where meaningful inferences were being drawn.

3.5 Ethical Considerations

The research was conducted within the existing ethical research standards. The respondents were approached on a voluntary basis and informed on the objective of the study. All the participants were informed and their consent was garnered and the full exercise of the process was being done confidentially. The gathered data was applied with academic purposes in mind and all the time the dignity of the respondents was considered.

IV. FINDINGS & DISCUSSION

4.1 Role of Grassroots Peace Actors in Farmer–Herder Conflicts

The emergence of grassroots peace actors became the primary mediators of farmer-herder conflict in Tigania East, where the conflicts over the land territory, water and grazing rights often turn into bloody conflicts. The responses showed that the elders, women organizations, youth leaders, and religious leaders did not only interfere and attempt to stop the clashes but also assisted in rebuilding the trust and restoring social harmony. Their power was connected with the cultural credibility, approachability, and even with their being integrated into the routine of local life.

The most widely mentioned actors were the elders and they were said to have had the authority vested on them by custom and mutual trust in the community. They represented continuity of the community and their values so they played both role symbolically and practically. One of the respondents said:

When the elders are under the tree holding a conversation everybody hearkens. It is even upheld by the young warriors who respect their word since they are the voices of the community, (Oral interview with one of the elders in Muriri location, on 3rd March, 2025).

This was again strengthened by another elder at Ngambela, when he said:

Elders are the pillars of peace. Unless they speak the conflict will go on and on, (Oral interview with one of the elders of the Borana in Ngambela location, on 19th February, 2025).

These views echo the ideas of Lederach (1997) concerning the middle-range leadership approach in which actors rooted on the ground but disconnecting the quarreling sides with the formal institutions play the middle-range role.

In addition to elder powers, other ancient powers were the role of women groups as also identified in the study. Women were commonly called the mothers of peace because it was believed that it was in their capacity to appeal to moral conscience of communities and suppress men to retaliate with violence.

A leader of women said: When men get angry and vengeful we get them together and beg, telling them that children would be most affected should war be made, (Oral investigation of a female leader in women peace group in Muriri location on 27th March, 2025). This goes in line with the observation made by Agala (2010) that women in the farmer-herder African societies capitalized on their mobilizing capacity through caring and symbolic rites to foster conciliation and forgiveness.

Youth leaders too bridged through especially in mobilizing other young men who mostly take the frontline during violence. Young people tend to listen to their peers than the older generation as one of the youth participants articulated: We explain to them that vengeance kills our future and sometimes they buy in to these, (Oral Interview with a Youth leader in Ngambela location on 19th January, 2025). Their participation played an imperative role as they translate peace-statements into complying with, interlacing Mkutu (2008) results who found out the youth engagement decreased retaliation raids in Kenya, in the North. Religious leaders also fortified the peace processes by referring to spiritual authority and held interfaith dialogues messages, as well as initiated forgiveness. This fits accurately into the

argument of Mwagiru (2000) who claims that faith-based actors work to relieve tensions by providing moral legitimacy into peace processes.

Overall, these examples indicate that the agency of grass-root actors in addressing farmer-herder conflicts is a multi-layered approach of building peace built of indigenous authority, the role of women, youth mobilization and religious leadership. They were often more useful than state interventions due to their legitimacy and accessibility, thus their validation of the claims of Adan and Pkalya (2005) and Boege (2011) that locally-based mechanisms cannot be superseded in African peace-building situations.

4.2 Cultural Sensitivity in Conflict Resolution

The element of cultural sensitivity has turned out to be one of the effective blocks of grassroots peace-creating among the communities in Tigania East. It was found that peace players strategically integrated rituals, symbol and ceremonies during reconciliation processes considering that settlements had to transcend material compensation in favor of emotional and psychological injuries. These cultural practices gave a sense of legitimacy, by appeal to the shared traditions and the collective remembrance, helping to heal in the long run.

It is mentioned regularly by the respondents that the conflicts were not actually settled until the rituals were conducted. One of the old men of Borana ethnicity said:

When cattle invade a man's farm we never pay and go. A cleansing ritual is conducted in order not to leave bitterness in the hearts of people. Ethanol records, (Oral Interview with a member in the Borana community in Mula location, on 20th February, 2025).

A different respondent said: It happens when elders kill a goat and the meat is shared by both parties we realize that the conflict has lifted. It is no longer in our hearts, (Oral Interview with a farmer in Ngaremara location, on 22nd March, 2025).

This was reiterated by a youth leader who asserted that:

Whenever there are no rituals, people hold vile grudges. But when we do the cleansing we cause even the young people to forget about revenge, (Oral Interview with Youth leader in Ngambela location, on 26th March, 2025).

These verbatim responses explain how the cultural rituals were able to act as the expressive of pardon, covenants in spirit and in practice.

These findings are highly supported by secondary literature. According to Murithi (2006), the philosophy of African Ubuntu places greater emphasis on reconciliation by acknowledging common humanity and dignity, which is in line with the ritualistic approach of restoring the harmony. Similarly, Boege (2011) believes that indigenous methods of conflict management within African communities are locked into the communal identity by which would have ceremonies not only as rhetoric movements but social contracts. This culture-centered approach emphasizes the concept that rituals can engage forces to heal broken ties of trust into new relationships.

Adan and Pkalya (2005) also narrates that even in farmer-herder cases like in Northern Kenya, symbolic behaviors such as the milk sharing, slaughtering of animals, or blessing of elderly people was indispensable in terms of compliance with peace agreements. Such practices imposed ethical responsibility that overlaid transactional settlements, which put a reconciling in the culture of the society.

Therefore, the importance of cultural sensitivity in the context of peace-building could not be only a procedure but a revolution. Through rituals and symbols and similar activities, the grassroots actors made sure that the process of peace remained sustainable, socially legitimate and rooted in community realities. The combination of tradition and reconciliation points out that the culturally grounded methods are still invaluable in transforming conflicts in Africa especially where the interventions by the state are not only not legitimate or trustworthy.

4.3 Mediation and Reconciliation Strategies

The most striking paradigm of strategies are mediation and reconciliation, which were used by the actors at a grassroots level to control and reshape the farmer-herder conflict in Tigania East. In contrast to state-supported action that tended to focus on enforcement, grassroots strategies established non-exclusive ground upon which disputants were free to vent their grievances and pursue acceptable solutions. These processes were aimed at solving not only short-term controversy, but also mended rifted social relations.

The mediation forums frequently run by revered elders were always described as legitimate and effective by the respondents. One of the women peace committee leaders put it into perspective:

We reconcile the both. This is explained by the herders, then to the farmers and then led to an agreement by the elders. They also commonly concur on payment- cows or goats sometimes take the



place of damaged crops, (Oral Interview with a leader of a peace committee in Ngambela location, on 11th March, 2025).

Another senior member at the border pointed out: By listening to both parties, we are less angry. Peace can be achieved, but only when everybody will talk and listen, (Oral Interview with an elder in Mula location, on 12th March, 2025).

Another youth leader reflected on the same and he claimed:

Elders know how to calm down temper with right words. You see even young men will listen when some elders talk. We respect them because they can even place a curse on you if you are defiant and disrespectful (Oral Interview with a youth leader in Ngambela location, on 14th February, 2025).

Those stories promote mediation as a dialogue-based trust-building exercise that is grounded in fairness and fit as culture.

Findings are consistent with that of Miall (2004) who writes that mediation involves not just compromising but also changing the negative perceptions into constructive problem solving. The same studies by Pkalya *et al.*, (2004) report the prevalence of community mediation in Northern Kenya where livestock payments rather than fines (which take Christ to court) are typically agreed and upheld as compensation. Paffenholz (2010) also confirms that the success of the traditional mediation is that it does not punish those who violate but helps restore a relationship which is also found to be true in Tigania East sub-county experience.

Reconciliation activities transcended negotiation and compensation to heal emotional traumas. Starts, symbolic gestures, and shared feasts were identified as results that would be impossible to abandon in building trust by the respondents. One of the youth respondents noted:

When a consensus is arrived at, they make merry by slaughtering a goat and having a common meal. In that manner, people get a sense that they are a family once again, (Oral Interview with a youth leader in Ngaremara, on 21st February, 2025).

It was further added by a women leader that when women sing after reconciliation, that is the end of the conflict indeed. The songs hail the settlement, (Oral Interview with one of the women leaders in Mula, on 17th February, 2025). This sort of symbolic action is reminiscent of the concept of positive peace discussed by Galtung (1996) in which reconciliation mends relationships and creates harmony. Rituals and shared meals, which turn enemies into relatives is also emphasized by Murithi (2006) as a way of making peace a social obligation. In such a way, mediation offered systematic negotiating and compensating mechanisms, whereas reconciliation reestablished feeling and communal relations. Cumulatively, these measures served to highlight the justification of grassroots peace actors where their ability to maintain long-term peace signifies a farmer/herder peace is strengthened.

4.4 Restorative Justice and Conflict Transformation

One of the most prominent discoveries of the research project was the fact that grassroots peace actors believed in restorative justice more than in punitive actions as a means of overcoming farmer-herder disputes. Communities engaged in the Tigania East lands used to focus on restoring dignity, repairing relationships, and to avoid future episodes of violence as opposed to state-based systems in which courts and punishments are involved. Not only did this solve the problem at hand within the period of time, it also changed the very substance that the communities in question were built with.

The respondents explained that restorative justice is a dialogue-based and forgiveness-driven process that involves compensation. One of the Borana elders emphasized the difference between the court system and traditional reconciliation mechanisms:

Courts repair, but elders rebuild relationships. When reconciliation is done, it is like sharing food after buying crops—you eat together, and there is no more revenge, (Oral Interview with one of the elders of Borana, in Ngambela on 13th March, 2025).

Most appropriately, one of the elders of the Ameru ethnic group observed:

When a cow destroys the harvest, it affects the whole family that depends on it. But the greatest thing is for individuals to accept each other, because if you only punish, it leaves behind hatred, (Oral Interview with one of the elders in Ngaremara location, on 25th February, 2025).

One of the leaders of women put more stress on communal healing where she stated: we teach people that peace is not revenge. In case of reconciliation, even the female singers praise and encourage the reconciliation phenomenon,



to advance the community, (Oral Interview with a member of women peace group in Muriri, on 30th March, 2025). These perspectives explain why restorative justice manifests a settlement sound not only material, but also a relationship settlement, so that grudges should not accumulate.

These findings are corroborated with the secondary literature. Lederach (1997) points out that transforming conflict does need not only be a task undertaken in the short term—such as resettling disputes on a short time scale—but necessitates long term relational change, and that is what grassroots restorative justice practices provide. Legesse (2000) continues to state that African restorative justice systems are often interdependent between compensation and rituals, which strengthens the social bond of a community, preventing violence in the future. Likewise, Chitere and Ileri (2004) asserts that restorative processes heal the hurt by restoring harmony by repairing injury through dialogue and agreement, which is peaceful as opposed to punitive sanctions whereby divisions are likely to be intensified.

In the farmer-herders historical context of Kenya, Pkalya *et al.*, (2004) note that compensation in the form of livestock is significant in the context of restitution, as well as a moral commitment to maintain peace. This result is in line with the stories gathered, with respondents underlining the nature of the payment not only, but also the community rites following, like the ritual of cleansing oneself or having a common dinner. These practices reflect the notion of positive peace introduced by Galtung (1996) that seeks to resolve the structural problem, such as at the resource conflict, but also mistrusting or restoring the broken relations. Similar emphases in Murithi (2006) affirm that through communal reconciliation rituals typically through meals, blessings and symbolic rituals, collective belonging and collective responsibility are renewed.

Restorative Justice in the Tigania East is therefore more than just resolution of disputes. It provides culturally acceptable ways of how communities actually settle their grievances, recover dignity and rejuvenate trust among ethnic groups. In giving privilege to healing instead of punishment, the grassroots actors not only terminate hostilities but also provide the basis of sustainable and transformational peace.

4.5 Community Engagement and Collective Action

The other major observation of this research was that community involvement and shared responsibility played a major role in the management of farmer-herder conflicts through the influence of the grassroots peace actors. Compared with methods in which decisions are limited to a small number of leaders, peace processes in the Tigania East tended to engage the whole community resulting in higher inclusivity, legitimacy and adherence to results. This also gave the grassroots actors a sense of shared ownership in the peace-building outcomes and process by making the decision-making a participatory exercise.

Respondents also noted that conflict resolution was purposefully designed so as to represent a variety of voices. A farmer of Ameru community asserted:

In case of strife there can be no resolution on the part of the aged ones. The entire society gets summoned. Everyone comes to listen- a man, a lady, a young man, everyone, (Oral Interview with a farmer in Ngambela, on 23rd January, 2025).

Another respondent from the peace committee stated that peace initiatives cannot succeed without the active participation of community members, even though elders provide overall guidance. He emphasized that during meetings, everyone is given a chance to contribute; ensuring that no one later feels excluded or misrepresented, (Oral Interview with a peace committee member in Ngaremarara, on 17th February, 2025). One youth respondent also emphasized an inclusivity of these forums: we sit under trees or in a field. Everyone can speak. The entire day is sometimes necessary, though everyone ultimately comes to the conclusion with the same answer.

More so, the researcher discovered that, secondary data confirms this focus towards inclusiveness. The second point holds, according to Lederach (1997), that, sustainable peacebuilding must involve multi-level operations in that, the players at the grass-root are not passive recipients to top-down intervention but agents in their own process of peace. Similarly, Murithi (2006) reiterates that models of African conflict resolution flourish in communal dialogue, a communal agreement, and recovery of relationship as opposed to the adversarial or the elite-type processes. In the Kenyan background, Adan and Pkalya (2005) record how community *barazas* in the past offered integrated platforms of discussion whereby all socially binding decisions would be made. Odendaal (2013) goes further to suggest that extensive participation is also important in farmer-herder societies in order to stem out mistrust, and trade peace processes among the elites and therefore, to protect legitimacy.

In this outlook, community engagement did not only serve as a process, but as a revolutionary conflict containing mechanism. The inclusion and effective use of the involvement between women, marginalized groups, youth, and men enabled grassroots peace actors to enhance accountability and achieve collective pressure to keep agreements up to date. This wide involvement did not only boost legitimacy but also provided peace arrangements which were more resilient and strong basing on shared values and afterwards affiliating future visions towards co-existence. Overall, it is possible to note that collective action and inclusiveness were vital features of grassroots peacebuilding. Participatory

forums saw communities surpass boundaries and form binding decisions which had a moral dimension as well as a social dimension and could not have been very easy to defy or lack.

4.6 Role of Women in Peace-building

The results highlighted the need of women that has not been paid much attention to but is also very important in grassroots peace-building in Tigania East. Women led pivotal roles in the process of reconciliation, conflict prevention, and long-term peace-building despite the societal injustices that they face throughout history with a small role in the official leadership system. The mobilization using social networks and pledging forgiveness and curbing revenge cycles demanded women groups take the bold initiative, interfering at the most violent seeming times when violence was on the verge of breaking. They did not just play an informal role, but their efforts went further to the formal peace committees, inter-community forums and cross-border movements.

Some of the respondents pointed out how women had a moral authority when looked upon as caretakers and guardians of community welfare. A leader of a women peace group pointed it out: When we women find men going out to war, they are the mothers who weep and lead them to their senses. We explain to them, but this will ruin the future of our children. Another respondent explained further,

...when there is a conflict, women on either side adopt each other. We sit and remind our husbands and sons they can only add to hunger and bring more suffering by fighting, (Oral interview with a community peace member in Muriri, on 20th February, 2025).

A young lady also mentioned that this is so:

...we may not sit in company with elders and determine, but we sing songs of peace in assemblies and listens. In that manner, we are able to be heard when we are not at the table, (Oral Interview with a young woman in Ngaremara, on 19th February, 2025).

These stories reveal how females used their charms, visits, songs, and morals in such ways that were subtle and yet potent to avoid violence and repair fractures.

Secondary sources further supported the report of these oral findings. As an illustration, Tonah (2006) focus on the centrality of African women in the realm of grassroots activities, where women tend to be the performing ground of reconciliation processes due to cross-ethnicities and network mobilizing. Paffenholz (2010) also emphasizes the importance of women actively pursuing peace using the role of women within their family and in community situations where they are denied political power. These views are echoed with the Tigania East setting, where women are portrayed repeatedly as being the mothers of peace as having the moral authority to stop violence of any kind.

Furthermore, profitability of females illustrates the aspect of inclusivity by Ledach (1997) effectively targeting to promote voices of every community especially those dominated in history. Agala (2010) also contributes that the African activities involving women empower intergenerational strength by instilling values of peace in families and by making sure that reconciliation is not another activity that lapses in the periodic forum and splash in day-to-day life.

In this way, women turned out to be the necessary peace-builders as they did not complement anymore but rather translate classical conflict resolution mechanisms. They did so at a cost to moral weight, enhanced inclusivity, a shift of conflict dynamics as they employed caring, community welfare, and kinship in the very essence of peace-building activities.

4.7 Monitoring and Evaluation of Peace Initiatives

The results showed that grassroots peace actors, on the one hand, relied on informal, though constructive methods of knowledge collection and assessment of peace processes. The local communities counted on organization culture-based structures of control or institutions of trust, dialogue and accountability, unlike formal institutional structures where bureaucratic measures and recidivistic reporting were mostly used. Elders, women and youth leaders worked hand in hand in enforcing adherence to an agreement like checking whether a compensation was made or the rules on grazing zones was followed. These mechanisms focused on accountability, but this was accomplished not by coercion but by community conversations and confirming morality. Some respondents highlighted the flexibility of these traditional systems. One of them explained;

Once peace is restored, Borana elders follow up to ensure that cattle are grazing in the agreed areas. If the agreement is violated, the community is summoned again to discuss the matter, (Oral Interview with an Elder from Borana community in Mula, on 8th March, 2025).

According to another participant, the study was informed that;

... we do not wait until the police arrive. Both our youths and women groups report to elders since they are aware of what is going on. In that manner, the issues are resolved at an early stage, (Oral Interview with a member of Meru women group in Ngaremara, on 5th March, 2025).

Equally, a youth leader described to the study that; we are like the eyes of the society. When there is a person who violates the discussion it is taken back to elders and all the people are summoned to justify, (Oral Interview with a youth leader in Mula, on 5th February, 2025).

These accounts disclose the notion of consistent checking during which violations were not mainly penalized but renegotiated by dialogue; hence, ensuring flexibility and responsibility simultaneously.

It also turned out to the study that, secondary literature supports such findings. Paffenholz (2010) suggests that community-led monitoring is essential to the maintenance of a local peace agreement particularly in a weak setting when there are no or little credibility with the state institutions. Odendaal (2013) further notes that informal monitoring systems incorporated within the social structures offer both legitimacy and responsiveness whereby interventions undertaken are quick before conflicts rise. In a research work on farmer-herder societies that was done by Mkutu (2008) in East Africa, youth also played the role of watchdogs to agreements and made sure that there was adherence to the agreements on sharing of resources. These are complemented by these insights which go further to support field narratives to assert that local monitoring mechanisms, though they need not be formal, are haptic and contextual.

Up to certain extent, limitations were however noticeable. Although such informal systems increased ownership and legitimacy locally, they did not always have formal documentation and reports and it was therefore hard to quantify long term influence or report long term results to an NGO, a donor or a government agency. In its difficulties this may resonate with the warning by Lederach (1997) that, though perfectly suited to relational mending after violence, and to its professional growth check the recurrence of violence on a personal scale, grassroots peace-building tends to have an ineffective interface with other formal structures. Consequently, grassroots peace-building through monitoring and evaluation was a combination of cultural legitimacy, inclusivity and adaptability. Though most effective at the community level, such systems needed to be complemented with formal structures to be sustainable, externally recognized and scalable.

4.8 Traditional Mechanisms and Inter-Ethnic Cooperation

This work has discovered that traditional justice systems like Njuri Ncheke of the Meru, and the Gada system of Borana played a crucial role in correcting disputes in Tigania East. These bodies were endowed with symbolic power, historical credibility and cultural value, which meant that they were very revered avenues of reconciliation, and inter-ethnic collaboration. In comparison to the formal state structures, which were seen as remote or prejudiced, the traditional ones were considered to be close, reliable, and based on the commonly shared values.

The respondents emphasized the long-term importance of councils of elders in bridging communities. As one interviewee explained:

Every time we hold a meeting between the Meru elders and the Borana elders, we are assured of peace. There is a sense of brotherhood between them rather than enmity. Indeed, this strengthens the entire society, (Oral Interview with a Borana Farmer-herder in Muriri, on 4th March, 2025).

Another respondent echoed this view, noting that the Njuri Ncheke elders are able to sit with Borana leaders and reach an understanding on boundary or livestock-related disputes. Once such discussions take place, the entire community respects and abides by the outcome. In the same way, one of the women respondents pointed to their most symbolic contribution:

In case the elders shake hands, it feels as though we are all shaking hands. We follow their word, (Oral Interview with a women group member in Ngaremara, on 17th January, 2025).

Such verbatims allow revealing the fact that the power of traditional institutions was not confined to formal agreements but reflected the collective identity and trust.

These findings are backed up by scholars such as Boege (2011), who asserted that, these institutions are termed as embodiments of hybrid type of peace-building as the traditional form of governance interacts with the contemporary frameworks as a means of bolstering legitimacy. As Chitere and Ireri (2004) point out, the Njuri Ncheke council has continued to play an indispensable role that has been evident in Meru especially in settling land disputes and ensuring peace within the community. Similarly, the Gada system, another centuries-old democratic and rotational institution of

government of the Borana, has long influenced resource utilization, instituted norms and regulated relations between groups (Legesse, 2000). These systems display cultural resilience as well as flexibility when it comes to dealing with the modern conflicts.

The effectiveness of the traditional mechanisms is also attested by comparative studies. Adan and Pkalya (2005) report the effective creation of grazing zones and compensation systems with the help of joint councils of elders in northern Kenya thus preventing violence. The same researcher, Mkutu (2008), notes that conventional mechanisms tend to be more effective than the role played by state-sponsored interventions mainly because they are developed with sense of community responsibility and are acceptable across ethnic boundaries.

In this way, traditional institutions became vital instruments of inter-ethnic collaboration, and cannot just solve the divide but also establish peace processes with some basis on cultural legitimacy. It is sorrowful how they managed to integrate both the ancient practices and the modernization of peace, which indicates their capacity and lifelong otherwise. Through recourse to these institutions, the actors on the grassroots level managed to make peace-building a situation-specific one that could be universally respected and owned by the people.

4.9 Collaboration with State Authorities

Despite the established effectiveness of grassroots actors in the areas of farmer-herder conflicts resolution, the results showed that the cooperation with the state authorities continued to play a critical role in peace-building in Tigraya East. Women along with other groups especially the elders and youthful leaders often approached the chiefs, the police and their local administrators to escalate the issue to a higher level which they could not govern. These types of collaborations were both required to carry out enforcement, and respond to cases spanning both community/county boundaries.

Counterarguments against the advantages of work with formal institutions were offset by the advantages exemplified by respondents. It happens because at times the seniors speak, yet young men do not pay attention, as one youth described it: At that time, chiefs or police are summoned to the rescue, (Oral Interview with a youth in Mula, on 6th April, 2025). Another elderly man in the neighborhood explained further:

Cattle that are stolen and moved to far away locations can only be tracked down by the police and this is across the subcounties. We cannot manage alone, (Oral Interview with an elder of Borana community in Ngambela, on 9th February, 2025).

One woman respondent also suggested: We need government on our side, but when they hang around or take bribes people lose hope, (Oral Interview with a women group member in Mula, on 10th March, 2025). These accounts reinstate the compatible relationship though at times antagonistic between grassroots processes and state institutions.

It also turned out to the researcher that secondary literature contains confirmation of this dynamic. For example, Odhiambo (2012) asserts that the effectiveness of indigenous peace-building processes can be more effective with the implementation of state authorities since the partnership will certainly increase their legitimacy and enforcement abilities. On the same note, Pkalya *et al.*, (2004) record that communities in the north of Kenya through counseling by the elders usually involve the administrative officers and police to bring about compliance especially when it is a cross-border cattle raid or incessant graveling contracts. This mixed kind of interaction is echoed in the definition by Boege (2011) of a layered peace architecture that Boege uses to describe the cooperation of actors on the local, state, and non-state levels in order to preserve peace.

However, the distrust of the state institutions was very vocal. Associated with reduction of trust, banshees mentioned frequently corruption, bureaucracy and a cultural insensitivity. This is a similar concern with Mkutu (2008), who found that the intervention of the state is usually seen as foreign and insensitive to local realities by farmer-herder communities. Specifically, societies have blamed security services to at times creating violence instead of de-escalating it as in cases where acts of excessive force were employed. To summarise, the results highlight the importance of the collaborative models, integrating the legitimacy of grassroots institutions with the authority and resources of the state, in a systemic approach to sustainable peace in farmer-herder settings. This kind of combination would assure that there is a culture resonance and structural enforcement hence making violent conflict less frequent and community faith in peace processes stronger.

4.10 Challenges Facing Grassroots Peace Actors

Irrespective of their exceptional roles in promoting peace, the peace actors at the grassroots had major hazards that affected the effectiveness of their efforts. One of the reasons was resource shortage, which was an obstacle that came in and out of the narratives. Communities did not have the support of dialogue platforms and peace forums because they were unable to support them without regular external or institutional reinforcement. As one woman chief argued:

We want to sit together more, to have a talk, but we have no encouragement. At times we resort to giving even out of our pocket

to travel or purchase food, (Oral Interview with a member of peace committee in Ngambela, on 26th January, 2025).

This limitation of resources restricted the frequency and inclusiveness of meetings, making them unlikely to be able to react as rapidly as possible to emerging conflicts.

Another barrier that continually existed was political interference. Some respondents said that there were instances politicians played with ethnic divide to secure re-election in office at the expense of tensions. One of the elders pointed out:

Politicians divide us, by their words. When the elections are over, they put us to the battle individually, (Oral Interview with one Meru elder in Muriri, on 7th April, 2025).

Similar politicization of ethnicity already enjoys a rich history within farmer-herder areas in Kenya whereby the location of electoral competition increases communal mistrust and violence (Nyukuri, 1997).

Furthermore, it was reported to the researcher that communities recruited young, unemployed and marginalized men in violent groups too easily, undermining the authority of elders and causing further rounds of retaliation. This observation is correlated with Mkutu (2008), who highlights small weapon proliferation and traditional institutions disempowerment as two factors in promoting insecurity in the North of Kenya.

These are structural and contextual phenomenon triangulated by secondary source confirms taste of this challenge. The dearth of resources is indicative of larger problems of underdevelopment and disenfranchisement of farmer-herder territory (Pkalya *et al.*, 2004) and the weakness of state-society bonds is discernible in political interference. All these limitations points to a necessity to formulate the policies of grassroots involvement in a wider issue of governance reform, youth empowerment, and sustainable development in order to make the most radical type of community-based peace-building demandable in the long term.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The research found that at the conflict between farmers and herders in Tigania East, central role in resolving the conflict lies with grassroots peace actors. It was found that elders, women groups, youth and religious leaders persuade by using culturally internalized forms of mediation and reconciliation coupled with belief in the values of the community. They calmed down the tensions and encouraged peaceful co-existence by the use of dialogue, restorative justice, and consensus building. The fieldwork storytelling interviews emphasized the legitimacy of the local and moral authority of the local grass roots actors in the community acting to restore relationships more effectively than a formal state system would act. As an example; when elders would take *barazas*, the elders' power was seldom challenged and their words could persuade the disputants on the path of reconciliation. This is why the results reiterate an argument by Lederach that claims that sustainable peace can be achieved through community-based change and not through enforcement by top leadership. Yet overcoming obstacles like political influence, lack of resources, and repeated cycles of violence also came into focus highlighting the falsity of peace in farmer-herder- farming environments. The conclusion is that although the peace actors at the grassroots level are unquestionably essential, their efforts should be sustained by structural adjustments and collaboration on the multi-level basis to guarantee long-term stability.

5.2 Recommendations

Based on these findings, the study recommends that since the grassroots peace structures have proven to be very strong, they need to be given the necessary logistical and material support to improve their mediation and monitoring effectiveness. The peace-making activities demonstrated to be very effective when executed by women needed to be strategically incorporated in formal and communal peace building efforts through leadership training and involvement in the decision making processes. Besides, institutionalizing inter-ethnic communication between elders of Meru and Boranas with the assistance of the legitimacy of the traditional institutions, including the *Njuri Ncheke* and Gada systems, would contribute to the development of trust coinciding with a lesser gear of reciprocity. It has also been advisable to adopt a hybrid system as the old institution works hand in hand with the state systems like the chiefs, the police, and county systems to enforce peace deals and compliance. In order to combat root causes of conflict, structural issues that have been found to contribute to the cause of conflicts like land and water scarcity, unemployment and political manipulation by the elites should be addressed through interventions as such however, the interventions must always target these root causes of conflict. Lastly, conscious precautions must be taken to de-politicize peace-building activities so that political motives do not compromise on the communal activities. Grassroots peace-building success is determined by effective cultural legitimacy, as well as the way it integrates with other larger socio-political change that fosters justice, equity and long-term development.



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Financial stress and its implications for students' learning in Tanzania: Evidence from Universities in Arusha

Jane Joseph Tesha¹

jtesha@iaa.ac.tz

¹Department of Education, Institute of Accountancy, Arusha, Tanzania

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ABSTRACT

Financial stress is emerging as one of the most pervasive and influential factors in students' academic performance. This study examines the financial stress and its effects on university students' education in the Arusha Region, Tanzania. Particularly, the study assessed the sources of financial stress among university students, determined the extent to which financial stress affects students' academic performance, and explored coping strategies in mitigating financial stress that affects students' university education. The study utilized the interpretivist research philosophy and the transactional model of stress and coping theory. A convergent mixed-methods research design was adopted. Descriptive statistics and thematic analysis were employed. A total of 205 respondents were selected using stratified, simple, and purposive sampling techniques. Reliability of the students' questionnaire was tested, and a Cronbach's Alpha value of $r=0.82$ was obtained. At the same time, the trustworthiness of the instrument for collecting qualitative data was established through peer debriefing. Quantitative data were analyzed using descriptive statistics in SPSS Version 25, while qualitative data were subjected to thematic analysis. The study reveals that delayed loan disbursement, high tuition fees, inadequate family support, food and transport expenses, accommodation costs, peer influence, and pressure to support family are sources of financial stress faced by university students. Due to the inability to purchase basic needs, students often skip meals or live in poor housing, which impairs cognitive functioning and limits study time. This affects their mental health, resulting in delayed or poor concentration in their studies. For strategies, it is necessary to partner with local housing providers to organize safe, affordable, university-approved shared accommodation options. In conclusion, delays in financial aid, high tuition, and living expenses synergistically erode students' stability. Inadequate family support and pressure to provide for the family amplify stress, especially if combined with obligations to earn income while studying. It was recommended that there be a need to ensure government loans and bursaries are confirmed and delivered before or at the start of the term to prevent initial financial instability.

Keywords: Academic Performance, Arusha Region, Education, Finance, Stress, Students' Learning, University

I. INTRODUCTION

Financial stress is one of the most prevalent and significant academic, social, and economic issues that university students worldwide deal with (Heckman et al., 2014). The psychological anguish brought on by having insufficient funds to cover basic personal and educational expenses is referred to as financial stress. Tuition fees, housing costs, food insecurity, transportation expenses, and limited access to educational resources are common causes of financial pressure (Thielking, 2019). Internationally as well as in low- and middle-income contexts, financial stress among college students has been associated with worse mental health outcomes, less concentration, higher dropout risk, and worse academic performance. Research from around the world shows that financial difficulties are associated with poorer grades, absenteeism, and even dropout.

Widespread poverty, restricted access to financial aid, and unemployment among students' families exacerbate the effects of financial stress in developing nations like sub-Saharan Africa (Osugiri et al., 2024). To make ends meet, students frequently turn to part-time work, which can negatively impact their study habits, focus, and academic achievement (Wagner et al., 2024). In severe situations, financial strains lead to poor academic performance, student dropout, and psychological issues such as sadness and anxiety. One of the biggest issues facing college students worldwide, particularly in developing nations, is financial stress, which is becoming more widely acknowledged. Tuition, housing, transportation, and educational supplies are significantly more expensive than many students' families can afford (Baluwa et al., 2021; Mkumbo et al., 2024). Stress, anxiety, and frequently poor academic performance or dropout are caused by the inability to pay these essential living and educational costs (Nasr et al., 2024).



The strain on students is considerably greater in sub-Saharan Africa, where funding for higher education is still insufficient. Many rely significantly on family support resources, part-time employment, government loans, and scholarships, all of which are frequently insufficient or inconsistent (Ikuemonisan, 2024). As a result, students learn coping mechanisms to deal with financial stress, like making a budget, asking for loans, getting help from peers, practicing their religion, or working part-time (Bulanda et al., 2020). It's important to comprehend these coping techniques because, although some, like financial preparation and seeking assistance, can foster resilience, others, like avoidance and excessive work hours, can make the academic load worse. In order to improve academic performance and mental health, institutional actions and student support services must be informed by studies on how students cope with financial stress (Kim, 2024).

Even if the number of students attending Tanzanian colleges is increasing, financial stress continues to be a major obstacle to academic achievement. Many students struggle financially over time, making it difficult for them to pay for necessities like housing, food, transportation, and school supplies. Because of this, some students are under a lot of stress and are compelled to work part-time jobs, take out loans, or forgo meals to make ends meet (Osugiri et al., 2024; Wagner et al., 2024). Even though there are financial aid programs like the Higher Education Students' Loans Board (HESLB), many students lack adequate funding because access is frequently competitive and restricted. According to Thielking (2019), the cumulative impacts of financial stress can show up as excessive absenteeism, decreased class engagement, poor academic performance, and, in the worst situations, dropout.

Similar patterns can be seen in Tanzania. Even though more people are enrolled in higher education now than 10 years ago, financial aid programs like government loans and scholarships are sometimes insufficient or not allocated fairly. Because of this, a large number of university students in metropolitan areas like Arusha struggle to pay for both their basic living expenses and academic-related charges, which may have an adverse effect on their performance and learning outcomes. Students in Tanzania are under a lot of strain due to the growing expenses of tertiary education, including tuition, housing, books, food, and transportation, as well as a lack of financial awareness and restricted access to loans or scholarships. Many students from low- and middle-income families attend institutions in the Arusha region; they frequently face financial limitations that could interfere with their academic performance. This study looked at the effects of financial stress on students' education and offered coping mechanisms for reducing the negative effects of financial stress on university education in Tanzania's Arusha region.

1.1 Research Objectives

1.1.1 General objectives.

To investigate the implications of financial stress on students' learning in universities in Arusha, Tanzania

1.1.2 Specific objectives

- (i) To identify the major sources and causes of financial stress among university students in Arusha.
- (ii) To examine the effects of financial stress on students' academic performance and learning engagement.
- (iii) To explore the coping strategies adopted by students in response to financial stress.
- (iv) To assess the institutional and policy measures in place to support students experiencing financial stress.

II. LITERATURE REVIEW

2.1 Theoretical Framework

2.1.1 Transactional Model of Stress and Coping Theory (TMSCT)

Richard S. Lazarus and Susan Folkman's 1984 transactional model of stress and coping theory served as the study's compass. According to this approach, stress is not a one-way response to a stressor but rather a dynamic, interacting process between an individual and their surroundings (Lazarus & Folkman, 1984). Stress can be found in interactions between people and their surroundings as well as in the environment itself. Only when a situation is viewed as stressful by the individual does it become so. TMSCT holds that the availability of both internal and external resources, including financial or informational resources, personal resilience, and social support, determines how effective coping is. The idea notes, for example, that students can view housing or tuition expenditures as intimidating. After that, they evaluate their capacity to manage by requesting assistance from parents and guardians, applying for a loan from HESLB, or working part-time. As a result, the effectiveness of these coping mechanisms and the available support networks has an impact on their stress level when asking parents and guardians for assistance. As a result, the effectiveness of these coping mechanisms and the available support networks has an impact on their stress level.



2.2 Empirical Review

Elmouhib et al. (2024) conducted a study on educational quality versus stress impact: assessing student well-being in higher education in Morocco. The study was purely quantitative, involving 426 students across higher education institutions. Structural equation modelling (SMART-PLS) analysis techniques were employed to analyze data. The finding shows that financial and academic stress significantly reduces quality of life, and educational quality is positively influenced by financial well-being. However, one potential limitation was that the study missed qualitative insights into the reasons behind quality of life and educational quality across higher education institutions in Morocco. The current study applied a mixed methods approach to collect both quantitative and qualitative data in order to fill the gap.

A related study was conducted in the United Kingdom by Bennett et al. (2015), investigating the change in students' financial stress at Bristol University from 2018 to 2022. A cross-sectional design and a quantitative approach were adopted. Data were collected with the aid of questionnaires from 10,876 students. Logistic regression was employed to analyze data in order to examine trends. The study found that 55% of students reported an increase in financial stress over time, thereby growing concern about mental health and academic continuity. The study was confined to students as the respondents. Also, the study lacks a longitudinal design that would have enabled it to track individual trends over time from 2018 to 2022, and similarly, there was no direct academic performance measure. To address these gaps, the current study also involves deans of students as respondents to investigate how financial stress affects the academic performance of university students in the Arusha region, Tanzania.

A study conducted by Saufi et al. (2025) examined financial stress among students in higher education institutions during the COVID-19 pandemic in Malaysia. Quantitative survey design and quantitative approach were adopted. Data were collected with the aid of questionnaires from 567 students. Descriptive statistics were employed to analyze data. The study found that 50.1% of students experienced financial stress. One potential limitation is that the study focused on the pandemic period, which may limit its generalizability to normal times. Also, no multivariate analysis was conducted.

A study conducted by Osugiri et al. (2024) analyzed the impact of financial stress on the academic performance of university students in South East Nigeria. A descriptive survey with qualitative and quantitative tools was employed. Data were collected from 50 students and their parents, randomly selected. Research instruments included Focus Group Discussion (FGDs), interviews, and observations. Descriptive statistics were employed to analyse data from surveys, while thematic analysis was used for qualitative data. The study found that students from low socio-economic backgrounds struggled to afford tuition, materials, and basic needs, resulting in poor academic performance and early departure from university education. Equally, parental low interest in education compounded the problem. One potential limitation is that the small sample (n~50) limits generalizability, and bias in qualitative design reduces comparability.

In Tanzania, Mkumbo et al. (2024) conducted a study on coping strategies among first-year students and their influence on their university education. The study employed convergent mixed-methods to collect both quantitative and qualitative data using questionnaires & interviews. A total of 150 participants (100 students, 35 lecturers, 10 non-academic staff, and 5 deans) across 5 universities were selected. Descriptive statistics and thematic analysis were employed. The study found that students coped with homesickness and financial challenges through peer support groups, time management training, parental engagement, and counselling. These mitigated transitional stress and improved adjustment. The study provides valuable insights into the coping strategies among first-year students, but its focus on first-year students only limits direct linkage to financial stress outcomes among other students. Therefore, the current study sought to fill this gap. Despite the critical nature of this issue, the empirical research specifically focused on the coping strategies among first-year students in Arusha City. Therefore, this study addresses the knowledge gap by investigating how financial stress affects the education of university students in the Arusha region, Tanzania.

III. METHODOLOGY

3.1 Research Philosophy

The study adopted an interpretivism philosophy. The philosophy focuses on subjective meaning-making, ideal for understanding how students deal with financial stress in diverse contexts. This philosophy focuses on understanding how individuals interpret and give meaning to their experiences, which aligns well with the study's emphasis on personal strategies, emotions, perceptions, and social contexts. It recognizes that students experience and cope with financial stress differently based on context, background, and beliefs. The philosophy encourages the collection of both quantitative and qualitative data to generate deep insights into lived experiences. This philosophy is especially relevant in contexts like Tanzania or other developing countries, where social, cultural, and institutional dynamics greatly influence how financial challenges are navigated.



3.2 Study Area

This study was conducted in the Arusha region, which is located in the northern part of Tanzania. This region consists of five universities in total, which offer courses for undergraduates. The choice of this study area is due to the challenges facing university students in their education due to financial stress as a result of inadequate financial support from parents and the government through HESLB. Similarly, the research objectives and questions align with the interests of university students in the region. Therefore, relevant data were available for this study.

3.3 Research Design

This study used the convergent mixed methods research design. According to Creswell and Creswell (2023), in a convergent mixed-method research design, the researcher collects both quantitative and qualitative data at the same time, then compares the two databases to see if they yield similar or different results. This integration enhanced the validity of the findings by providing a richer context for interpreting results, as it allows researchers to triangulate data sources.

3.4 Research Approach

The study employed a mixed-methods research approach. A research approach refers to the overall strategy or plan that a researcher adopts to conduct their study (Cohen et al. 2018). A convergent mixed methods research design was used in collecting both quantitative and qualitative data simultaneously, and analysing them separately, then integrating the findings. Wium and Louw (2018) emphasize that mixed methods involve collecting, analysing, and integrating both qualitative and quantitative data in a single study. Qualitative and quantitative data were used to complement one another.

3.5 Targeted Population

Creswell and Creswell (2023) defined the target population as the entire group of individuals that a researcher is interested in researching and analysing. It refers to the entire group of individuals or instances that meet a set of specific criteria, and from which researchers aim to conclude. The target population from five universities was 1000 undergraduate students and five deans of students.

3.6 Sample size

A sample size is a subset of the target population. Five universities were involved in this study, whereby a simple random sampling technique was used to select sampled university students. This technique gave every individual an equal chance to participate in the study. A total of 205 sample respondents from universities in the Arusha region were selected for this study. Based on respondents' categories, the study included 200 (20% of 1000) undergraduate students and 5 deans of students (purposely selected) from five Arusha region universities. The choice to select 200 students from universities was due to their relevance to the study. The remaining 5 respondents were deans of students. Their inclusion was essential for providing insights regarding cases involving students affected by financial stress. This sample size was suitable and helpful to generalize results and statistical relations between variables. The total sample size translated to 205 respondents, as shown in Table 1.

Table 1

Sample Size Grid and Sampling Techniques

Category	Sample	Sampling procedures
University students	200	Stratified & Simple random
Dean of students	5	Criterion purposive sampling
Total	205	

Source: Researcher's Construct (2025)

3.7 Sampling Techniques

The researcher employed a probability sampling technique to select students. Specifically, using stratified random sampling, students were grouped based on their gender. Therefore, 40 students from every university were selected based on their gender. Consequently, 20 male and 20 female students were selected from five universities in the Arusha region. Simple random sampling was employed to select the students in their strata. Criterion Purposive sampling was used to select 5 deans of students. Therefore, through stratified sampling, simple random sampling, and criterion purposive sampling techniques, 200 respondents were sampled for this study (Tracy, 2024).



3.8 Data Collection Methods

Questionnaires were used to collect quantitative data from 200 university students. The questionnaire was structured into 5 Likert scale responses. For each theme from the objective, between 6 and 7 items were developed to investigate the three objectives. Similarly, structured interviews were conducted with five deans of students. These instruments enabled the collection of both quantitative and qualitative data that provided in-depth insights into the Effects of financial Stress on university students’ education.

3.9 Validity and Reliability

Content validity of questionnaires was affirmed by two experts: one from HESLB and another from the accounts office in the university. A total of 20 items were tested in SPSS Version 25 using Cronbach's alpha coefficient to determine the reliability of the students’ questionnaire, and the correlation coefficient value of $r=0.82$ was generated. This value confirmed that the instrument was dependable and capable of producing consistent results over time. According to George and Malley (2003), the instrument was found to be fairly reliable for the study. Questionnaires were then issued to the respondents and collected on the agreed date, while a personal interview was conducted on the same day of the visit. The researcher audio-recorded the conversation for later transcription with the consent of the interviewee.

3.10 Data Analysis

The study used both quantitative and qualitative analysis. Quantitative data were analysed using descriptive statistics in SPSS Version 25, while qualitative data were subjected to thematic analysis. These analysis approaches facilitated a comprehensive interpretation of findings, allowing for a clearer understanding of patterns and themes (Tracy, 2024).

3.11 Ethical Considerations

All the research rules and regulations were carefully observed during the preparation and conduct of research in the field. Ethical guidelines were followed by ensuring informed consent and treating all participants fairly. The researcher ensured the anonymity of the respondents, and respondents’ feedback was kept confidential. The results of the study were accurately and honestly communicated, and plagiarism was avoided by properly acknowledging the sources. The study prioritized the protection of participants' rights and dignity throughout the research (Andanda & Wathuta, 2018).

IV. FINDINGS & DISCUSSION

4.1 Findings

The findings are presented starting with the return rate of research tools, demographic information, and the effects of financial stress on university students’ education in the Arusha region, Tanzania.

4.1.1 Return Rate of Instruments

The researcher administered questionnaires to 200 students and an interview guide to 5 deans of students to collect data for this study. Table 2 gives a summary as follows:

Table 2

Distribution of Research Instruments and Instruments’ Return Rate

Instruments Distributed	Sample Size	Instruments’ return rate	(%)
Questionnaires for students	200	200	97.56
Interview for Dean of Students	5	5	2.44
Total	205	205	100

Source (Field Data 2025)

The distribution of data indicated that the researcher administered questionnaires to 200 Students, which accounted for 97.56% of the total respondents. Also, the interview guide was used to obtain qualitative data from five deans of students (2.44% of the total respondents), which provided a more comprehensive understanding of the problem investigated under the current study. Additionally, all questionnaires were returned by respondents to the researcher, while the interviews were carried out successfully. This implies that by obtaining data from multiple sources, the study was able to identify the effects



of financial stress on university students' education. In the view of Fagarasanu and Kumar (2002), the quality of data analysis is influenced by the research instruments' return rates. In this regard, the low return rate of the research instruments may compromise the credibility of the findings. However, in this study, due to the 100% return rate of the research instruments administered, this improved the suitability of the qualitative and quantitative data. This 100% return rate was achieved due to the efforts that were put in place by the researcher through making a follow-up to remind the respondents to submit their duly filled instruments. This approach was a necessary sacrifice in order to make sure that all the intended respondents participated fully in the study.

4.1.2 Demographic Information of Students

This part identifies demographic information of the respondents, that is, students' gender, age, and level of education. This demographic information was important in the current study because it provided insights into different personal information considered among university students that is relevant to the current study. Demographic information plays a crucial role in research as it helps identify and understand the characteristics of a target population, and it enables researchers to segment their responses and tailor their strategies accordingly (Willie, 2024). Table 3 shows the demographic information of university students.

Table 3

Demographic Information of Students (n= 200)

Category		F	%
Gender	Male	100	50.0
	Female	100	50.0
Age	16-20 years	10	5.0
	21-25 years	108	54.0
	26-30 years	72	36.0
	31 years and above	10	5.0
Level of Education	First year	24	12.0
	Second year	79	39.5
	Third year	91	45.5
	Fourth year	6	3.0

Source: Field Data (2025)

Table 3 shows the gender distribution among the students, indicating that 50% of respondents were male and 50% were female. This demonstrates that there was gender parity among male and female students represented in the study. Gender was considered because it may affect the perception and experience of university students' financial situation and how this affects their education. The descriptive statistics presented in Table 3 indicate that 108 students, accounting for 54% were of age between 21 - 25 years, 72(36.0%) were of age between 26 - 30 years, and only 5% represented age from 16-20 years & above 31 years. The age group among the students was necessary for the generalization of financial experience among different age groups concerning the effects of financial stress on university students' education. Additionally, the level of education shows that the third year was 91, representing 45.5%, followed by the second year at 39.5%, the first year was 12% and a small number (3%) of fourth-year students were also represented.

4.1.3 The sources of financial stress among university students in the Arusha Region

Objective one of this study assessed the sources of financial stress among university students in the Arusha Region. The sampled University students were required to indicate their level of agreement with the statement on the sources of financial stress among university students. A total of 7 items were drawn to investigate this objective. University students were required to agree or disagree with the items using a five-point Likert scale, where 5=strongly agree (SA), 4=agree (A), 3=Undecided (U), 2=disagree (D), and 1=strongly disagree (SD). During the discussion, the percentage of those who strongly agreed and those who agreed was merged. The same was done to the percentage of those who strongly disagreed and those who disagreed. Table 4 presents the data of quantitative findings through questionnaires on the sources of financial stress among university students.



Table 4
Students' Responses on the Sources of Financial Stress in the Universities in Arusha Region (n=200)

Primary sources of financial stress experienced by university students	SA		A		U		D		SD		Mean
	F	%	F	%	F	%	F	%	F	%	
Delays in government loan disbursement	104	52.0	87	43.5	3	1.50	4	2.0	2	1.0	4.4
Accommodation costs	56	28.0	32	16.0	34	17.0	56	28.0	22	11.0	3.2
Food and transport expenses	91	45.5	56	28.0	31	15.5	16	8.0	6	3.0	4.1
Peer influence	2	1.0	3	1.50	7	3.5	50	25.0	138	69.0	1.4
High tuition fees	110	55.0	49	24.5	27	13.5	10	5.0	4	2.0	4.3
Pressure to support their families financially	51	25.5	75	37.5	54	27.0	14	7.0	6	3.0	4.0
Inadequate family financial support	91	45.5	56	28.0	31	15.5	16	8.0	6	3.0	4.1
Grand mean score											3.6

Source: (Field data, 2025)

Data in Table 4 show that the students identified the sources of financial stress among university students in Arusha Region. Delays in government loan disbursement got the highest mean score of 4.4, which was higher than the grand mean score of 3.6. A total of 104 students strongly agreed, accounting for 52%, 43.5% agreed, only 3(1.5%) were undecided, while 3% held a contrary opinion. This implies that delayed financial aid significantly heightens students' anxiety and stress. In terms of accommodation costs, 56 respondents, accounting for 28.0% strongly agreed that this is a source of financial stress among university students, 16% of the respondents agreed, while 28% disagreed, together with 11% who strongly disagreed. The mean score (3.2) posted was slightly below the grand mean score of 3.6. Similarly, a total of 45.5% of students were strongly in agreement that food and transport expenses cause financial stress.

During face-to-face interviews and while giving a response regarding the theme on the sources of financial stress among university students in the Arusha region, the dean of students at university "4" noted as follows:

Well, many students have reported financial difficulties due to delays in the loan disbursement. My office has established that the delay causes considerable hardship for students, especially those coming from low-income backgrounds. I have shared this with the relevant office, and I must admit that they're trying their best to handle the situation (Personal interview, 8th July 2025).

Furthermore, another dean of students in university "1" noted that;

Many students from disadvantaged or rural backgrounds rely heavily on loans from HESLB or inconsistent family financial support. When family support is insufficient, combined with delayed loan disbursement, students are forced into precarious coping strategies such as part-time work that heighten stress. Recently, a student was involved in a road accident while performing his part-time work. Unfortunately, the student succumbed to the injuries, and we can only attribute his death to financial difficulties (Personal interview, 9th July 2025).

A high tuition fee is also another source of financial stress among university students. This source recorded a mean score of 4.3, where a total of 79.5% (55.0% strongly agreed & 24.5% agreed) agreed. Likewise, pressure to support their families financially was cited as another source of financial stress among university students, with a mean score of 4.0. Inadequate family financial support, with a mean score of 4.1, received 73.5% approval as a source of financial stress among university students.

4.1.3 Effect of Financial Stress on Students' Academic Performance in their University Education in the Arusha Region

The second objective of the current study was to determine the extent to which financial stress affects students' education in the universities in Arusha Region. The sampled university students were required to indicate their level of agreement with the statement on the effects of financial Stress on university students' education. A total of 7 items were drawn to investigate this objective. The scale consisted of five choices, which are 5 = Greater extent (GE), 4 = High extent (HE), 3 = Moderate extent (ME), 2 = Low extent (LE), and 1 = No extent (NE). However, it was necessary to collapse cells where the categories of "Moderate Extent" were merged with "Low Extent" for clarity of reporting, and "Great Extent" and "High Extent" categories were equally merged. Table 5 shows quantitative data on the effects of financial stress on university students' education in the Arusha region.



Table 5: Students' Response on the Extent to which the University Students Participate in Lottery games in Arusha region (n=200)

Statement	GE		HE		ME		LE		NE		mean
	F	%	F	%	F	%	F	%	F	%	
Reduced concentration in studies	125	62.5	63	31.5	8	4.0	3	1.5	1	0.5	4.54
Absenteeism due to the inability to afford transportation	57	28.5	5	2.5	6	3.0	61	30.5	71	35.5	3.83
Results in unsafe relationship	10	5.0	71	35.5	91	45.5	22	11.0	6	3.0	3.29
Delayed graduation	32	16.0	16	8.0	33	16.5	89	44.5	30	15.0	3.21
Inability to purchase academic materials	32	16.0	16	8.0	33	16.5	90	45.0	29	14.5	3.21
Dropping out from university education	57	28.5	5	2.5	7	3.5	60	30.0	71	35.5	3.83
Poor performance thus lower grades	127	63.5	47	23.5	11	5.5	15	7.5	0	0.0	4.43
Grand mean score											3.9

Source: (Field data, 2025)

The data in Table 5 shows that financial stress negatively affects university students to the extent that it reduces their concentration in studies. The variable recorded the highest mean score of 4.54, which was relatively higher than the grand mean score of 3.9. The high mean score was due to support from 62.5% for a greater extent and 31.5% for High extent, while 4.0% indicated moderate extent, 1.5% for Low extent, and 0.5% for No extent. The data also indicates that financial stress quite often results in absenteeism due to the inability to afford the means of transport. The mean score of 3.83 recorded was due to support from 28.5% for a greater extent, 2.5% for High extent, 3.0% indicated moderate extent, 30.5% for Low extent, and 35.5% for No extent. In essence, those who supported were 62 students, accounting for 31% and those who held a contrary opinion (No extent) were 71 students, accounting for 35.5%. Moreover, Table 5 exhibits that financial stress results in unsafe relationships among students and with other people in the community. The mean score of 3.29 recorded was due to support from 81 students, accounting for 40.5% and those who held a contrary opinion (No extent) were 6 students, accounting for 3.0%. The quantitative statistics further illustrate that financial stress negatively affects university students to the extent that they drop out of university education. Similarly, the mean score of 3.83 recorded was due to support from 62 students, accounting for 31.0% and 7 students indicated a moderate extent, accounting for 3.5% while 60 students indicated a low extent, accounting for 30% and 71 students voted for extent, accounting for 35.5%. During the interviews on the questions that sought to find out the extent to which financial stress affects students' education, the sampled dean of students at university "2" pointed out that:

Indeed, financial stress is strongly associated with diminished cognitive focus and academic engagement. Students who worry constantly about money report difficulty concentrating on lectures, reading assignments, and exams. Also, in the contexts where students must commute, a lack of funds for transport significantly increases absenteeism (Personal interview on 10th July 2025).

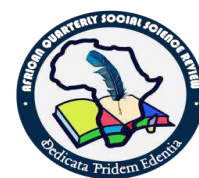
From another dean of students, it was found that;

Yes, the report in my office indicates that financially insecure students sometimes enter exploitative or high-risk arrangements such as transactional relationships to meet basic needs. These circumstances sometimes result in unwanted pregnancies and conflict, thereby creating additional psychological stress that undermines academic well-being (Personal interview, 17th July 2025).

Finally, students pointed out that financial stress negatively affects their university education to the extent that it results in poor performance, thus lower grades. This variable recorded a mean score of 4.43, which was greater than the grand mean score of 3.9, with an overwhelming support of 174 students accounting for 87% and those who held a contrary opinion were 26 students accounting for 13.0%.

4.1.4 Students' coping strategies in mitigating financial stress that affects their university education in Arusha City

The last objective of this study explored students' coping strategies in mitigating financial stress that affects their university education in the Arusha Region. The sampled University students were required to indicate their level of agreement with the statement on the coping strategies in mitigating financial stress that affects their university education. A total of 6 items were drawn to investigate this objective. University students were required to agree or disagree with the items using a five-point Likert scale, where 5=strongly agree, 4=agree, 3=neutral, 2=disagree, and 1=strongly disagree.



During the discussion, the percentage of those who strongly agreed and those who agreed was merged. The same was done to the percentage of those who strongly disagreed and those who disagreed. Table 6 presents the data of quantitative findings through questionnaires on the coping strategies in mitigating financial stress that affects students’ university education.

Table 6
Coping Strategies in Mitigating Financial Stress that affects Students’ University Education (n=200)

Coping strategies in mitigating financial stress	SA		A		N		D		SD		Mean
	F	%	F	%	F	%	F	%	F	%	
Part-time work	110	55.0	65	32.5	13	6.5	6	3.0	6	3.0	4.3
Borrowing from peers or family.	91	45.5	56	28.0	31	15.5	16	8.0	6	3.0	4.0
Applying for bursaries or scholarships.	96	48.0	78	39.0	17	8.5	6	3.0	3	1.5	4.2
Strict budgeting.	137	68.5	44	22.0	6	3.0	7	3.5	6	3.0	4.5
Seeking spiritual or religious support.	74	37.0	78	39.0	35	17.5	8	4.0	5	2.5	4.0
Relying on shared accommodation.	151	75.5	45	22.5	0	0.0	4	2.0	0	0.0	4.7
Grand Mean score											4.3

Source: (Field data, 2025)

From Table 6, part-time work was identified as a coping strategy in mitigating financial stress among students. The mean score of 4.3 recorded was due to support from 55.0% for strongly agree and 32.5% for agree, while 6.5% indicated neutral, 3.0% for disagree, and 3.0% also for strongly disagree. Fundamentally, those who supported were 175 students, accounting for 87.5% and those who held a contrary opinion were 12 students, accounting for 6.0%. Shared accommodation, with a mean score of 4.7, was identified as another major coping strategy used by students to mitigate financial stress. The measure received overwhelming support from 151 students, accounting for 75.5% who strongly agreed, 45(22.5%) of students agreed, while only 4(2%) disagreed. The strategy regarding strict budgeting was acknowledged by 181(90.5%) of students, a small number; that is, 6(3%) remained neutral, with 6.5% holding a contrary opinion. The strategy recorded a higher mean than the grand mean score of 4.5. This implies that students recognize the necessity of strict budgeting to address their financial difficulties.

Furthermore, during the interviews while identifying the coping strategies in mitigating financial stress that affects students’ university education in the Arusha region, one dean of students in university “3” noted that:

It is necessary to conduct workshops in budgeting, debt management, and coping strategies to boost students’ financial self-efficacy. This will also promote problem-focused coping, which has been shown to mitigate perceived financial stress. Likewise, there is a need to introduce financial literacy modules during orientation to cover budgeting, expense tracking, debt management, and saving strategies (Personal interview with Dean “3” on 18th July, 2025).

Another dean of students, “5” pointed out that;

Providing counselling and time-management support for students in balancing academic and family financial responsibilities is necessary. In addition, there is a need to offer flexible payment or enrolment options for those under dual pressure. Similarly, if necessary, we need to embed budgeting and money management workshops into orientation and give student training services on financial management, as many students report mismanaging allowances early in the semester (Personal interview with dean “5” on 18th July, 2025).

The study revealed that borrowing from peers, with a mean score of 4.0, was identified as a possible coping strategy in mitigating financial stress. Other coping strategies identified include applying for bursaries or scholarships with a mean score of 4.2 and seeking spiritual or religious support with a mean score of 4.0, which are slightly below the grand mean score of 4.3.



Table 7
Relationship between Financial Stress and Students' Education

Financial Stress Factor (Independent Variable)	Manifestation of Stress	Effect on Student Education (Dependent Variable)
Delayed loan disbursement	Students lack timely access to funds for tuition and basic needs	Missed classes, delayed fee payments, reduced focus on studies
High tuition fees	Increased financial burden beyond family capacity	Risk of dropout, absenteeism, and reduced academic performance
Inadequate family support	Limited financial assistance from home	Difficulty purchasing study materials, lower participation in academic activities
Food and transport expenses	Students skip meals or walk long distances	Poor nutrition affects cognitive functioning and concentration in class
Accommodation costs	Students live in overcrowded or poor housing	Unfavourable study environment leading to reduced study time
Peer influence & pressure to support family	Students divert resources to social/family obligations	Divided attention, stress, and reduced academic engagement
Need to earn income while studying	Balancing part-time work with academics	Fatigue, limited study hours, and lower academic performance
Overall mental health impact	Anxiety, stress, and poor emotional well-being	Poor concentration, delayed assignments, and diminished educational outcomes

Source: (Field data, 2025)

Table 7 demonstrates the intricate relationship between financial stressors and students' education outcomes in higher learning institutions. It reveals that students' academic performance is not only determined by individual effort but is also heavily shaped by financial circumstances. For instance, delayed loan disbursement directly undermines academic stability, as students struggle to pay tuition and access basic needs at the right time, resulting in missed classes and reduced concentration. Similarly, high tuition fees impose a heavy financial burden that often exceeds family capacity, pushing students toward absenteeism and even dropout in extreme cases.

The findings further highlight the crucial role of family support, since inadequate assistance makes it difficult for students to secure essential study materials or participate fully in learning activities. Relatedly, food and transport expenses often force students to skip meals or walk long distances, which negatively affects their health and cognitive functioning, ultimately weakening classroom concentration. Accommodation costs create another layer of challenge; students who cannot afford proper housing end up in overcrowded or poor living conditions that hinder effective study and personal well-being.

Table 7 also emphasizes the social dimension of financial stress. Peer influence and the pressure to support family members compel students to divert limited resources, leaving less time and energy for their studies. In addition, the need to earn income while studying forces many students to combine academic responsibilities with part-time work, leading to fatigue, reduced study hours, and poor academic outcomes. Collectively, these stressors contribute to a decline in students' mental health, manifesting in anxiety, delayed assignments, and poor concentration in learning activities.

Therefore, financial stress acts as a multifaceted barrier to students' education, affecting both academic engagement and personal well-being. While financial support is central to stability, the interaction of high costs, inadequate support, and competing obligations erodes educational performance. Addressing these stressors through timely loan disbursements, affordable accommodation, and institutional support systems is vital for safeguarding students' academic success.

4.2 Discussion

The rate of return of the research tools was 100% for questionnaires and interviews for the dean of students, as shown in Table 2. The return rate from the respondents shows a strong engagement and provides a data set representing the population under study. This enhanced the study's credibility by incorporating their direct experiences and observations. According to Fentahun et al. (2025), a higher return rate enhances the representativeness of survey data, ensuring findings are more reflective of the target population. This return rate shows the representation across all respondents. In terms of demographic information, such as gender and age, these were crucial to show respondents' characteristics. Consequently, the demographic information is crucial for the greater generalization of the findings.

Table 4, the primary sources of financial stress include delays in government loan disbursement, high tuition fees, accommodation costs, food and transport expenses, and a lack of part-time job opportunities. Delayed financial aid



significantly heightens student anxiety and stress. The implication is that students often begin their semester without confirmed funding, leaving basic needs unmet and their academic focus impaired. Many students also reported pressure from supporting their families financially while studying. These findings align with those of Mkumbo et al. (2024), who reported that universities that delay confirming or disbursing student loans undermine students' concentration in their studies. Regarding high tuition fees, the findings show that consistently rising tuition contributes to financial stress that affects university students in their education.

While in agreement, Ikuemonisan (2024) reported that in Australia and Malaysia, mounting tuition and auxiliary costs such as fees and textbooks correlate with elevated anxiety and depression among students. From the interviews, the findings indicate that the financial burden of tuition is one of the most frequently reported stressors that affect university students' education, leading to mental health decline and academic difficulty. Students lacking sufficient parental financial support frequently experience protracted stress. The findings demonstrate that only a minority of students receive adequate financial help from parents, forcing many to rely on loans or part-time work. The inability to rely on family resources undermines both psychological well-being and academic engagement.

The findings also reveal that some students assume responsibility for family support, compounding their own financial burdens and stress. PMCID (2023) confirms that in Pakistan and elsewhere, this obligation often exacerbates anxiety, impacting both their studies and the health of students. While still significant with a mean score of 3.2, the finding shows that the stress from housing is sometimes slightly lower than tuition or food/transport, yet in high rent markets, it can surpass loan limits. However, in some places, students' rents exceed typical maintenance loans, causing considerable anxiety. Peer pressure or social comparison typically registers low in mean score (1.4), but qualitative findings revealed notable effects. The study revealed social exclusion due to the inability to afford social activities, and feelings of inferiority or shame when compared to wealthier peers. Although the mean score is low, qualitative data show a persistent, subtle effect. Generally, the average stress level is moderate to high regarding peer pressure that leads to social exclusion. Consequently, the findings confirm that across contexts, most students report moderate to severe financial stress, with 50% to 70% experiencing financial difficulties, significantly impairing their well-being and academic outcomes.

The data in Table 5 indicate that financial stress significantly affects academic performance through reduced concentration, absenteeism due to inability to afford transportation, lower grades, and even delayed graduation. The study revealed that students in Arusha facing delayed loans and daily cash shortages are highly likely to experience similar concentration difficulties. These findings positively resonate with those of Akanpaadgi et al. (2023), who found that high living costs, time pressures, and financial problems impair students' academic focus and performance in Ghanaian higher education. Similarly, from the interviews, the study revealed that financially insecure students sometimes enter exploitative or risky relationships as coping mechanisms that often result in unwanted pregnancies. Once the student has delivered, the innocent child is taken to her parents, adding more burden to the family, consequently compounding stress and mental health burdens that harm academic well-being.

Likewise, due to the inability to purchase basic needs, students often skip meals or live in poor housing, which impairs cognitive functioning and limits study time. This affects their mental health hence delayed or poor concentration in studies. The findings are in agreement with Baluwa et al. (2021) and Kim (2024), who reported that students often skip meals or live in poor housing, which impairs cognitive functioning and limits study time. The authors argued that financial stress leads to cognitive overload, anxiety, and divided attention among students. Students under severe stress are more likely to perform poorly or consider dropping out (Nasr et al. 2024). Alkhaldeh et al. (2023) weigh in by revealing data from The Citizen (Tanzania) that highlights that over recent years more than 16,500 Tanzanian university students dropped out, with many attritions attributed to inability to pay fees, financial hardship, or failure to secure student loans. Furthermore, the study found that time management, exam performance, ability to purchase academic materials, and mental health are most affected by financial stress. The findings are reinforced by a related study of Alshagga et al. (2015), who established that persistent financial anxiety undermines emotional stability and concentration, negatively affecting academic engagement. Similarly, Bennett et al. (2015) noted that financially stressed students are preoccupied with working and financial concerns rather than studies, thereby reducing their focus and performance.

Table 6, a substantial number of university students reported key coping strategies that include part-time work, borrowing from peers or family, applying for bursaries or scholarships, and joining student saving groups. The study found that many students in universities in Tanzania take on part-time jobs to support living and tuition expenses. The students juggling work and study often lead to exhaustion and reduced academic focus, highlighting that while part-time work is a key coping mechanism, it compromises academic performance. While in support, Bulanda et al. (2020) revealed that problem-focused strategies such as strict budgeting and finding part-time work are more effective in promoting resilience and academic persistence.



During the face-to-face interviews with one dean of students, the study discovered the need to conduct workshops in budgeting, debt management, and coping strategies to boost students' financial self-efficacy. This will also promote problem-focused coping, which has been shown to mitigate perceived financial stress. Similarly, institutions should provide counseling and time-management support for students to enable them to balance academic and financial responsibilities. In addition, institutions should proactively provide counseling and peer support groups not just for academic stress but also for financial anxiety. Moreover, there is a need to offer flexible payment or enrolment options for those under dual pressure, personal and familial responsibilities. Another strategy is to embed budgeting and money management workshops into orientation and continuing student support services, as many students report mismanaging allowances early in the semester. Likewise, there is a need to introduce financial literacy modules during orientation to cover budgeting, expense tracking, debt management, and saving strategies.

Other common strategies identified include strict budgeting, seeking spiritual or religious support, and relying on shared accommodation. Concerning accommodation, it is necessary to partner with local housing providers to organize safe, affordable, university-approved shared accommodation options. The findings agree with those of Mkumbo et al. (2024), who revealed that shared housing is the most common strategy for students to reduce living costs. Also, due to delayed loans or insufficient allowances, students often seek short-term loans from family or friends. While this offers quick help, it may create dependency or repayment pressure later. Spiritual coping (prayers, religious gatherings, sharing worries with fellow believers) is frequently reported among students to manage stress emotionally, especially when other coping options are limited. The study found that students report cases of stress and depression to the chaplain for spiritual guidance. After counselling, it is later established that financial stress is the major source of tension and despair among students.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

In conclusion, delays in financial aid, high tuition, and living costs synergistically erode students' ability to concentrate on their studies. Inadequate family support and pressure to provide for the family amplify stress, especially if combined with obligations to earn income while studying. Similarly, financial stress is linked to anxiety, depression, social isolation, lower academic performance, and decisions about continuing or dropping out. Although peer influence scores are low numerically, experiences of exclusion, shame, and social comparison are consistently reported when students face financial stress. Due to the inability to purchase basic needs, students often skip meals or live in poor housing, which impairs cognitive functioning and limits study time. This affects their mental health, resulting in delayed or poor concentration in their studies.

The study established that shared accommodation (highest mean scores = 4.7) and strict budgeting (mean scores = 4.5) are the most widely adopted strategies as they reduce recurring expenses. These strategies for mitigating financial stress are directly within students' control. Part-time work and scholarships also serve critical roles (with mean scores of 4.3 and 4.2, respectively), though it was found that part-time work can negatively affect academic time and concentration. Borrowing and religious/social support (means scores = 4.0) were found to provide emotional or short-term financial relief, but may carry dependency or psychological pressures. Additionally, Spiritual coping helps emotionally but doesn't solve the underlying financial issues; it complements other strategies. The study also concludes that there is a need to embed budgeting and money management workshops into orientation and train students on financial management, as many students report mismanaging loans early in the semester. Likewise, there is a need to introduce financial literacy modules during orientation to cover budgeting, expense tracking, debt management, and saving strategies. Provide counselling and time-management support for students on balancing academic and family financial responsibilities. In addition, there is a need to offer flexible payment or enrolment options for those under dual financial pressure. Concerning accommodation, institutions should partner with local housing providers to organize safe, affordable, university-approved shared accommodation options.

5.2 Recommendations

Based on the research conclusions, the following recommendations are given forth. Firstly, the study recommends that it is necessary to ensure government loans and bursaries are confirmed and delivered before or at the start of every semester to prevent initial financial instability. The application processes should be simplified, and students should be assisted in applying early to reduce financial uncertainty. Institutions should develop emergency grant funds for unexpected eventualities. This will help to cover accommodation or food where delays are common. This grant should be recovered once students receive their loan from HESLB. Provide affordable university-managed housing or rent caps in collaboration



with local authorities and expand food assistance programmes (food banks, subsidized meals), transport subsidies, and placement bursaries. Conduct workshops in budgeting, debt management, and coping strategies to boost students' financial self-efficacy. This will also promote problem-focused coping, which has been shown to mitigate perceived financial stress. Proactively provide counselling and peer support groups not just for academic stress but also for financial anxiety. The counselling should also focus on time-management support to help students balance their academic work and financial responsibilities. In addition, there is a need to offer flexible payment or enrolment options for those under dual pressure. There is a need to embed budgeting and money management workshops into orientation and continuing student support services, as many students report mismanaging their loans early in the semester

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Evaluation of ICT resources and barriers to adoption in improving library service delivery for higher user satisfaction in Tanzania

Kaishe-Mulungu, Dativa Donati^{1*}
Lwehabura, Mugyabuso Julius Festo²
Consolata Angello³

^{1*}ddkaishe@mzumbe.ac.tz

²lwehabura@sua.ac.tz

³angelo@sua.ac.tz

¹Mzumbe University (MU), ^{2,3}Sokoine University of Agriculture (SUA), ^{1,2,3}Tanzania

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ABSTRACT

It is impossible to understate the use of Information Communication and Technologies (ICTs) resources and the challenges they present in university libraries in underdeveloped countries like Tanzania. Thus, this study investigated the quality of library services in Tanzanian universities, focusing on ICT facilities and removing adoption hurdles. The ServQual framework forms the theoretical basis for evaluating how ICT-related library services contribute to user satisfaction in Tanzanian university libraries. This study was guided by two specific objectives: (1) to determine the barriers to ICT technology adoption in Tanzanian university libraries, and (2) to evaluate the availability of ICT facilities for improving library service offering. The study employed the cross-sectional research design, the quantitative and qualitative research approach, and the pragmatic philosophical framework. A systematic questionnaire and interview were used to gather the data, and Statistical Package for Social Sciences (SPSS) was used for both descriptive and content analysis of the qualitative data. The findings indicated that despite the presence of computers, projectors, photocopiers, and internet connectivity, the quality of these fundamental ICT resources was inconsistent. Although a sizable percentage of respondents said that internet facilities were sufficient, there were several substantial obstacles to using ICT. These difficulties included subpar computer systems, erratic power supplies, inadequate ICT infrastructure, and student abuse of ICT resources. These challenges have a detrimental effect on patron satisfaction and severely impair the caliber of library services. The study comes to the conclusion that although certain ICT facilities are there, their efficient usage is restricted by deficiencies in infrastructure, resource sufficiency, and management. Resolving these issues is essential to enhancing customer happiness and library service delivery. Enhancing computer facilities, enhancing internet connectivity, guaranteeing a steady power supply, offering staff training, boosting management support for ICT efforts, and putting procedures in place that stop ICT resource exploitation are some of the recommendations made by the study.

Keywords: ICT Facilities, ICT Infrastructure, Library Service Provision, Obstacles to ICT Adoption, University Libraries, User Satisfaction

I. INTRODUCTION

All across the world, academic libraries are gradually switching from manual to automated methods. This change aims to balance the evolving needs of their clients with the developments in information and communication technologies (ICTs) (Akinola, 2022; Emasealu, 2019). The development of ICT has radically changed how university libraries operate, increasing the caliber and volume of services they provide. According to Okonedo *et al.* (2014), these changes are most noticeable in the fields of mass storage, computing, and communication technologies. According to the authors, continuous advancements in these domains have significantly changed the strategies used by university libraries for information collection, preservation, retrieval, and distribution. Similarly, Wema (2018) highlights the importance of online services, e-learning platforms, and electronic databases as critical technological innovations that are changing library services.

Tanzanian university libraries are increasingly utilizing ICT-driven services to enhance their core functions in research, instruction, and learning (Wema, 2018). This transition is being driven by the need to improve overall educational experience, operational effectiveness, and service delivery. The use of technologies such as Web 2.0 tools, artificial intelligence (AI), and other digital advancements is a crucial part of this shift. Academic libraries may now operate more efficiently and offer better services at a lesser cost thanks to technologies. However, despite their high awareness of ICTs, only 23% of Tanzanian librarians have used them (Bakiri *et al.*, 2023). The high degree of demand and readiness for adoption indicates a bright future for ICT integration in library services (Bakiri *et al.*, 2023). This



observation is also supported by Mosha and Ngulube (2024), who note that library staff members utilize Web 2.0 applications extensively for both personal and professional purposes. These applications allow for online communication, knowledge sharing, and the promotion of library services. According to Zhu *et al.*, (2023), these technologies are intended to enhance student skills, facilitate classroom modifications, and strengthen university libraries' competitive edge. The implementation of ICT-driven services in Tanzanian university libraries is progressing, although there are still challenges, such as a lack of resources and differences in technological readiness. These problems must be fixed in order to optimize the benefits of ICT in enhancing library services and encouraging academic success.

Despite these developments, Tanzanian university libraries nevertheless face persistent obstacles that limit their ability to properly utilize ICTs. The COVID-19 epidemic has significantly hastened this shift, requiring a shift to digital approaches in administrative, instructional, and learning operations (Khamis, *et al.*, 2021). Consequently, as observed by Kumar *et al.* (2024) that there has been a significant increase in the usage of ICTs for online lectures, discussions, meetings, and library services. These challenges include a shortage of technical expertise, a lack of ICT competencies among staff, a lack of funding, a lack of training for professional development, and low awareness among library users.

According to Aina (2010), technology emphasizes how telecommunication-based Internet resources may facilitate the amazing immediacy of data production, organization, manipulation, and retrieval from remote locations. ICT integration into library operations is still uneven at Tanzanian universities, despite the fact that technology has presented new potential for libraries to increase their reach and improve service delivery. Lack of significant investment in ICT infrastructure, an unstable energy supply, insufficient training for librarians and patrons on improving digital literacy, using information resources, professional development programs, data management, and user-centric ICT strategies are some of the issues that impact library services (Ahmed & Sheikh, 2021). Additionally, librarians are better equipped to provide accurate guidance in a changing information environment when they receive training on topics like copyright laws, open access, and information privacy. Basic library user skills include utilizing e-resources, accessing online catalogues, and effectively using research tools should be covered in training programs. Workshops can also address topics like conducting scholarly research using library databases or evaluating the credibility of content accessible online. By providing comprehensive training to both librarians and users, libraries can foster a better-informed community that maximizes the benefits of current resources.

1.1 Statement of the Problem

In line with the institution's vision and mission, university libraries are essential for meeting the academic and research demands of researchers, instructors, students, and the larger scholarly community (Sukums *et al.*, 2023). To ensure user happiness and meet educational and personal information needs, effective library services must cater to these users' ICT needs (Hamad *et al.*, 2023). Nevertheless, despite ICT developments, research done in Tanzania, such as that done by Ndibalema (2020) and Samzugi (2019), has found serious gaps in access to information resources. Underdeveloped ICT infrastructure, a lack of finance, and a lack of technical skills in university libraries are the main causes of these difficulties (Zondi *et al.*, 2024). As a result, their academic and research endeavors have been hampered by the general discontent caused by libraries' incapacity to satisfy the growing information needs of their patrons. In order to improve user satisfaction, interventions are required to close the gap between ICT innovations and their applications in Tanzanian university libraries. In order to improve the quality of library services in Tanzanian university libraries, this study intends to evaluate the ICT resources that are currently accessible and identify the barriers to ICT adoption.

1.2 Research Objectives

This study was guided by two specific objectives;

- i. To determine the barriers to ICT technology adoption in Tanzanian university libraries
- ii. To evaluate the availability of ICT facilities for improving library service offering.

II. LITERATURE REVIEW

2.1 Theoretical Review

To explain patron satisfaction with library services, several models have been proposed in previous studies. These models provide insight into user satisfaction with Library Service Provision (LSP) and include Web-Qual, Lib-Qual, E-S-Qual, Site-Qual, Dig-Qual, and ServQual, among others. They have been widely used in empirical research (Mbua, 2024; Thokoa *et al.*, 2022) to assess how effectively libraries meet the expectations and needs of their patrons. For this study, the ServQual model was selected as the theoretical foundation because of its strong record in assessing the quality of library services globally.

The ServQual model posits that service quality and hence user satisfaction depends on five core dimensions, often referred to as RATER: Reliability, Assurance, Tangibles, Empathy, and Responsiveness. Reliability refers to the ability of a service provider to perform promised services dependably and accurately. Responsiveness reflects the



willingness to help customers promptly. Assurance relates to the knowledge, courtesy, and trustworthiness of service staff. Empathy involves providing caring, individualized attention to users. Tangibles denote the appearance of facilities, equipment, and communication materials.

By applying this model, libraries can better understand user expectations, identify gaps in service quality, and plan interventions to improve overall satisfaction. Thus, the ServQual framework forms the theoretical basis for evaluating how ICT-related library services contribute to user satisfaction in Tanzanian university libraries.

2.2 Empirical Review

2.2.1 Barriers to ICT Technology Adoption in Tanzanian University Libraries

The main barrier to ICT adoption in university libraries is infrastructure limitations, according to empirical research conducted in Tanzania and other sub-Saharan African nations (Ndibalema 2020; Sejane 2017). They pointed out common issues that hinder the efficient implementation of library management systems, digital catalogs, and e-resources include unstable electricity, inadequate internet access, a shortage of working computers, and outdated equipment. For example, regular power outages and poor campus networks decrease the usage of online catalogs and postpone automating routine library activities, according to survey results from Tanzanian public universities. It is challenging for libraries to offer their patrons smooth ICT-based services because of these infrastructure deficiencies.

Financial and human resource limitations present another obstacle, where by many university libraries have little funding that hardly covers basic operations, leaving little left over for the purchase, upkeep, and modernization of ICT facilities (Siyao & Chishami, 2025). Librarians' and users' lack of ICT proficiency worsen this budgetary deficit. According to a number of studies, although some employees receive training on how to use integrated library management systems, many lack the sophisticated abilities needed to solve technical issues or provide users with efficient assistance (Okwu & Oporum, 2021). Furthermore, underutilization of the existing ICT tools frequently occurs when there are no technical support teams or ongoing professional development opportunities.

Organizational and policy difficulties are the subject of the third group of obstacles whereby according to empirical research conducted in Tanzanian institutions, some library staff members are resistance to change as opined by Mubofu (2025), also, lack of clear ICT adoption strategies, and inadequate managerial support are the main obstacles. According to studies, implementation attempts frequently stall in the absence of institutional policies that give priority to ICT integration, such as funding for technical maintenance, staff training, and licenses (Ntorukiri *et al.*, 2022). So the introduction of new technology is delayed by sluggish procurement processes and a lack of cooperation between university ICT departments and library management. These results imply that in addition to infrastructure and training investments, strong leadership, encouraging policies, and organizational commitment are necessary to overcome the obstacles to ICT adoption.

2.2.2 Availability of ICT Facilities for Improving Library Service Provision

The availability of ICT resources varies throughout Tanzanian universities, according to empirical evaluations of their libraries. Larger, well-funded universities often possess basic infrastructures such as computer laboratories, Online Public Access Catalogues (OPACs), and access to selected e-journals and databases, while many smaller institutions struggle to provide even a minimal level of ICT support for library operations (Kassim, 2024). According to studies, while some libraries have implemented Integrated Library Management Systems (ILMS), their implementation is occasionally lacking, leading to hybrid systems that continue to use manual procedures in addition to digital cataloguing. These differences have an impact on libraries' ability to provide its patrons with timely and effective services (Wema, 2018). The quality and usefulness of the ICT resources that are accessible have positive impact on how well they can improve services. For instance, employees and users can be discouraged from depending on computers that are old, have slow CPUs, or lack updated software. In a similar vein, having an institutional repository or OPAC does not guarantee better service unless the database is user-friendly and updated often (Mbughun *et al.*, 2023). While some students are aware of digital collections, their access is restricted by a lack of remote access to resources, a shortage of working workstations, and insufficient internet speed (Kaishe-Mulungu *et al.*, 2024)

Additionally, empirical research highlights the critical role that user engagement strategies and supportive infrastructure play in optimizing the advantages of ICT facilities. Higher user satisfaction and better use of digital services are typically reported by libraries that allow remote access to e-resources, keep dependable internet connections, offer dependable power backup, and regularly hold user training sessions (Ahmed & Buba, 2024). Conversely, even when the technology and software are available, libraries without such supportive measures have low ICT tool adoption (Wema, 2018). These results highlight the significance of assessing ICT availability holistically, taking into account not just the quantity of systems and devices in use but also their usability, accessibility, and the ability of employees and users to efficiently utilize them.



III. METHODOLOGY

3.1 Philosophical Paradigm

This study utilized a pragmatic philosophical paradigm because it emphasizes using a flexible and useful way to handle the research challenge. The use of several approaches and paradigms that are most effective in addressing the research issues is emphasized by pragmatics. The pragmatic approach it makes it easier to combine several research techniques, which enables scientists to more successfully tackle challenging issues. Instead than following strict paradigms, researchers that adopt a pragmatic approach can choose and combine qualitative and quantitative approaches according to their usefulness for certain research purposes (Paudel, 2024).

The relevance and applicability of research findings in a variety of sectors are improved by this flexibility. A more comprehensive approach to research design is promoted by methodological pragmatism, which pushes researchers to bridge the qualitative-quantitative gap (Foster, 2024). The difficulties brought on by the data revolution are addressed by this novel design, which makes it possible to analyze big qualitative datasets (Gillespie et al., 2024). Researchers can investigate answers in a creative and context-driven way thanks to pragmatism. This method is very appropriate for this study since it uses both qualitative and quantitative data to investigate various aspects of the research subject.

3.2 Research Approach

To align with the pragmatic paradigm, this study employed a quantitative and qualitative research approach, because they facilitate the collection of different kinds of data and generates great confidence in conclusions because the weakness of one method is complemented by the strength of other methods (Kothari, 2004). Data were collected exclusively through structured questionnaires and interviews. This approach facilitated the collection of numerical data, and narrative information providing a clear and objective understanding of the research problem. Utilizing quantitative and qualitative methods, the study ensured the reliability and validity of the findings, enabling robust analysis of the influence of ICT on library services. The use of questionnaires allowed for consistent data collection, minimizing subjectivity and enhancing the precision of the results (Kothari, 2004). This approach ensures a comprehensive and measurable insight into the research question.

3.3 Research Design

In line with the chosen research paradigm and approach, this study utilized a cross-sectional research design. This design allows for the collection of data at a single point in time, making it an efficient and cost-effective way to gather information from a large group of participants (Gupta *et al.*, 2020). A cross-sectional design is appropriate for capturing a snapshot of current perceptions and practices regarding ICT use in university libraries. It also aligns with the pragmatic focus on practical solutions, providing timely and relevant data that directly addresses the research questions.

3.4 The Study Area

The study was carried out in five selected Universities in Tanzania. These universities were the University of Dar-es-Salaam (UDSM), the University of Dodoma (UDOM) and St. Augustine University (SAUT) on Tanzania Mainland and the State University of Zanzibar (SUZA) and Zanzibar University (ZU) in Tanzania Islands. These universities were selected because basing on their age, they were considered potential to be able to provide the required data in terms of resources, experiences in services provision and infrastructure. In addition, the selected universities are located in island and mainland parts of the United Republic of Tanzania (URT). Also, the selected universities include private and public owned and provide services which differs in one way or another. Furthermore, the universities under the study are regulated by Tanzania Commission for Universities (TCU) thus they were thought to be appropriate for giving the required information for the study.

3.5 Study Population

The population of this study was members of academic staff, students, heads of higher learning institutions, Directors of Libraries, quality assurance officials, Heads of Departments in the libraries and library staff amounting to 64,988 (Table 1). In addition, 68 respondents were selected purposely because they were considered to provide reliable information related to the positions they held in their institutions. Thus, they were considered important for enriching the research findings. Thus they were chosen because they were considered as potential for providing relevant information and answers for the study. The unit of analysis was the university's academic staff and students. They were selected by using systematic random sampling techniques as explained by (Kothari, 2004)

**Table 1***Population of the Study*

Name of University		Number of Participants
UDSM	Staff	1,538
	Students	28,625
UDOM	Staff	867
	Students	16398
SAUT	Staff	434
	Students	10,957
SUZA	Staff	230
	Students	3,984
ZU	Staff	93
	Students	1,995
Total		64,988

3.6 Sampling Techniques

Respondents in this study were selected by using both probability and non-probability sampling techniques. Probability sampling techniques used were systematic random sampling, while non-probability sampling was purposive sampling techniques. Purposively technique was used to select five universes of this study.

3.7 Systematic Random Sampling:

This was used to obtain respondents of the population at regular intervals by selecting the 20th respondent on a list of the population.

3.8 Sample Size

The total population was 64,988 (see table 1). The sample size was obtained by using Sample Size Determination Table (Israel, 1992) which states that if the total population is between 50,000 to 100,000, the sample should be 397 respondents.

Table 2*The Sample Size of the Study*

	Precision level	Precision level	Precision level	Precision level
Population	±3%	±5%	±7%	±10%
15,000	1034	390	201	99
20,000	1053	392	204	100
25,000	1064	394	204	100
50,000	1087	397	204	100
100,000	1099	398	204	100
≥100,000	1111	400	204	100

Source: Israel (1992) Israel Sample Size Determination Table Sample size for ±3%, ±5%, ±7% and ±10% Precision Levels Where Confidence Level is 95% and P=.5

3.9 Sampling Frame

Table number 3 shows the sampling frame which indicate how many respondents were selected from each university. The respondents were selected by using a formula $\text{Number of Participants} / \text{total population} * \text{sample size} = \text{number of respondents in each university categories of staff and universities}$.

Table 3*Sampling Frame*

Name of University		Number of Participants
UDSM	Staff	9
	Students	175
UDOM	Staff	5
	Students	100
SAUT	Staff	3
	Students	67
SUZA	Staff	1
	Students	24
ZU	Staff	1
	Students	12
Total		397



3.10 Data Collection Methods and Instruments

The data for this study were collected through a structured questionnaire, which allowed for the comprehensive gathering of data from the respondents. Likert scale questions were used to ensure that all necessary information for analyzing the two specific objectives of the study was captured. To ensure the quality of the collected data, the questionnaire was pre-tested before being administered to the sample. The reliability of the instrument was confirmed with a coefficient of 0.72, indicating that the questionnaire was reliable for data collection. Furthermore, an interview guide was used to collect qualitative data. Quantitative data were analyzed using SPSS software, with results presented in tables highlighting frequencies and percentages. Qualitative data were subjected to content analysis and the findings were presented in narrative form.

IV. FINDINGS & DISCUSSION

4.1 To assess the Availability of ICT Facilities for Enhancing Library Service Provision

Determining the availability of ICT resources for improving the caliber of library service delivery was the study's first explicit goal. The respondents were asked to score the availability of ICT facilities in their university libraries on a four-point Likert scale: adequate, available but inadequate, not available, and unknown. The analysis's conclusions showed that participants used a four-point rating system: Available and Adequate, Available but Inadequate, Not Available, and Do Not Know to assess the availability of twelve electronic resources and facilities in their libraries. Additionally, participants were asked to name any additional ICT-related facilities that were not on the list. The findings were presented in Table 4.

Table 4

Availability of ICT Facilities (N = 397)

Variables	Available and adequate		Available but inadequate		Not available		Do not know	
	F	%	F	%	F	%	F	%
Internet facilities	171	43.0	143	36.1	45	9.7	38	11.2
Radio	58	14.6	73	18.5	126	31.8	139	35.1
Computers	148	37.4	141	35.5	41	10.3	67	16.8
Telephone	62	15.7	56	14.2	126	31.6	152	38.5
Fax machines	44	11.0	40	10.1	133	33.5	180	45.4
Tape recorders	46	11.6	59	14.8	119	29.9	172	43.4
Projectors	75	18.9	90	22.6	89	22.4	143	35.9
Video cassette	50	12.5	60	15.1	124	31.2	161	40.4
Printers	67	17.0	94	23.75	109	27.5	126	31.6
Scanner	69	17.4	87	21.9	103	26.0	136	34.4
Photocopier	78	19.6	90	22.6	93	23.4	135	34.0
T.V sets	59	14.8	67	16.8	126	31.6	145	36.6

As shown in Table 4, 79.1% and 72.9% of respondents, respectively, indicated that internet facilities were available and adequate, indicating that they were commonly accessible.

Some participants, however, pointed out that these features were still lacking, indicating that they could be improved to completely satisfy user needs. However, many respondents were either unaware of or unable to use technologies like radios (31.8%), fax machines (33.5%), and telephones (31.6%). Video cassettes and tape recorders were also cited as largely unknown or unavailable, underscoring their waning use in library services. Although 41.5% of participants reported that projectors were available, many still felt that they were insufficient (22.6%). As summed up in Table 4, the trend across different ICT facilities shows a combination of availability and inadequacy, indicating the need for improved resource allocation and usage.

Participants emphasized in their interview responses that having access to a variety of ICT resources has greatly improved user happiness and assisted in meeting their information demands. They pointed out that internet access is essential for gaining access to a wide range of digital resources, which facilitates effective study and education. The availability of telephones and radios guarantees that people can communicate efficiently and stay informed about current affairs.

From writing papers to accessing internet resources, computers are necessary for a variety of academic duties. Despite being seen as antiquated, tape recorders and fax machines continue to be used for some administrative and research tasks, satisfying users who are accustomed to these devices. By enabling multimedia presentations, projectors and television sets improve the educational process. These tools are especially helpful during seminars and group study sessions. In a similar vein, video cassette players are useful for accessing previously undigitized educational materials.



In order to create, digitize, and reproduce documents, printers, scanners, and photocopiers are essential, which makes both personal and academic work easier to do. By successfully satisfying a variety of user demands, these ICT resources help create a more inventive and inclusive library environment; which in turn raises user happiness.

4.2 Obstacles in Adaption ICTs Technology in Universities

The second goal was to identify the barriers to ICT adoption in higher education. The quality of library services as perceived by patrons is greatly impacted by the impediments that have been identified. The findings were presented in Table 5.

Table 5

Obstacles in Adaption ICTs Technology in University (N=397)

Variables	Most serious	Somehow serious	Less serious	Least serious	Not serious	Do not know
In adequate computers	133(33.5%)	85(21.5%)	41(10.3%)	29(7.3%)	68(17.2%)	40(10.1%)
Un computerized sections in library	82(20.6%)	90(22.8%)	90(22.8%)	42(10.5%)	60(15.1%)	62(15.7%)
Irregularities on power supply	102(25.8%)	71(17.8%)	66(16.6%)	44(11.2%)	59(14.8%)	55(13.8%)
Poor internet connectivity	86(21.7%)	84(21.1%)	73(18.5%)	47(11.8%)	56(14.2%)	50(12.7%)
Insufficient training support	79(19.8%)	74(18.7%)	71(18.1%)	48(12.0%)	60(15.1%)	65(16.3%)
Inadequate skills among library staff	76(19.1%)	73(18.3%)	58(14.6%)	45(11.4%)	79(19.8%)	66(16.65%)
Low support from university mgt on ICTs	79(19.4%)	61(15.3%)	61(15.5%)	44(11.0%)	67(16.8%)	88(22.2%)
Recycling outdated materials on e-learning forum	75(18.9%)	78(19.6%)	57(14.4%)	58(14.6%)	61(15.3%)	68(17.2%)
Poor ICT infrastructure	104(26.2%)	83(20.9%)	55(13.8%)	39(9.9%)	52(13.1%)	64(16.1%)
Student misuse of ICT infrastructure	85(21.3%)	71(17.8%)	61(15.5%)	43(10.85%)	75(18.9%)	62(15.7%)
Poor choosing appropriate software solution	82(20.6%)	70(17.6%)	61(15.5%)	42(10.5%)	66(16.6%)	80(20.2%)
Poor ACs in computers laboratories	80(20.2%)	146(36.8%)	31(7.7%)	22(5.6%)	66(16.6%)	52(13.1%)

According to 47.1% of respondents, users' access to dependable technology is directly impacted by the inadequate ICT infrastructure, which restricts their usage of library resources. According to 55% of respondents, users' capacity to use digital services is limited when they lack access to sufficient computers, which causes them to become frustrated and less satisfied. According to 57% of respondents, inadequate air conditioning in computer laboratories has a detrimental impact on the overall user experience by affecting not only user comfort but also the longevity and functionality of ICT equipment (Hamad *et al.*, 2023).

42.8% of respondents said that poor internet connectivity is a severe problem since it interferes with access to online resources, making it hard for users to efficiently do research or access learning materials. The effectiveness of ICT services is further reduced by moderate issues including inconsistent power supply (43.6%), inadequate training support (38.5%), and low staff skills (37.4%), which prevent users from making the most of the resources that are available. Poor software selections (38.2%) and student ICT usage (39.1%) point to management and policy flaws that undermine user happiness and confidence. Furthermore, systemic problems that hinder the expansion and modernization of ICT services are highlighted by inadequate support from university administration (34.7%) and recycling of outmoded resources (38.5%).

Several obstacles to the successful integration of ICT technology in higher education were identified by interviewees. When ICT infrastructure is misused by students, it wears down and becomes less dependable and accessible for usage in the classroom. Students become frustrated and less productive when they cannot access essential digital materials due to inadequate PCs. Users' academic performance suffers when they are unable to access online learning resources and do research due to poor internet connectivity.

It was also discovered that staff and students lack the necessary training and support to effectively utilize the ICT resources at their disposal, which reduces the potential advantages these technologies could provide. The problems are made worse by the university administration's lack of support for ICT-related concerns, which also prevents investment and advancements in ICT infrastructure. When taken as a whole, these issues limit patrons' capacity to utilize library services efficiently and lower patron satisfaction levels.

**Table 6***Obstacles in Adaption ICTs Technology in University (N=397)*

Variables	Most serious	Somehow serious	Less serious	Least serious	Not serious	Do not know
In adequate computers	133(33.5%)	85(21.5%)	41(10.3%)	29(7.3%)	68(17.2%)	40(10.1%)
Un computerized sections in library	82(20.6%)	90(22.8%)	90(22.8%)	42(10.5%)	60(15.1%)	62(15.7%)
Irregularities on power supply	102(25.8%)	71(17.8%)	66(16.6%)	44(11.2%)	59(14.8%)	55(13.8%)
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Poor ACs in computers laboratories	80(20.2%)	146(36.8%)	31(7.7%)	22(5.6%)	66(16.6%)	52(13.1%)

4.2 Discussion

Even though there are still some classic ICT facilities in use, their presence is justified by their accessibility. Because of familiarity, restricted access to newer gadgets, or personal preference, it was thought that some users might rely on this older technology. In order to serve a wide range of user demands, libraries strive to be inclusive. The results showed a significant degree of ambiguity among participants on the accessibility of particular resources, suggesting a lack of knowledge or communication regarding ICT technologies in libraries. This finding is in line with earlier studies that highlighted the necessity of enhancing ICT infrastructure to better support learning and library services (Bachynska *et al.*, 2024 and Mubofu, 2023). The results point to important areas for improving the administration and availability of ICT resources in university libraries.

By meeting a variety of user demands and enhancing user happiness, traditional ICTs like fax machines, tape recorders, projectors, video cassettes, printers, scanners, photocopiers, and TV sets continue to be used in libraries. For users who prefer or depend on these tools because of familiarity, accessibility concerns, or particular research needs, they remain important even when they appear to be outdated. For instance, although projectors and TV sets improve learning experiences through multimedia presentations (Nwosu, *et al.*, 2024), fax machines and tape recorders are necessary for historical research or specific administrative chores (Bachynska *et al.*, 2024; Mubofu, 2023).

By meeting a variety of user demands and enhancing user happiness, traditional ICTs like fax machines, tape recorders, projectors, video cassettes, printers, scanners, photocopiers, and TV sets continue to be used in libraries. For users who prefer or depend on these tools because of familiarity, accessibility concerns, or particular research needs, they remain important even when they appear to be outdated. Projectors and TV sets, for example, improve learning experiences through multimedia presentations whereas fax machines and tape recorders are necessary for historical research or specific administrative chores (Bachynska *et al.*, 2024; Mubofu, 2023). In order to efficiently create and reproduce documents, printers, scanners, and photocopiers are essential tools for both personal and academic duties (Breeding, 2023). According to recent research highlighting the significance of ICT infrastructure in enhancing library services and user satisfaction, libraries' dedication to inclusivity and resourcefulness is demonstrated by their maintenance of a mix of old and new technology (Bachynska *et al.*, 2024; Mubofu & Chaula, 2023).

The impact of ICT resources in university libraries has been shown in recent studies. For instance, Breeding (2023) discovered that by facilitating easy access to digital knowledge resources, sophisticated ICT facilities like fast internet and contemporary computer facilities significantly increase user happiness. Furthermore, it was noted by Idiegbeyan-ose *et al.* (2017) that the incorporation of automation and artificial intelligence (AI) into library services not only increases efficiency but also satisfies changing customer expectations, which raises overall satisfaction. These results highlight how crucial ICT is in determining the caliber of library services and how crucial it is to continuously invest in and update ICT infrastructure in order to properly satisfy user needs.

4.2.1 Obstacles in adaption ICTs technology in university

These issues, together with some respondents' ignorance of the difficulties, highlight a lack of communication and transparency that impedes attempts to enhance library services. Samzug (2019) in general, these challenges show how crucial dependable, modern, and easily accessible ICT infrastructure is to determining user pleasure. Improving user experiences requires addressing important concerns like inadequate infrastructure, poor internet access, and



unfavorable ambient conditions. To create a library environment that is more responsive and user-centered, it is imperative to improve staff abilities, provide training support, and strengthen management commitment. Universities can greatly improve user satisfaction and encourage greater use of library services and resources by addressing these problems.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study, specifically, aimed to assess the availability of ICT facilities and identify obstacles to ICT adaptation in Tanzanian university libraries, with a focus on enhancing the quality of library services. The findings revealed a mix of positive and negative aspects regarding the state of ICT infrastructure in these libraries. While some essential facilities like internet access were deemed adequate by a significant portion of respondents, critical issues such as inadequate computer systems, irregular power supply, poor internet connectivity, and environmental challenges like inadequate air conditioning in computer labs emerged as major obstacles. These issues have a direct impact on user satisfaction, limiting the effectiveness of library services and hindering students, researchers, and faculty from fully benefiting from available resources. The study also highlighted gaps in staff skills, management support, and the proper use of ICT facilities, further complicating the process of integrating technology into library services. These barriers underline the need for continuous improvements in both infrastructure and human resource development to ensure that ICTs contribute effectively to library services and user satisfaction.

5.2 Recommendations

Based on the findings and the conclusions provided the study recommends the following to university library stakeholders. Improve internet connectivity in university library by strengthening physical infrastructure and remote access mechanism and enhance users' engagement through mobile access, online chats and SMS alerts. Provide regular ICT training for library staff and general users by offering continuous professional development through seminars, workshops, online modules and orientation to new users and staff. Increasing management involvement in ICT by prioritize it in integrating with library services in acquiring, organizing and dissemination the learning resources to users, support the adoption of automated system that is e-lending and online cataloging and circulation. Regular update systems by modernizing software and hardware to ensure efficiency, security and reliability, integrating emerging technologies and automate library processes, expand support for digital resources like e-books, databases, online account and open access. Develop clear policies to govern proper use of library resources by establishing specific policy on ICT resources misuse aligned with international and national legal framework like Crime Act, 2025 and intellectual property rights.

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Evaluation of ICT resources and barriers to adoption in improving library service delivery for higher user satisfaction in Tanzania

Kaishe-Mulungu, Dativa Donati^{1*}
Lwehabura, Mugyabuso Julius Festo²
Consolata Angello³

^{1*}ddkaishe@mzumbe.ac.tz

²lwehabura@sua.ac.tz

³angelo@sua.ac.tz

¹Mzumbe University (MU), ^{2,3}Sokoine University of Agriculture (SUA), ^{1,2,3}Tanzania

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ABSTRACT

It is impossible to understate the use of Information Communication and Technologies (ICTs) resources and the challenges they present in university libraries in underdeveloped countries like Tanzania. Thus, this study investigated the quality of library services in Tanzanian universities, focusing on ICT facilities and removing adoption hurdles. The ServQual framework forms the theoretical basis for evaluating how ICT-related library services contribute to user satisfaction in Tanzanian university libraries. This study was guided by two specific objectives: (1) to determine the barriers to ICT technology adoption in Tanzanian university libraries, and (2) to evaluate the availability of ICT facilities for improving library service offering. The study employed the cross-sectional research design, the quantitative and qualitative research approach, and the pragmatic philosophical framework. A systematic questionnaire and interview were used to gather the data, and Statistical Package for Social Sciences (SPSS) was used for both descriptive and content analysis of the qualitative data. The findings indicated that despite the presence of computers, projectors, photocopiers, and internet connectivity, the quality of these fundamental ICT resources was inconsistent. Although a sizable percentage of respondents said that internet facilities were sufficient, there were several substantial obstacles to using ICT. These difficulties included subpar computer systems, erratic power supplies, inadequate ICT infrastructure, and student abuse of ICT resources. These challenges have a detrimental effect on patron satisfaction and severely impair the caliber of library services. The study comes to the conclusion that although certain ICT facilities are there, their efficient usage is restricted by deficiencies in infrastructure, resource sufficiency, and management. Resolving these issues is essential to enhancing customer happiness and library service delivery. Enhancing computer facilities, enhancing internet connectivity, guaranteeing a steady power supply, offering staff training, boosting management support for ICT efforts, and putting procedures in place that stop ICT resource exploitation are some of the recommendations made by the study.

Keywords: ICT Facilities, ICT Infrastructure, Library Service Provision, Obstacles to ICT Adoption, University Libraries, User Satisfaction

I. INTRODUCTION

All across the world, academic libraries are gradually switching from manual to automated methods. This change aims to balance the evolving needs of their clients with the developments in information and communication technologies (ICTs) (Akinola, 2022; Emasealu, 2019). The development of ICT has radically changed how university libraries operate, increasing the caliber and volume of services they provide. According to Okonedo *et al.* (2014), these changes are most noticeable in the fields of mass storage, computing, and communication technologies. According to the authors, continuous advancements in these domains have significantly changed the strategies used by university libraries for information collection, preservation, retrieval, and distribution. Similarly, Wema (2018) highlights the importance of online services, e-learning platforms, and electronic databases as critical technological innovations that are changing library services.

Tanzanian university libraries are increasingly utilizing ICT-driven services to enhance their core functions in research, instruction, and learning (Wema, 2018). This transition is being driven by the need to improve overall educational experience, operational effectiveness, and service delivery. The use of technologies such as Web 2.0 tools, artificial intelligence (AI), and other digital advancements is a crucial part of this shift. Academic libraries may now operate more efficiently and offer better services at a lesser cost thanks to technologies. However, despite their high awareness of ICTs, only 23% of Tanzanian librarians have used them (Bakiri *et al.*, 2023). The high degree of demand and readiness for adoption indicates a bright future for ICT integration in library services (Bakiri *et al.*, 2023). This



observation is also supported by Mosha and Ngulube (2024), who note that library staff members utilize Web 2.0 applications extensively for both personal and professional purposes. These applications allow for online communication, knowledge sharing, and the promotion of library services. According to Zhu *et al.*, (2023), these technologies are intended to enhance student skills, facilitate classroom modifications, and strengthen university libraries' competitive edge. The implementation of ICT-driven services in Tanzanian university libraries is progressing, although there are still challenges, such as a lack of resources and differences in technological readiness. These problems must be fixed in order to optimize the benefits of ICT in enhancing library services and encouraging academic success.

Despite these developments, Tanzanian university libraries nevertheless face persistent obstacles that limit their ability to properly utilize ICTs. The COVID-19 epidemic has significantly hastened this shift, requiring a shift to digital approaches in administrative, instructional, and learning operations (Khamis, *et al.*, 2021). Consequently, as observed by Kumar *et al.* (2024) that there has been a significant increase in the usage of ICTs for online lectures, discussions, meetings, and library services. These challenges include a shortage of technical expertise, a lack of ICT competencies among staff, a lack of funding, a lack of training for professional development, and low awareness among library users.

According to Aina (2010), technology emphasizes how telecommunication-based Internet resources may facilitate the amazing immediacy of data production, organization, manipulation, and retrieval from remote locations. ICT integration into library operations is still uneven at Tanzanian universities, despite the fact that technology has presented new potential for libraries to increase their reach and improve service delivery. Lack of significant investment in ICT infrastructure, an unstable energy supply, insufficient training for librarians and patrons on improving digital literacy, using information resources, professional development programs, data management, and user-centric ICT strategies are some of the issues that impact library services (Ahmed & Sheikh, 2021). Additionally, librarians are better equipped to provide accurate guidance in a changing information environment when they receive training on topics like copyright laws, open access, and information privacy. Basic library user skills include utilizing e-resources, accessing online catalogues, and effectively using research tools should be covered in training programs. Workshops can also address topics like conducting scholarly research using library databases or evaluating the credibility of content accessible online. By providing comprehensive training to both librarians and users, libraries can foster a better-informed community that maximizes the benefits of current resources.

1.1 Statement of the Problem

In line with the institution's vision and mission, university libraries are essential for meeting the academic and research demands of researchers, instructors, students, and the larger scholarly community (Sukums *et al.*, 2023). To ensure user happiness and meet educational and personal information needs, effective library services must cater to these users' ICT needs (Hamad *et al.*, 2023). Nevertheless, despite ICT developments, research done in Tanzania, such as that done by Ndibalema (2020) and Samzugi (2019), has found serious gaps in access to information resources. Underdeveloped ICT infrastructure, a lack of finance, and a lack of technical skills in university libraries are the main causes of these difficulties (Zondi *et al.*, 2024). As a result, their academic and research endeavors have been hampered by the general discontent caused by libraries' incapacity to satisfy the growing information needs of their patrons. In order to improve user satisfaction, interventions are required to close the gap between ICT innovations and their applications in Tanzanian university libraries. In order to improve the quality of library services in Tanzanian university libraries, this study intends to evaluate the ICT resources that are currently accessible and identify the barriers to ICT adoption.

1.2 Research Objectives

This study was guided by two specific objectives;

- i. To determine the barriers to ICT technology adoption in Tanzanian university libraries
- ii. To evaluate the availability of ICT facilities for improving library service offering.

II. LITERATURE REVIEW

2.1 Theoretical Review

To explain patron satisfaction with library services, several models have been proposed in previous studies. These models provide insight into user satisfaction with Library Service Provision (LSP) and include Web-Qual, Lib-Qual, E-S-Qual, Site-Qual, Dig-Qual, and ServQual, among others. They have been widely used in empirical research (Mbua, 2024; Thokoa *et al.*, 2022) to assess how effectively libraries meet the expectations and needs of their patrons. For this study, the ServQual model was selected as the theoretical foundation because of its strong record in assessing the quality of library services globally.

The ServQual model posits that service quality and hence user satisfaction depends on five core dimensions, often referred to as RATER: Reliability, Assurance, Tangibles, Empathy, and Responsiveness. Reliability refers to the ability of a service provider to perform promised services dependably and accurately. Responsiveness reflects the



willingness to help customers promptly. Assurance relates to the knowledge, courtesy, and trustworthiness of service staff. Empathy involves providing caring, individualized attention to users. Tangibles denote the appearance of facilities, equipment, and communication materials.

By applying this model, libraries can better understand user expectations, identify gaps in service quality, and plan interventions to improve overall satisfaction. Thus, the ServQual framework forms the theoretical basis for evaluating how ICT-related library services contribute to user satisfaction in Tanzanian university libraries.

2.2 Empirical Review

2.2.1 Barriers to ICT Technology Adoption in Tanzanian University Libraries

The main barrier to ICT adoption in university libraries is infrastructure limitations, according to empirical research conducted in Tanzania and other sub-Saharan African nations (Ndibalema 2020; Sejane 2017). They pointed out common issues that hinder the efficient implementation of library management systems, digital catalogs, and e-resources include unstable electricity, inadequate internet access, a shortage of working computers, and outdated equipment. For example, regular power outages and poor campus networks decrease the usage of online catalogs and postpone automating routine library activities, according to survey results from Tanzanian public universities. It is challenging for libraries to offer their patrons smooth ICT-based services because of these infrastructure deficiencies.

Financial and human resource limitations present another obstacle, where by many university libraries have little funding that hardly covers basic operations, leaving little left over for the purchase, upkeep, and modernization of ICT facilities (Siyao & Chishami, 2025). Librarians' and users' lack of ICT proficiency worsen this budgetary deficit. According to a number of studies, although some employees receive training on how to use integrated library management systems, many lack the sophisticated abilities needed to solve technical issues or provide users with efficient assistance (Okwu & Oporum, 2021). Furthermore, underutilization of the existing ICT tools frequently occurs when there are no technical support teams or ongoing professional development opportunities.

Organizational and policy difficulties are the subject of the third group of obstacles whereby according to empirical research conducted in Tanzanian institutions, some library staff members are resistance to change as opined by Mubofu (2025), also, lack of clear ICT adoption strategies, and inadequate managerial support are the main obstacles. According to studies, implementation attempts frequently stall in the absence of institutional policies that give priority to ICT integration, such as funding for technical maintenance, staff training, and licenses (Ntorukiri *et al.*, 2022). So the introduction of new technology is delayed by sluggish procurement processes and a lack of cooperation between university ICT departments and library management. These results imply that in addition to infrastructure and training investments, strong leadership, encouraging policies, and organizational commitment are necessary to overcome the obstacles to ICT adoption.

2.2.2 Availability of ICT Facilities for Improving Library Service Provision

The availability of ICT resources varies throughout Tanzanian universities, according to empirical evaluations of their libraries. Larger, well-funded universities often possess basic infrastructures such as computer laboratories, Online Public Access Catalogues (OPACs), and access to selected e-journals and databases, while many smaller institutions struggle to provide even a minimal level of ICT support for library operations (Kassim, 2024). According to studies, while some libraries have implemented Integrated Library Management Systems (ILMS), their implementation is occasionally lacking, leading to hybrid systems that continue to use manual procedures in addition to digital cataloguing. These differences have an impact on libraries' ability to provide its patrons with timely and effective services (Wema, 2018). The quality and usefulness of the ICT resources that are accessible have positive impact on how well they can improve services. For instance, employees and users can be discouraged from depending on computers that are old, have slow CPUs, or lack updated software. In a similar vein, having an institutional repository or OPAC does not guarantee better service unless the database is user-friendly and updated often (Mbughun *et al.*, 2023). While some students are aware of digital collections, their access is restricted by a lack of remote access to resources, a shortage of working workstations, and insufficient internet speed (Kaishe-Mulungu *et al.*, 2024)

Additionally, empirical research highlights the critical role that user engagement strategies and supportive infrastructure play in optimizing the advantages of ICT facilities. Higher user satisfaction and better use of digital services are typically reported by libraries that allow remote access to e-resources, keep dependable internet connections, offer dependable power backup, and regularly hold user training sessions (Ahmed & Buba, 2024). Conversely, even when the technology and software are available, libraries without such supportive measures have low ICT tool adoption (Wema, 2018). These results highlight the significance of assessing ICT availability holistically, taking into account not just the quantity of systems and devices in use but also their usability, accessibility, and the ability of employees and users to efficiently utilize them.



III. METHODOLOGY

3.1 Philosophical Paradigm

This study utilized a pragmatic philosophical paradigm because it emphasizes using a flexible and useful way to handle the research challenge. The use of several approaches and paradigms that are most effective in addressing the research issues is emphasized by pragmatics. The pragmatic approach it makes it easier to combine several research techniques, which enables scientists to more successfully tackle challenging issues. Instead than following strict paradigms, researchers that adopt a pragmatic approach can choose and combine qualitative and quantitative approaches according to their usefulness for certain research purposes (Paudel, 2024).

The relevance and applicability of research findings in a variety of sectors are improved by this flexibility. A more comprehensive approach to research design is promoted by methodological pragmatism, which pushes researchers to bridge the qualitative-quantitative gap (Foster, 2024). The difficulties brought on by the data revolution are addressed by this novel design, which makes it possible to analyze big qualitative datasets (Gillespie et al., 2024). Researchers can investigate answers in a creative and context-driven way thanks to pragmatism. This method is very appropriate for this study since it uses both qualitative and quantitative data to investigate various aspects of the research subject.

3.2 Research Approach

To align with the pragmatic paradigm, this study employed a quantitative and qualitative research approach, because they facilitate the collection of different kinds of data and generates great confidence in conclusions because the weakness of one method is complemented by the strength of other methods (Kothari, 2004). Data were collected exclusively through structured questionnaires and interviews. This approach facilitated the collection of numerical data, and narrative information providing a clear and objective understanding of the research problem. Utilizing quantitative and qualitative methods, the study ensured the reliability and validity of the findings, enabling robust analysis of the influence of ICT on library services. The use of questionnaires allowed for consistent data collection, minimizing subjectivity and enhancing the precision of the results (Kothari, 2004). This approach ensures a comprehensive and measurable insight into the research question.

3.3 Research Design

In line with the chosen research paradigm and approach, this study utilized a cross-sectional research design. This design allows for the collection of data at a single point in time, making it an efficient and cost-effective way to gather information from a large group of participants (Gupta *et al.*, 2020). A cross-sectional design is appropriate for capturing a snapshot of current perceptions and practices regarding ICT use in university libraries. It also aligns with the pragmatic focus on practical solutions, providing timely and relevant data that directly addresses the research questions.

3.4 The Study Area

The study was carried out in five selected Universities in Tanzania. These universities were the University of Dar-es-Salaam (UDSM), the University of Dodoma (UDOM) and St. Augustine University (SAUT) on Tanzania Mainland and the State University of Zanzibar (SUZA) and Zanzibar University (ZU) in Tanzania Islands. These universities were selected because basing on their age, they were considered potential to be able to provide the required data in terms of resources, experiences in services provision and infrastructure. In addition, the selected universities are located in island and mainland parts of the United Republic of Tanzania (URT). Also, the selected universities include private and public owned and provide services which differs in one way or another. Furthermore, the universities under the study are regulated by Tanzania Commission for Universities (TCU) thus they were thought to be appropriate for giving the required information for the study.

3.5 Study Population

The population of this study was members of academic staff, students, heads of higher learning institutions, Directors of Libraries, quality assurance officials, Heads of Departments in the libraries and library staff amounting to 64,988 (Table 1). In addition, 68 respondents were selected purposely because they were considered to provide reliable information related to the positions they held in their institutions. Thus, they were considered important for enriching the research findings. Thus they were chosen because they were considered as potential for providing relevant information and answers for the study. The unit of analysis was the university's academic staff and students. They were selected by using systematic random sampling techniques as explained by (Kothari, 2004)

**Table 1***Population of the Study*

Name of University		Number of Participants
UDSM	Staff	1,538
	Students	28,625
UDOM	Staff	867
	Students	16398
SAUT	Staff	434
	Students	10,957
SUZA	Staff	230
	Students	3,984
ZU	Staff	93
	Students	1,995
Total		64,988

3.6 Sampling Techniques

Respondents in this study were selected by using both probability and non-probability sampling techniques. Probability sampling techniques used were systematic random sampling, while non-probability sampling was purposive sampling techniques. Purposively technique was used to select five universes of this study.

3.7 Systematic Random Sampling:

This was used to obtain respondents of the population at regular intervals by selecting the 20th respondent on a list of the population.

3.8 Sample Size

The total population was 64,988 (see table 1). The sample size was obtained by using Sample Size Determination Table (Israel, 1992) which states that if the total population is between 50,000 to 100,000, the sample should be 397 respondents.

Table 2*The Sample Size of the Study*

	Precision level	Precision level	Precision level	Precision level
Population	±3%	±5%	±7%	±10%
15,000	1034	390	201	99
20,000	1053	392	204	100
25,000	1064	394	204	100
50,000	1087	397	204	100
100,000	1099	398	204	100
≥100,000	1111	400	204	100

Source: Israel (1992) Israel Sample Size Determination Table Sample size for ±3%, ±5%, ±7% and ±10% Precision Levels Where Confidence Level is 95% and P=.5

3.9 Sampling Frame

Table number 3 shows the sampling frame which indicate how many respondents were selected from each university. The respondents were selected by using a formula $\text{Number of Participants} / \text{total population} * \text{sample size} = \text{number of respondents in each university categories of staff and universities}$.

Table 3*Sampling Frame*

Name of University		Number of Participants
UDSM	Staff	9
	Students	175
UDOM	Staff	5
	Students	100
SAUT	Staff	3
	Students	67
SUZA	Staff	1
	Students	24
ZU	Staff	1
	Students	12
Total		397



3.10 Data Collection Methods and Instruments

The data for this study were collected through a structured questionnaire, which allowed for the comprehensive gathering of data from the respondents. Likert scale questions were used to ensure that all necessary information for analyzing the two specific objectives of the study was captured. To ensure the quality of the collected data, the questionnaire was pre-tested before being administered to the sample. The reliability of the instrument was confirmed with a coefficient of 0.72, indicating that the questionnaire was reliable for data collection. Furthermore, an interview guide was used to collect qualitative data. Quantitative data were analyzed using SPSS software, with results presented in tables highlighting frequencies and percentages. Qualitative data were subjected to content analysis and the findings were presented in narrative form.

IV. FINDINGS & DISCUSSION

4.1 To assess the Availability of ICT Facilities for Enhancing Library Service Provision

Determining the availability of ICT resources for improving the caliber of library service delivery was the study's first explicit goal. The respondents were asked to score the availability of ICT facilities in their university libraries on a four-point Likert scale: adequate, available but inadequate, not available, and unknown. The analysis's conclusions showed that participants used a four-point rating system: Available and Adequate, Available but Inadequate, Not Available, and Do Not Know to assess the availability of twelve electronic resources and facilities in their libraries. Additionally, participants were asked to name any additional ICT-related facilities that were not on the list. The findings were presented in Table 4.

Table 4

Availability of ICT Facilities (N = 397)

Variables	Available and adequate		Available but inadequate		Not available		Do not know	
	F	%	F	%	F	%	F	%
Internet facilities	171	43.0	143	36.1	45	9.7	38	11.2
Radio	58	14.6	73	18.5	126	31.8	139	35.1
Computers	148	37.4	141	35.5	41	10.3	67	16.8
Telephone	62	15.7	56	14.2	126	31.6	152	38.5
Fax machines	44	11.0	40	10.1	133	33.5	180	45.4
Tape recorders	46	11.6	59	14.8	119	29.9	172	43.4
Projectors	75	18.9	90	22.6	89	22.4	143	35.9
Video cassette	50	12.5	60	15.1	124	31.2	161	40.4
Printers	67	17.0	94	23.75	109	27.5	126	31.6
Scanner	69	17.4	87	21.9	103	26.0	136	34.4
Photocopier	78	19.6	90	22.6	93	23.4	135	34.0
T.V sets	59	14.8	67	16.8	126	31.6	145	36.6

As shown in Table 4, 79.1% and 72.9% of respondents, respectively, indicated that internet facilities were available and adequate, indicating that they were commonly accessible.

Some participants, however, pointed out that these features were still lacking, indicating that they could be improved to completely satisfy user needs. However, many respondents were either unaware of or unable to use technologies like radios (31.8%), fax machines (33.5%), and telephones (31.6%). Video cassettes and tape recorders were also cited as largely unknown or unavailable, underscoring their waning use in library services. Although 41.5% of participants reported that projectors were available, many still felt that they were insufficient (22.6%). As summed up in Table 4, the trend across different ICT facilities shows a combination of availability and inadequacy, indicating the need for improved resource allocation and usage.

Participants emphasized in their interview responses that having access to a variety of ICT resources has greatly improved user happiness and assisted in meeting their information demands. They pointed out that internet access is essential for gaining access to a wide range of digital resources, which facilitates effective study and education. The availability of telephones and radios guarantees that people can communicate efficiently and stay informed about current affairs.

From writing papers to accessing internet resources, computers are necessary for a variety of academic duties. Despite being seen as antiquated, tape recorders and fax machines continue to be used for some administrative and research tasks, satisfying users who are accustomed to these devices. By enabling multimedia presentations, projectors and television sets improve the educational process. These tools are especially helpful during seminars and group study sessions. In a similar vein, video cassette players are useful for accessing previously undigitized educational materials.



In order to create, digitize, and reproduce documents, printers, scanners, and photocopiers are essential, which makes both personal and academic work easier to do. By successfully satisfying a variety of user demands, these ICT resources help create a more inventive and inclusive library environment; which in turn raises user happiness.

4.2 Obstacles in Adaption ICTs Technology in Universities

The second goal was to identify the barriers to ICT adoption in higher education. The quality of library services as perceived by patrons is greatly impacted by the impediments that have been identified. The findings were presented in Table 5.

Table 5

Obstacles in Adaption ICTs Technology in University (N=397)

Variables	Most serious	Somehow serious	Less serious	Least serious	Not serious	Do not know
In adequate computers	133(33.5%)	85(21.5%)	41(10.3%)	29(7.3%)	68(17.2%)	40(10.1%)
Un computerized sections in library	82(20.6%)	90(22.8%)	90(22.8%)	42(10.5%)	60(15.1%)	62(15.7%)
Irregularities on power supply	102(25.8%)	71(17.8%)	66(16.6%)	44(11.2%)	59(14.8%)	55(13.8%)
Poor internet connectivity	86(21.7%)	84(21.1%)	73(18.5%)	47(11.8%)	56(14.2%)	50(12.7%)
Insufficient training support	79(19.8%)	74(18.7%)	71(18.1%)	48(12.0%)	60(15.1%)	65(16.3%)
Inadequate skills among library staff	76(19.1%)	73(18.3%)	58(14.6%)	45(11.4%)	79(19.8%)	66(16.65%)
Low support from university mgt on ICTs	79(19.4%)	61(15.3%)	61(15.5%)	44(11.0%)	67(16.8%)	88(22.2%)
Recycling outdated materials on e-learning forum	75(18.9%)	78(19.6%)	57(14.4%)	58(14.6%)	61(15.3%)	68(17.2%)
Poor ICT infrastructure	104(26.2%)	83(20.9%)	55(13.8%)	39(9.9%)	52(13.1%)	64(16.1%)
Student misuse of ICT infrastructure	85(21.3%)	71(17.8%)	61(15.5%)	43(10.85%)	75(18.9%)	62(15.7%)
Poor choosing appropriate software solution	82(20.6%)	70(17.6%)	61(15.5%)	42(10.5%)	66(16.6%)	80(20.2%)
Poor ACs in computers laboratories	80(20.2%)	146(36.8%)	31(7.7%)	22(5.6%)	66(16.6%)	52(13.1%)

According to 47.1% of respondents, users' access to dependable technology is directly impacted by the inadequate ICT infrastructure, which restricts their usage of library resources. According to 55% of respondents, users' capacity to use digital services is limited when they lack access to sufficient computers, which causes them to become frustrated and less satisfied. According to 57% of respondents, inadequate air conditioning in computer laboratories has a detrimental impact on the overall user experience by affecting not only user comfort but also the longevity and functionality of ICT equipment (Hamad *et al.*, 2023).

42.8% of respondents said that poor internet connectivity is a severe problem since it interferes with access to online resources, making it hard for users to efficiently do research or access learning materials. The effectiveness of ICT services is further reduced by moderate issues including inconsistent power supply (43.6%), inadequate training support (38.5%), and low staff skills (37.4%), which prevent users from making the most of the resources that are available. Poor software selections (38.2%) and student ICT usage (39.1%) point to management and policy flaws that undermine user happiness and confidence. Furthermore, systemic problems that hinder the expansion and modernization of ICT services are highlighted by inadequate support from university administration (34.7%) and recycling of outmoded resources (38.5%).

Several obstacles to the successful integration of ICT technology in higher education were identified by interviewees. When ICT infrastructure is misused by students, it wears down and becomes less dependable and accessible for usage in the classroom. Students become frustrated and less productive when they cannot access essential digital materials due to inadequate PCs. Users' academic performance suffers when they are unable to access online learning resources and do research due to poor internet connectivity.

It was also discovered that staff and students lack the necessary training and support to effectively utilize the ICT resources at their disposal, which reduces the potential advantages these technologies could provide. The problems are made worse by the university administration's lack of support for ICT-related concerns, which also prevents investment and advancements in ICT infrastructure. When taken as a whole, these issues limit patrons' capacity to utilize library services efficiently and lower patron satisfaction levels.

**Table 6***Obstacles in Adaption ICTs Technology in University (N=397)*

Variables	Most serious	Somehow serious	Less serious	Least serious	Not serious	Do not know
In adequate computers	133(33.5%)	85(21.5%)	41(10.3%)	29(7.3%)	68(17.2%)	40(10.1%)
Un computerized sections in library	82(20.6%)	90(22.8%)	90(22.8%)	42(10.5%)	60(15.1%)	62(15.7%)
Irregularities on power supply	102(25.8%)	71(17.8%)	66(16.6%)	44(11.2%)	59(14.8%)	55(13.8%)
Poor internet connectivity	86(21.7%)	84(21.1%)	73(18.5%)	47(11.8%)	56(14.2%)	50(12.7%)
Insufficient training support	79(19.8%)	74(18.7%)	71(18.1%)	48(12.0%)	60(15.1%)	65(16.3%)
Inadequate skills among library staff	76(19.1%)	73(18.3%)	58(14.6%)	45(11.4%)	79(19.8%)	66(16.65%)
Low support from university mgt on ICTs	79(19.4%)	61(15.3%)	61(15.5%)	44(11.0%)	67(16.8%)	88(22.2%)
Recycling outdated materials on e-learning forum	75(18.9%)	78(19.6%)	57(14.4%)	58(14.6%)	61(15.3%)	68(17.2%)
Poor ICT infrastructure	104(26.2%)	83(20.9%)	55(13.8%)	39(9.9%)	52(13.1%)	64(16.1%)
Student misuse of ICT infrastructure	85(21.3%)	71(17.8%)	61(15.5%)	43(10.85%)	75(18.9%)	62(15.7%)
Poor choosing appropriate software solution	82(20.6%)	70(17.6%)	61(15.5%)	42(10.5%)	66(16.6%)	80(20.2%)
Poor ACs in computers laboratories	80(20.2%)	146(36.8%)	31(7.7%)	22(5.6%)	66(16.6%)	52(13.1%)

4.2 Discussion

Even though there are still some classic ICT facilities in use, their presence is justified by their accessibility. Because of familiarity, restricted access to newer gadgets, or personal preference, it was thought that some users might rely on this older technology. In order to serve a wide range of user demands, libraries strive to be inclusive. The results showed a significant degree of ambiguity among participants on the accessibility of particular resources, suggesting a lack of knowledge or communication regarding ICT technologies in libraries. This finding is in line with earlier studies that highlighted the necessity of enhancing ICT infrastructure to better support learning and library services (Bachynska *et al.*, 2024 and Mubofu, 2023). The results point to important areas for improving the administration and availability of ICT resources in university libraries.

By meeting a variety of user demands and enhancing user happiness, traditional ICTs like fax machines, tape recorders, projectors, video cassettes, printers, scanners, photocopiers, and TV sets continue to be used in libraries. For users who prefer or depend on these tools because of familiarity, accessibility concerns, or particular research needs, they remain important even when they appear to be outdated. For instance, although projectors and TV sets improve learning experiences through multimedia presentations (Nwosu, *et al.*, 2024), fax machines and tape recorders are necessary for historical research or specific administrative chores (Bachynska *et al.*, 2024; Mubofu, 2023).

By meeting a variety of user demands and enhancing user happiness, traditional ICTs like fax machines, tape recorders, projectors, video cassettes, printers, scanners, photocopiers, and TV sets continue to be used in libraries. For users who prefer or depend on these tools because of familiarity, accessibility concerns, or particular research needs, they remain important even when they appear to be outdated. Projectors and TV sets, for example, improve learning experiences through multimedia presentations whereas fax machines and tape recorders are necessary for historical research or specific administrative chores (Bachynska *et al.*, 2024; Mubofu, 2023). In order to efficiently create and reproduce documents, printers, scanners, and photocopiers are essential tools for both personal and academic duties (Breeding, 2023). According to recent research highlighting the significance of ICT infrastructure in enhancing library services and user satisfaction, libraries' dedication to inclusivity and resourcefulness is demonstrated by their maintenance of a mix of old and new technology (Bachynska *et al.*, 2024; Mubofu & Chaula, 2023).

The impact of ICT resources in university libraries has been shown in recent studies. For instance, Breeding (2023) discovered that by facilitating easy access to digital knowledge resources, sophisticated ICT facilities like fast internet and contemporary computer facilities significantly increase user happiness. Furthermore, it was noted by Idiegbeyan-ose *et al.* (2017) that the incorporation of automation and artificial intelligence (AI) into library services not only increases efficiency but also satisfies changing customer expectations, which raises overall satisfaction. These results highlight how crucial ICT is in determining the caliber of library services and how crucial it is to continuously invest in and update ICT infrastructure in order to properly satisfy user needs.

4.2.1 Obstacles in adaption ICTs technology in university

These issues, together with some respondents' ignorance of the difficulties, highlight a lack of communication and transparency that impedes attempts to enhance library services. Samzug (2019) in general, these challenges show how crucial dependable, modern, and easily accessible ICT infrastructure is to determining user pleasure. Improving user experiences requires addressing important concerns like inadequate infrastructure, poor internet access, and



unfavorable ambient conditions. To create a library environment that is more responsive and user-centered, it is imperative to improve staff abilities, provide training support, and strengthen management commitment. Universities can greatly improve user satisfaction and encourage greater use of library services and resources by addressing these problems.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study, specifically, aimed to assess the availability of ICT facilities and identify obstacles to ICT adaptation in Tanzanian university libraries, with a focus on enhancing the quality of library services. The findings revealed a mix of positive and negative aspects regarding the state of ICT infrastructure in these libraries. While some essential facilities like internet access were deemed adequate by a significant portion of respondents, critical issues such as inadequate computer systems, irregular power supply, poor internet connectivity, and environmental challenges like inadequate air conditioning in computer labs emerged as major obstacles. These issues have a direct impact on user satisfaction, limiting the effectiveness of library services and hindering students, researchers, and faculty from fully benefiting from available resources. The study also highlighted gaps in staff skills, management support, and the proper use of ICT facilities, further complicating the process of integrating technology into library services. These barriers underline the need for continuous improvements in both infrastructure and human resource development to ensure that ICTs contribute effectively to library services and user satisfaction.

5.2 Recommendations

Based on the findings and the conclusions provided the study recommends the following to university library stakeholders. Improve internet connectivity in university library by strengthening physical infrastructure and remote access mechanism and enhance users' engagement through mobile access, online chats and SMS alerts. Provide regular ICT training for library staff and general users by offering continuous professional development through seminars, workshops, online modules and orientation to new users and staff. Increasing management involvement in ICT by prioritize it in integrating with library services in acquiring, organizing and dissemination the learning resources to users, support the adoption of automated system that is e-lending and online cataloging and circulation. Regular update systems by modernizing software and hardware to ensure efficiency, security and reliability, integrating emerging technologies and automate library processes, expand support for digital resources like e-books, databases, online account and open access. Develop clear policies to govern proper use of library resources by establishing specific policy on ICT resources misuse aligned with international and national legal framework like Crime Act, 2025 and intellectual property rights.

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Gender conflicts in Muslim societies: A feminist analysis of Sherine Hafez's *women of the midan*

Isabella Mulama^{1*}
Lencer Ndede²
Maureen Amimo³

^{1*}isabeltabby3@gmail.com

^{1,2,3}Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

This article examines the various forms of gendered conflicts experienced by Muslim women in predominantly Islamic societies, as depicted in Sherine Hafez's biographical memoir, *Women of the Midan* (2018). Adopting a qualitative approach and descriptive design methodology, the study employs the theoretical lens of Islamic Feminism to critically analyse how patriarchal structures, societal norms, and institutional frameworks perpetuate gender inequality, leading to gendered conflicts encompassing sexual violence, restricted political agency, economic disparities, and legal barriers. Through a detailed textual analysis of Hafez's (2018) memoir, the paper identifies and analyses specific instances of gendered oppression and resistance, highlighting the resilience and struggles of Muslim women. Islamic Feminism provides a crucial framework for re-interpreting Islamic texts and traditions to advocate for women's rights and gender justice, demonstrating how many forms of gendered conflict are rooted in cultural misinterpretations rather than core religious principles. The findings reveal that Muslim women, despite their active roles, faced systemic discrimination and violence, underscoring the urgent need for a transformative approach to gender relations in Islamic societies. The article concludes with recommendations for fostering greater gender equality rooted in the principles of justice and equity inherent in Islam.

Keywords: Gendered Conflicts, Islamic Feminism, Patriarchal Structures, Sherine Hafez, *Women of the Midan*.

I. INTRODUCTION

Muslim women in predominantly Islamic societies often face various forms of gendered conflicts due to patriarchal structures, power dynamics, and the patriarchal interpretation of religious texts. Hafez's (2018) biographical memoir, *Women of the Midan*, vividly depicts these conflicts and the struggles of Muslim women to overcome them. This article aims to explore the gendered conflicts experienced by Muslim women in such societies and analyze how these conflicts are perpetuated by patriarchal structures, societal norms, and institutional frameworks. By employing the theoretical lens of Islamic feminism, this study critically examines the ways in which these factors contribute to gender inequality and how they manifest in different forms of gendered conflict, including sexual violence, restricted political agency, economic disparities, and legal barriers.

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1.1 Research Objective

The objective of this study is to examine the nature and manifestations of gendered conflicts experienced by Muslim women in predominantly Islamic societies and to analyze how patriarchal structures, societal norms, and



institutional frameworks—interpreted through the lens of Islamic feminism—contribute to and sustain gender inequality.

II. LITERATURE REVIEW

Numerous studies have explored the gendered conflicts faced by Muslim women in predominantly Islamic societies. For instance, Badran (2009) argues that patriarchal interpretations of Islamic texts have led to the marginalization and oppression of women in these societies. Similarly, Mernissi (1991) highlights the historical roots of gender inequality in Islamic societies and emphasizes the need for a reinterpretation of Islamic texts to promote gender justice. In her work, Abu-Lughod (2013) discusses the role of cultural norms and practices in perpetuating gender-based violence and inequality in Muslim communities. These perspectives provide a critical backdrop for examining how Muslim women navigate systems of power and resistance in contemporary contexts. By situating this study within such debates, it extends the conversation to consider how women's voices are represented, contested, and reimagined in digital and textual spaces. Collectively, the works of Badran (2009) underscore that gender inequality in Muslim societies is not inherent to Islam itself but rather emerges from patriarchal readings, historical power imbalances, and entrenched social traditions. Building on these insights, this study explores how contemporary Muslim women reinterpret their faith and identity to challenge such structures and assert agency within their sociocultural and religious contexts.

This argument further suggests that the struggle for gender equality within Islamic societies is not merely a battle against religious doctrine but against the socio-political forces that have historically shaped its interpretation. As Badran (2009) and Mernissi (1991) imply, reclaiming interpretive authority allows women to redefine their place within both faith and society. Abu-Lughod's (2013) insights reinforce this by showing that everyday practices and discourses often sustain patriarchal power, making women's resistance both a personal and collective act of reinterpretation. In this light, examining how Muslim women articulate these struggles through narrative and performance provides a deeper understanding of how feminist consciousness emerges within Islamic frameworks.

III. METHODOLOGY

This study adopts a qualitative approach and descriptive design methodology to analyze the gendered conflicts depicted in Hafez's (2018) *Women of the Midan*. The research is based on a detailed textual analysis of the memoir, which provides firsthand accounts of the experiences of Muslim women in a predominantly Islamic society. The theoretical framework of Islamic Feminism is employed to critically examine the ways in which patriarchal structures, societal norms, and institutional frameworks perpetuate gender inequality and contribute to gendered conflicts.

IV. FINDINGS & DISCUSSION

4.1 Response Rate

Through a detailed textual analysis of *Women of the Midan*, the study identifies and analyses specific instances of gendered oppression and resistance experienced by Muslim women in a predominantly Islamic society, quickly morphed into a renewed struggle against deeply ingrained gendered conflicts. Interpreted through an Islamic feminist lens, these narratives expose the pervasive nature of patriarchy and the ways in which women, often devout Muslims, navigate, resist, and sometimes succumb to these challenges. The findings are categorized into the specific forms of gendered conflicts identified through the analysis.

4.1.1 Sexual Violence

Sexual violence, particularly in the form of mob sexual harassment and assault in public spaces, emerged as a terrifying reality for women who participated in the Tahrir Square protests. While the revolution promised liberation, the public space often became a site of extreme vulnerability for women. These acts were not random; they were often systematic, aimed at deterring women from political participation and reasserting patriarchal control over public spaces. Scholars like Tadros (2016) have documented how such violence became a tool of political repression, used to delegitimize women's presence in the public sphere during and after the revolution. The memoir highlights the psychological trauma and fear that resulted, acting as a powerful deterrent.

One woman recounted the terrifying experience of being targeted in the square:

"The square became a place of fear for us. We went there to fight for freedom, but we found ourselves fighting for our bodies. We were told, 'Go home! This is not your place!'" (P.321)

This quote encapsulates the immediate reassertion of patriarchal claims over public space and women's bodies even within the revolutionary crucible. From an Islamic feminist perspective, such violence directly contradicts the Quranic emphasis on respectful social interaction, modesty for all, and the sanctity of individual dignity (e.g., Quran



24:30-31, 33:59). The perpetration of sexual violence against women, often under the guise of religious or moral guardianship, is a profound misinterpretation of Islamic principles which actively condemn aggression and uphold the protection of vulnerable individuals. The systematic nature of the attacks also points to a deliberate strategy to silence women, undermining their voices and participation a direct challenge to the Islamic feminist vision of women as active and respected members of the community (Wadud, 1999).

4.1.2 Restricted Political Representation and Participation

Despite their pivotal role in igniting and sustaining the revolution, women were largely sidelined in the formal political processes that followed. Post-Mubarak transitional governments and subsequent elections saw a significant decrease in female political representation. This marginalization was not merely an oversight; it was a deliberate exclusion, often justified by arguments rooted in conservative interpretations of gender roles. Women were lauded for their revolutionary spirit but expected to retreat to the private sphere once political order was ostensibly restored. Research by Charrad & Stephan (2020) points to how state-level patriarchal structures in the Middle East often co-opt women's movements, only to marginalize them once their utility is perceived to diminish.

One woman expressed, Amina, her profound disappointment:

"We were integral to the revolution, but when it came to writing the constitution, to forming the new government, we were nowhere to be found. They praised our courage, then told us to go back to our kitchens. It was as if our voices were only needed when men were afraid" (P.46)

This statement poignantly captures the betrayal felt by many. Islamic feminism posits that true Islamic governance emphasizes justice, consultation, and the well-being of the community, principles that necessitate the inclusion of all capable individuals, regardless of gender. The exclusion of women from decision-making bodies after they had proven their leadership and intellectual capabilities in the streets directly violates these principles, revealing a preference for patriarchal power structures over authentic Islamic governance (Barlas, 2002).

4.1.3 Patriarchal Structures

The memoir vividly portrays the pervasive influence of patriarchal structures that extend beyond formal political institutions into the fabric of Egyptian society, family, and personal relationships. These structures manifest as deeply ingrained norms, expectations, and attitudes that privilege male authority and subordinate women. Even within families supportive of the revolution, women often faced pressure to conform to traditional gender roles once the political fervor subsided. For instance, families might expect women to prioritize marriage and child-rearing over career or continued activism. This resonates with Ahmed's (2021) historical analysis of how patriarchal interpretations became dominant in Islamic societies, impacting women's societal roles.

Husna, a young woman lamented the constant societal scrutiny:

"It's not just the government. It's everyone. Your family, your neighbours, even strangers on the street. They constantly remind you of 'your place,' of what a 'good girl' should do. And if you step outside that, you're an outcast" (p.67)

This highlights the informal yet powerful mechanisms of patriarchal control. Islamic feminism argues that such societal pressures often stem from cultural norms mistakenly attributed to religious injunctions. While Islam emphasizes family and community, it does not mandate a static, hierarchical gender order that stifles individual potential or denies women agency. Instead, it promotes mutual respect and shared responsibilities within the family unit (Mir-Hosseini, 2004). The struggle faced by these women illustrates the ongoing battle to distinguish between genuine Islamic principles and culturally ingrained patriarchal practices.

4.1.4 Power Dynamics

The narratives in *Women of the Midan* underscore the unequal power dynamics that govern gender relations in Egypt. These dynamics are evident in the political sphere, where male leaders dominated the post-revolutionary landscape, but also in everyday interactions, decision-making processes within families, and professional environments. Power imbalances meant women's contributions were often undervalued, their voices silenced, and their agency curtailed. This is a common theme in studies of gender in the Middle East, where power is often consolidated in male hands across various sectors (Kandiyoti, 2009).

Fauzia, reflecting on the post-revolutionary climate, observed:

"They were happy to have us marching alongside them, but when it came to making the real decisions, the powerful men, religious or secular, decided everything. Our ideas, our visions, simply didn't matter to them in the end. We couldn't break into their circles of power" (P.105).

This observation reveals the deep-seated nature of male-dominated power structures. Islamic feminism challenges such inherent power imbalances, emphasizing the Quranic concept of often mistranslated as male 'headship' as mutual responsibility and protection rather than absolute authority. Wadud (1999) and others argue that true Islamic governance should be based on equitable power-sharing and consultation, where competence and justice, not gender,



determine leadership roles. The persistent exclusion of women from circles of power thus represents a significant deviation from what Islamic feminists would consider a just and equitable Islamic social order.

4.1.5 Legal and Institutional Barriers

Despite some reforms over the years, legal and institutional frameworks in Egypt continue to pose significant barriers to women's equality. Issues such as discriminatory family laws, challenges in legal recourse for violence, and bureaucratic hurdles for women in entrepreneurship or public service are evident in the narratives. These barriers often reflect and reinforce patriarchal structures, limiting women's autonomy and opportunities. Scholars like Mir-Hosseini (2004) have meticulously documented how family laws in many Muslim-majority countries often disadvantage women, reflecting traditional interpretations of Islamic jurisprudence rather than universal principles of justice.

A woman recounted the frustration of navigating the legal system:

"When I tried to get a divorce, even with clear grounds, the system was against me. It was designed to protect the man, to make it impossible for a woman to leave an abusive situation without losing everything. The judges, the lawyers, they all seemed to operate from the same old book" (p.98).

This poignant statement highlights the practical implications of legal disparities. Islamic feminism critically examines such legal frameworks, arguing that many contemporary personal status laws are products of specific historical legal interpretations rather than direct Quranic injunctions. It advocates for legal reforms that align with the Quranic spirit of justice and compassion, ensuring equitable rights for women in marriage, divorce, and child custody. The struggle of women against these legal barriers is, therefore, a struggle for a more just and truly Islamic legal system.

4.1.6 Economic and Social Disparities

The memoir also touches upon the economic and social disparities faced by women, particularly in the post-revolutionary period where economic opportunities became scarcer. Women, even those highly educated and professionally capable, struggled with securing employment, achieving financial independence, and facing societal biases in the workplace. Socially, they might face increased pressure to marry, produce children, or adhere to specific dress codes or behaviors that limit their public engagement. Researchers like Al-Ali (2012) have shown how women's economic participation is often intertwined with societal expectations and the broader political economy. Razla, a highly educated woman shared her professional frustrations:

"After all my education, all my efforts in the revolution, I still struggled to find a decent job. Men were always preferred, even if they had less experience. And if you did find a job, you were paid less, or expected to tolerate certain behaviours. Society still sees women as dependent, even women like me"(p.87).

This reflects a systemic disadvantage. Islamic feminism argues that Islam explicitly encourages both men and women to work, acquire wealth, and engage in economic activity, emphasizing the principle of earning financial independence. Furthermore, the Quran grants women independent financial rights and ownership. Therefore, economic disparities and social pressures that limit women's professional aspirations or independent living are viewed as cultural distortions that contradict the egalitarian economic spirit of Islam (Ahmed, 2021).

4.1.7 Marital Disputes

Marital disputes, including issues of domestic violence, divorce, and child custody, are deeply personal but are often shaped by broader societal norms and legal interpretations. *Women of the Midan* implicitly and explicitly portrays how women navigate difficult marital situations, often facing pressure to endure hardship for the sake of family Honor or children, or finding themselves disempowered by legal systems that Favor men. Such personal struggles exemplify the most intimate forms of gendered conflict.

While direct quotes about highly personal marital disputes might be less prominent due to the interviewees' focus on public life, the general undercurrent of societal expectations for women within marriage is palpable. One woman, discussing her decision to remain unmarried due to revolutionary commitments, implicitly critiques the traditional marital expectations:

"They say a woman isn't complete without a husband. But I found my completeness in the revolution, in my work. It's hard to find a man who respects that, who doesn't want you to just be a wife and mother"(p.73)

This speaks to the broader societal framework impacting marital choices and dynamics. Islamic feminism, in its re-reading of Islamic family law, emphasizes *qawamah* as mutual responsibility and protection, not male dominance. It advocates for equitable divorce procedures, just child custody arrangements, and absolute condemnation of domestic violence, which is fundamentally un-Islamic. Scholars like Mir-Hosseini (2006) demonstrate how classical fiqh has often been interpreted to institutionalize gender inequality in marriage, a pattern that Islamic feminists actively challenge by advocating for reform based on Quranic principles of justice and mercy.



4.1.8 Access to Education

While *Women of the Midan* largely features educated women, the themes of gendered conflict related to education might not be about *lack* of access but rather the societal expectations and challenges faced by educated women. This can include: the pressure to use education primarily for enhancing marriageability rather than professional independence; the underutilization of women's educational qualifications in the workforce; and the limitations placed on their public roles despite their intellectual capabilities. One woman, reflecting on her education, noted:

“My parents invested so much in my education, but then society expects me to stay at home, or only use my degree for a 'suitable' female job. It's as if education is just a formality for women, not a tool for true empowerment or leadership” (p.34).

This highlights the societal dissonance between promoting female education and then restricting its full application. Islamic feminism celebrates the pursuit of knowledge as a fundamental Islamic imperative for all Muslims, men and women alike. Historical examples of prominent female scholars and jurists in early Islamic history are often cited to counter the notion that women's education should be limited or serve only domestic ends. Restricting the professional or public application of women's education, therefore, is viewed as a cultural limitation rather than an Islamic one, undermining the potential and contributions of half of the Muslim community. The struggle for these educated women is not for access, but for the full recognition and utilization of their intellectual capacities in a society that too often limits them.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

In conclusion, the findings of this research reveal that Muslim women, despite their active roles, faced systemic discrimination and violence in various forms, including sexual violence, restricted political agency, economic disparities, and legal barriers. The memoir *Women of the Midan* provides a detailed account of these conflicts and the struggles of Muslim women to resist and overcome them. The theoretical lens of Islamic Feminism offers a framework for re-interpreting Islamic texts and traditions to advocate for women's rights and gender justice, demonstrating how many forms of gendered conflict are rooted in cultural misinterpretations rather than core religious principles. The urgent need for a transformative approach to gender relations in Islamic societies is underscored by the findings of this research, which highlight the resilience and struggles of Muslim women.

5.2 Recommendations

Based on the findings of this research, several recommendations can be made to foster greater gender equality in Islamic societies. These recommendations include challenging patriarchal structures and societal norms that perpetuate gender inequality through education and awareness campaigns. There is also need for promoting the participation of women in political decision-making processes and ensuring their voices are heard and taken seriously and addressing economic disparities that limit women's access to education, employment, and financial independence through targeted policies and programs. Further, reforming legal systems to ensure equal rights and justice for women, including access to education, employment, and financial independence might lead to encouraging the development and implementation of Islamic Feminist perspectives in religious and educational institutions to promote gender equality and justice.

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Spoken-word poetry and the framing of fluid identities amongst Kenyan youth

Rose Oriko^{1*}
Maureen Amimo²
Lencer Ndede³

^{1*}orikowa@gmail.com

^{1,2,3}Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

This article explores how spoken-word poetry in Kenya serves as a crucial medium for framing and articulating the fluid identities of Kenyan youth. Drawing upon a formalist theoretical framework, the paper examines the aesthetic and structural elements of spoken-word performances to understand how they construct meaning and voice various identity expressions. Specifically, the analysis delves into four key dimensions: cultural hybridity, social norms, political issues, and social nationalism, demonstrating how youth navigate and represent their multifarious selves through poetic form and delivery. By giving voice to subaltern experiences and confronting stereotypes, spoken-word poetry emerges as a potent artistic and socio-political tool, reflecting the dynamic interplay of cultural, social, and political influences that shape young people's experiences in contemporary Kenya. The findings reveal that Kenyan spoken-word poetry functions as both a creative and political platform through which youth assert agency, negotiate belonging, and challenge dominant discourses surrounding identity and power. The study concludes that spoken-word poetry not only redefines the contours of Kenyan youth identity but also fosters critical dialogue and social transformation by bridging art, activism, and everyday lived realities.

Keywords: Cultural Hybridity, Fluid Identities, Kenyan Youth, Spoken-Word Poetry, Social Norms

I. INTRODUCTION

This paper interrogates the way spoken word poetry in Kenya frames fluidity of subaltern identities amongst Kenyan youth. It examines how selected Kenyan spoken word poetry gives voice to the voiceless youth. It also explores how the youth use spoken word poetry to confront the stereotypes of young people by trying to reach the broader young listening public through politically and socially relevant poems. The youth tend to raise issues such as unemployment, identity crisis, gender discriminations, poverty and corruption (Muiya, 2014).

In particular, the paper looks at spoken word poetry as a performance-based literary genre which has emerged as a potent form of expression among Kenyan youth, reflecting the complexities of their identities. This art form captures the dynamic interplay of cultural, social, and political influences that shape young people's experiences in Kenya (Dina, 2015). As a multifaceted medium that engages with various themes, spoken word poetry allows Kenyan youth to articulate their realities, aspirations, and struggles, thus revealing the fluid nature of their identities. The study further discusses how spoken word poetry serves as a lens through which the evolving identities of Kenyan youth can be understood, focusing on themes such as cultural hybridity, social issues, and political engagement.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Formalism and the Poetics of Identity

To rigorously analyse how spoken-word poetry frames fluid identities, this study adopts Formalism as its guiding theoretical framework. Formalism, originating from Russian Formalism and later evolving into New Criticism, posits that the true meaning and aesthetic value of a literary work reside primarily in its intrinsic features: its form, structure, language, and literary devices rather than external factors such as authorial intent or historical context (Shklovsky, 1965; Jakobson, 1960). While traditional Formalism focused largely on written texts, its principles are uniquely adaptable to performance-based genres like spoken-word poetry, where the *how* of delivery is as crucial as the *what* of the message (Kariuki, 2018).

In the context of spoken-word poetry, a formalist approach directs attention to elements such as rhythm, rhyme, alliteration, assonance, metaphor, simile, narrative structure, vocal intonation, cadence, pauses, repetition, and even the



performer's body language and interaction with the audience. These are not mere embellishments but constitute the very mechanisms through which meaning is generated and, crucially, through which identities are articulated and framed. For instance, the deliberate choice of code-switching between Swahili, English, and Sheng (a Kenyan urban slang) is a formal choice that signifies cultural hybridity. The rhythmic crescendo in a political poem formally signals outrage or urgency. The narrative arc of a personal story, performed with fluctuating vocal tones, formally maps the journey of an evolving identity (Odinga, 2020)

III. METHODOLOGY

This study utilized a qualitative research methodology, examining chosen spoken-word poetry performances by Kenyan youth through formalist literary analysis. Poems were intentionally selected from notable platforms and digital repositories to encompass a variety of voices and themes. The analysis concentrated on the structural, linguistic, and performative aspects of the poems, investigating how these elements shape and express fluid identities. The interpretation of data was directed by formalist principles, highlighting intrinsic poetic devices and performance techniques to reveal the intricate methods through which identity is constructed and articulated within the genre.

IV. FINDINGS & DISCUSSION

4.1.1 Spoken-Word Poetry in Kenya: A Contextual Landscape

Spoken-word poetry in Kenya has experienced a vibrant resurgence, particularly within the last two decades, evolving from informal open-mic nights in Nairobi's cultural hubs to become a significant force in public discourse and artistic expression (Ndung'u, 2017). This art form resonates deeply with Kenyan youth, offering an accessible and unmediated platform for self-expression in a society often characterized by generational divides and limited avenues for youth engagement. The emergence of groups like Poetry Slam Africa, Kwani? Open Mic, and individual artists gaining significant online traction underscores its growing influence (Chepkwony, 2016).

This growth is not accidental. Kenyan youth, particularly those in urban and peri-urban centers, face a myriad of challenges including high unemployment rates, limited economic opportunities, pervasive corruption, and social pressures to conform to traditional norms (Gakii, 2015). Concurrently, they are increasingly exposed to global cultural currents through digital media, leading to a complex negotiation of local traditions and global influences. Spoken-word poetry provides a cathartic and empowering space where these complex realities can be articulated, challenged, and collectively processed. It acts as a counter-narrative, allowing young voices to challenge prevailing stereotypes that often paint them as apathetic, unruly, or simply a demographic burden (Moi, 2017).

4.1.2 Cultural Hybridity and Identity

One of the most prominent ways spoken-word poetry frames fluid identities among Kenyan youth is through the articulation of cultural hybridity. Kenyan youth inhabit a liminal space, often straddling the perceived divide between traditional African values, inherited colonial legacies, and burgeoning global digital cultures (Wanjiku, 2019). Spoken-word poetry, through its formal choices, masterfully reflects and celebrates this intricate interweaving of influences, thereby framing an identity that is not homogenous but a vibrant mosaic.

From a formalist perspective, the most striking manifestation of cultural hybridity is the linguistic eclecticism evident in many performances. Poets frequently engage in code-switching and code-mixing between English, Swahili, and Sheng. This is not merely a practical communication choice but a deliberate artistic act that formally signals the multidimensionality of the youth's identity. The rapid shifts in language, often within a single stanza or even a line, reflect a mind that seamlessly navigates different cultural registers. Consider the following lines from Mufasa's poem

"They tell me to remember my roots, but my roots are Nairobi concrete, my soul whispers in Swahili proverbs, while my dreams speak in English headlines. Si niko hapo, between tradition na tech? A child of two worlds, neither fully broken, nor quite yet whole".

Here, the formal elements of linguistic juxtaposition are key. The use of "Nairobi concrete" immediately grounds the identity in an urban, modern Kenyan reality. The contrast between "Swahili proverbs" and "English headlines" formally encapsulates the dichotomy of traditional wisdom versus globalized information. The interrogative "Si niko hapo?" (Am I not there?) in Sheng, followed by the reflective English phrase, formally blurs linguistic boundaries, asserting an identity comfortable in its hybridity. This linguistic fluidity, as Nyamu (2021) suggests, is a performative act of identity construction, showcasing the versatility and adaptability of the contemporary Kenyan self.



4.1.3 Social Norms and Identity

Spoken-word poetry also serves as a critical platform for Kenyan youth to frame their identities in relation to, and often in defiance of, prevailing social norms. Traditional Kenyan society often upholds conservative values regarding gender roles, age hierarchies, sexuality, and community expectations. Youth, navigating modern influences and global perspectives, frequently find themselves at odds with these established norms. Formalism helps us analyse *how* spoken-word poetry challenges, redefines, or sometimes reinforces these social structures through its aesthetic choices.

The direct address and confrontational tone often employed in spoken word are key to challenging social norms. Poets frequently adopt a confessional or argumentative stance, directly addressing societal expectations or specific restrictive beliefs. The use of rhetorical questions, irony, and satire formally dissects and exposes the inconsistencies or hypocrisies within traditional social structures. Consider a poem, by Mufasa addressing gender stereotypes:

They said a girl's place is hushed and low, beneath the shadows, where her whispers go. But my voice is a thunder, a defiant roar, shaking the foundations, demanding more. Are these traditions chains, or merely old stories told?

From a formalist perspective, the deliberate use of rhyming couplets in the opening lines (low/go, roar/more) initially mimics a traditional, almost ballad-like structure, setting up the norm. However, the immediate shift in imagery to "thunder" and "defiant roar" formally breaks this quietude, asserting a powerful counter-narrative. The formal shift from description to rhetorical questions "*Are these traditions chains, or merely old stories told?*" directly engages the audience, forcing a re-evaluation of established norms. This formal disruption is not accidental; it is a calculated poetic strategy to destabilize rigid social expectations and assert a new, bolder identity (Gitau, 2022). The contrast between the "whispers" and the "thunder" is a formal binary that frames the speaker's identity as a challenger of silence.

2.1.5 Political Issues and Identity

Beyond personal and social realms, spoken-word poetry in Kenya serves as an incisive tool for framing identities shaped by political realities. Kenyan youth are acutely aware of the political landscape, marked by issues such as corruption, governance failures, electoral violence, and socio-economic inequality. Spoken-word performances, particularly through their rhetorical and performative dimensions, become potent sites for political critique and the assertion of identities as active, often disillusioned, citizens.

The political framing of identity in spoken-word poetry is often achieved through specific rhetorical devices and the manipulation of performance dynamics. Anaphora, repetition, vivid imagery, and direct address are frequently employed to amplify political messages and evoke a collective identity of shared struggle or discontent. An instance is Teardrops poem, I have a dream, which addresses political corruption:

"The ballot box whispered promises, But our hungry stomachs scream silent curses. They built grand towers, but our dreams remain in shacks. Power's embrace is a viper's kiss, leaving us the shadows, the broken pieces. We, the youth, demand accountability, not just empty speeches."

Here, the formal use of contrasting imagery ("whispered promises" vs. "hungry stomachs scream," "grand towers" vs. "shacks") formally highlights the disconnect between political rhetoric and lived reality, framing the youth's identity as victims of this disparity. The powerful metaphor "Power's embrace is a viper's kiss" formally creates a sense of betrayal and danger. Crucially, the shift to the collective pronoun "We, the youth," in the final line is a direct formal invocation of a collective political identity. This formal move transforms individual grievances into a shared demand for justice, underscoring youth agency (Kimani, 2019). The rhythm and cadence of such lines, often delivered with increasing intensity and vocal force, formally embody the urgency and anger of the political sentiment.

2.1.6 Social Nationalism and Identity

The concept of "social nationalism" in this context refers to the collective identity of belonging to the Kenyan nation, often expressed through shared cultural pride, a sense of national destiny, or critique of the nation's contemporary state. Spoken-word poetry plays a significant role in framing this multi-faceted national identity among Kenyan youth, oscillating between fervent patriotism and disillusioned critiques of the national project.

The framing of social nationalism is achieved through the strategic deployment of national symbols, geographical references, historical allusions, and the invocation of shared cultural narratives. Poets might use the Kenyan flag's colours, imagery of iconic landmarks, or references to national heroes to evoke a sense of collective belonging and pride. The deliberate choice of such culturally specific references formally signals a deep connection to the national fabric. The following line illustrates this assertion

"From these red lands, our future's penned, A Kenyan dream, broken yet unbent. The Maasai step, the Kikuyu chant, echoes of unity, though divisions haunt. We build our nation, brick by painful brick, this motherland's pulse, our hearts beat quick."



Here, the reference to "red lands" (a color in the Kenyan flag and characteristic of Kenyan soil) and the invocation of "*Maasai step*" and "*Kikuyu chant*" are formal inclusions of specific cultural markers that ground the identity in the diverse national tapestry. The phrase "A Kenyan dream, broken yet unbent" formally encapsulates the tension between national aspirations and present realities, yet ultimately asserts resilience. The use of collective pronouns ("our," "we") and the personification of "motherland" formally draw the audience into a shared sense of national ownership and responsibility. This formal embrace of both hope and disillusionment frames a complex, evolving national identity (Wambui, 2021). The rhythmic quality of the lines, often evocative of traditional chants or national anthems, formally instills a sense of shared heritage and collective purpose.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Spoken-word poetry has unequivocally emerged as a powerful and indispensable art form for Kenyan youth, serving as a vital conduit for the articulation and framing of their fluid identities. Guided by a formalist theoretical framework, this study has demonstrated how the intrinsic aesthetic and structural elements of spoken-word performances – encompassing linguistic choices, rhetorical devices, narrative structures, and performative delivery – are instrumental in constructing nuanced meanings around themes of identity.

The analysis revealed how spoken word meticulously frames identities that are culturally hybrid, navigating the confluence of local traditions and global influences through linguistic and thematic synthesis. It further elucidated how youth leverage this art form to challenge and redefine restrictive social norms, asserting autonomous selves in defiance of societal expectations through direct, confrontational, and often ironic formal expressions. Moreover, the study underscored spoken word's pivotal role in framing politically conscious identities, where youth articulate their disillusionment with governance and advocate for change through powerful rhetorical strategies and collective invocations. Finally, the paper explored how social nationalism is framed, oscillating between a proud embrace of national heritage and a critical assessment of the nation's present state, reflecting a complex and evolving sense of belonging.

By focusing on the *how* of identity construction through poetic form, this research reaffirms that spoken-word poetry is not merely content delivery but a sophisticated act of meaning-making that allows Kenyan youth to vocalize their subaltern experiences, confront pervasive stereotypes, and engage a broader public. This performance-based genre offers a unique lens through which the dynamic interplay of cultural, social, and political influences on young Kenyans' lives can be understood. As Kenya continues to evolve, the fluidity of youth identities, as powerfully captured and framed by spoken-word poetry, will remain a critical force in shaping its future narratives. Future research could explore the audience reception and impact of these performances, or delve into regional variations in spoken-word styles and identity framing across Kenya.

5.2 Recommendations

To sustain the transformative potential of spoken-word poetry in Kenya, it is recommended that educational institutions integrate it into curricula to foster creativity and critical consciousness among youth, while cultural and governmental bodies provide institutional and financial support to nurture emerging talent. Expanding mentorship programs, research, and digital access can further amplify youth voices, enabling spoken-word poetry to thrive as both an artistic expression and a vehicle for social change, civic engagement, and the reimagining of Kenyan identity in a rapidly evolving society.

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The doctrine of state sovereignty and its implications for the harmonisation of banking regulation and supervisory frameworks under the East African community common market protocol

Geofray Ngulla¹

¹geofrayngulla@gmail.com

¹Mbeya University of Science and Technology, Tanzania

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ABSTRACT

The treaty establishing the East African Community [EAC] is more ambitious than a mere international agreement, as it focuses on achieving economic integration that will establish an internal market, an economic and monetary union, and ultimately a political federation. The common desire of the Partner States is to yield part of their sovereignty to the EAC as an intergovernmental organisation, but this desire does not oust the jealousy of the Partner States to maintain a considerable degree of sovereignty. This research was guided by intergovernmentalism and neofunctionalism theory. This study employed a qualitative research design using the doctrinal legal research method of data collection to establish the significance of sovereign ceding for regional development. The study, through a documentary review, has revealed that the EAC member states limit their sovereignty to avoid being subjected to EAC jurisdiction regarding the regulation and supervision of the banking industry. The study found that the domestic laws of the Partner States do not adequately reflect the fundamental and operational principles necessary for achieving EAC objectives, as efforts are focused on strengthening the domestic banking business instead of the EAC banking system. This paper suggests that the core to the realisation of EAC objectives through the banking industry is the adherence to the effective political and economic will among the Member States.

Keywords: Banking Industry, East African Community, Harmonisation of Laws, Member States, Sovereignty

I. INTRODUCTION

The world economy after World War II evidenced resilient rules for controlling cross-border capital movements. Time has changed and changed dramatically, with international flows instigated to develop, especially during the occurrence of the Eurodollar market in London in the 1960s and the downfall of the Bretton Woods system in the early 1970s. And since then, international financial integration has proceeded intensely.¹ Efforts are being deployed to strengthen financial regulation through international regulatory harmonisation, and the obsessed formation of so-called 'International Standards' or 'International best practices', rather than being under national domestic regulatory mechanisms.² This approach began in 1988 after the establishment of the Basel Committee on Banking Supervision, which laid down rules governing capital adequacy at banks.³

The primary concern of bank regulation is making sound and good management of a bank's financial operation; it is referred to as *prudential* regulation, or in the United States, the concept is referred to as *safety and soundness* regulation.⁴ According to neoclassical economic theory, regulation is regarded as state intervention in the market economy operations.⁵ This intervention is done mainly for two reasons: first is to ensure the market operates efficiently (to limit market inefficiencies, or what economists refer to as 'market failures'), and second is to change market results

¹ Chey, H. (2014). *International Harmonisation of Financial Regulation?: The Politics of Global Diffusion of the Basel Capital Accord*, Routledge, New York, p 1

² *Ibid*, in his book Chey, views the term financial regulation, international regulatory standards and international regulatory harmonisation, to mainly mean prudential regulation, and to international regulatory standards and international regulatory harmonisation in the area of finance, respectively. See also Nakagaw, J. (2011). *International Harmonisation of Economic Regulation*, Oxford University Press, London, p 1, where international harmonisation of economic regulation is defined as "the process by which countries work to eliminate or narrow differences among their respective regulatory regimes. It may loosely define as making the regulatory requirements and governmental policies of different jurisdictions identical or at least more similar".

³ *Ibid*

⁴ Schooner .H and Taylor, M. (2010). *Regulation of Global Banking Principles and Policies*, Elsevier, London, P. 1

⁵ Dragomir, L. (2010). *European Prudential banking Regulation and Supervision: The Legal Dimension*, Routledge, New York, P.

to attain social objectives.⁶ These two reasons may also be referred to as economic regulation and social regulation, respectively.

Ceding sovereignty while it is often seen as a threat or a source of tension for the effective functioning of regional courts, should really be an automatic attribute of regional integration. It is widely and well understood that sovereignty is a fundamental principle in international relations, granting states the authority to govern themselves without external interference. Sovereignty is not absolute and can be limited or shared through international agreements. By agreeing to be bound by the treaties that govern their Regional Economic Communities (RECs), member states consent to be bound by the rules of the RECs over and above their own. This consent demonstrates the state's willingness to accept the obligations outlined in the treaty, which may require it to alter its laws or policies in alignment with the treaty's provisions. By agreeing to these terms, member states effectively limit their sovereign powers in specific areas. This process inevitably implies the surrender of national policies to the supranational authority for the consolidation of regional economic integration. It is therefore necessary that Member States should yield to a gradual surrender of sovereignty to strengthen the integration process, which would ensure long-term benefits for integrating states.

1.1 Statement of the Problem

Currently, the legal and practical problems facing the banking industry in the EAC are highly attributed to the application of domestic laws on the regulation and supervision of the EAC banking business. Where EAC member states are not commonly willing to cede their sovereign powers partly to the community as an intergovernmental organisation that will ensure sound and prudential regulation and supervision of the banking industry in the EAC. This assertion opposes the spirit of the EAC Treaty, which requires all Community integration matters to be administered by the Treaty principles⁷ and be regarded as a source of law as well as a roadmap on the policy-making process, which all Partner States are bound to observe and adhere.⁸

The East African Community (EAC), as an intergovernmental economic community, subjects all Partner States to a duty to achieve the community objectives by taking all necessary steps to harmonise all their national laws pertaining to the Community.⁹ The Common Market as one of the EAC pillars, derives its legal root from the EAC Common Market protocol that has set standards on its implementation and set forth the requirements for harmonisation of the EAC member states' banking laws in consideration with the states' sovereignty.

1.2 Research Objectives

The main objective of the paper is to address how the doctrine of state sovereignty affects the realisation of the EAC objectives, especially the Common Market Protocol, in line with the banking activities regulation. Furthermore, the paper suggests appropriate solutions to address the ongoing challenges attributed to the EAC Member States.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Neo-functionalism Theory

This theory, developed by Ernest Haas,¹⁰ from the theory of functionalism, shows the way as to how and why national states will partly cease to be sovereign and interact with other states, while on the other hand gaining a new way of dealing with matters.¹¹ According to Mattli, he says that functionalism describes a process whereby political officers in various national settings are influenced to shift their loyalties, expectations, and political activities toward a new institution with jurisdiction over national states.¹²

The basis of neo-functionalism is the concept of 'spillover', where further integration or co-operation will be achieved through economic and political dynamics. There are two types of spillover, and both depend much on deep and widened integration using interest-group pressure, public opinion, elite socialisation, and domestic actors and processes.¹³ The first, *functional spillover*, is an economics-based approach, where pressure is placed on the economic

⁶ Schooner, *Supra* note 7

⁷ See Article 6 and 8 of the EAC Treaty

⁸ Possi. A & Kamanga. C, (2017). "General Principles Governing EAC Integration", In Ugirashabuja. E, *et al*, *The East African Community Law*, Brill, P 204.

⁹ Article 82(1)(b) of the EAC Treaty

¹⁰ Haas .E, *The Uniting of Europe: Political, Social and Economic Forces, 1950-1957*, Stanford University Press, Stanford, 1958, p. 22

¹¹ *Ibid*, 24

¹² *Ibid*

¹³ Moravcsik .A, *Preferences and Power in the European Community: A Liberal Intergovernmentalist Approach*, Journal of Common Market Studies, Harvard University , Volume 3 1, No. 4 December 1993, p. 474



policies in the areas of integration and economic sector so as to have a wide policy co-ordination. The second is *political spillover*; this is where the presence of supranational organisations sets in motion a self-reinforcing process of institution-building for supranational authorities to regulate the integrated economy.¹⁴ The theory aims at attaining a greater political entity than the national state and analyses prerequisites under which a political entity will develop.¹⁵ Neo-functionalism a method of achieving the final goal of creating a supranational political entity by starting from economics and later taking integration to the political sphere.

2.1.2 Intergovernmentalism

This is an intergovernmental organisation (IGO), also called a classical international organisation, described as a permanent entity made by two or more members with international legal personality that promotes voluntary cooperation and coordination between or among its members but has neither autonomous power nor the authority to impose its decision on its members.¹⁶ According to Kembayev, IGO involves no surrender of sovereignty by its member, and the member state's representative is responsible for making a decision based on sovereign equality, either to adopt it or not by voting on a proposed decision.¹⁷

Intergovernmentalism can be understood as an instrument of bargaining between heads of governments of leading states in a region. Moravcsik described intergovernmentalism by considering the status of states (big or small) when voting on fundamental changes to integration.¹⁸ That big states exercise a de facto veto over any decision on integration.¹⁹ The key difference between intergovernmentalism and neofunctionalism is the position of the head of state as a central player in IGO.²⁰

2.2 Empirical Review

According to neo-functionalism theories, sovereignty is considered a pinpoint that facilitated the adoption of regional integration. Both David Matrny and Erenest Haas agreed on the creation of a supranational entity as a creature with sovereign states to control the economic and political ambitions at hand. In African regional integration, sovereignty has been marked as one of the key constraints to the attainment of a fully united Africa. This section illustrates the importance of the concept of sovereignty in achieving strong and successful regional integration.

Conceptual Review.

There are several concepts that do not define sovereignty but rather unite most of the sovereignty's traditions. The first one is legitimate authority. Authority is "the right to command, and correlatively, the right to be obeyed," and authority is legitimate when it is seen as right by those living under it".²¹ In his chapter Philpott claims not to confuse legitimate authority with simple power. Borrowing an example from R.P. Wolff, that "if I am forced at gunpoint to hand over my money, I am subjected to power; if I pay my taxes, even though I think I can cheat, I am recognising legitimate authority".²² Legitimacy yields power but is not itself powerful, but the vice-versa is true that power can establish legitimacy. Hence, one can conclude that sovereignty is made up of legitimate authority, not power, and it is suggested by the law.²³ A second ingredient of sovereignty's definition is territoriality; it's on territory where authority or control is exercised because states are territorial configurations.²⁴ The location of borders defines people where the holder of sovereignty governs. Hence, in general, Sovereignty can be defined as a supreme authority within a territory.²⁵

¹⁴ *Ibid* p. 474

¹⁵ Cavlak .H, *et al*, *EU Health Policy: To what extent the EU got involved in the field of health?*, In Engin .S and Hasan .D, (ed) "Regional Economic Integration and the Global Financial System, Business Science Reference", Hershey PA, USA 2015, pp 98-119, p. 102

¹⁶ Kembayev .Z, *Legal Aspects of the Regional Integration Processes in the Post-Soviet Area*, Springer-Verlag, Berlin, 2009, p. 14.

¹⁷ *Idem*

¹⁸ Moravcsik. A, *Negotiating the Single European Act: national interests and conventional statecraft in the European Community*, International Organisation, 45, 1, Winter 1991, p. 25.

¹⁹ *Ibid*

²⁰ Mattli. W, (1999) *The logic of Regional Integration, European and Beyond*, the press syndicate of the university of Cambridge, London, p. 29

²¹ Philpott .D, (1997). "Ideas and the Evolution of Sovereignty" In S. Hashmi .S, (ed) *State Sovereignty: Change and Persistence in International Relations*, The Pennsylvania State University Press, Pennsylvania, P. 17

²² Wolff. R, (1990) "The Conflict between Authority and Autonomy", In Raz. J, (ed) *Authority*, Oxford University Press, Oxford, P. 20-12

²³ Philpott, *Supra* note 25, P. 17

²⁴ Onuf .N, (1998). *The Republican Legacy in International Thought*, Cambridge University Press, London, 1998, P. 120

²⁵ Philpott, *Supra* note 25, P. 19



Linking regional integration with sovereignty, scholars and various schools have conceptualized sovereignty in two forms, the ‘internal and external’ sovereignty,²⁶ or according to Hashmi in his book, is Absolute and non-absolute.²⁷ Internal or absolute sovereignty connotes that, supreme authority covers sovereignty within borders and immunity from external intervention.²⁸ And external or non-absolute sovereignty is what international lawyer understands when discussing sovereignty and what is known by the UN Charter as “political independence and territorial integrity”.²⁹

According to Grimm, in his book, external sovereignty is connected with the existence of a state conferred with public power and is not subjected to or affected by questions related to its internal allocation, separation, and limitation. For the state to enjoy external sovereignty, it ought to be a legal subject.³⁰ Grimm, also claims that it is not possible to possess internal without external sovereignty and that a political system must first ensure it firmly holds its external sovereignty for it to maintain its internal sovereignty. He proceeds to add that “Lack of external sovereignty means nothing less than the subordination of state power to a foreign will and to that extent rules out self-determination”³¹

Currently, in international relations, no single state is fully sovereign within the meaning of sovereignty in the nineteenth and first half of the twentieth century.³² In the European Union, it is the member states that transferred sovereignty rights, to be exercised by the Union in its name and with direct effect to the member states.³³ In the book by Cooley and Spruyt, they adopted the scholarly traditional definition of ‘integration’ to mean, the “aggregated transfer of sovereign assets or function to another actor or organisation.”³⁴ The process of sovereign transfer (supranationalism) is constituted by the reapportioning of sovereign, rights, functions, and territories from one entity to another.³⁵ A good example cited by Cooley and Spruyt is that when a state loses its exclusive sovereignty in the area of economic governance to a regional organisation, it tells the gain of the governance of the same function to that regional organisation.³⁶

In her book, Magdalena Martinez argues that the value of the state’s life was fundamentally supported by international cooperation subsequent to the failure of the League of Nations and the revulsions of the Second World War. It increased the states’ awareness of the issues that facilitated political and economic cooperation through domestic rule states authorized to be incorporated in international institutions, which lender deprivation part of the state’s sovereign, a process that needs certain conditions to adhered so that to ensure proper transfer of the state’s power. Magdalena Martinez in her book pointed out constitutional conditions for the transfer of State’s power.³⁷

Adherence to internal or domestic procedures prior to the transfer of power process. For example, is the adoption of parliamentary consensus for a state to join the international organisation. Condition to be fulfilled by the international Organisations addresses of the transfer. Conditions to be fulfilled by all the States that are or will become members of the International Organisation. For example, reciprocity in their relationships, equal treatment within the international organisation, and proportional distribution of responsibilities assumed by each member to achieve a common purpose. Despite the adoption of the above conditions, different Constitutions, although not all, have embodied certain limits to the process of the transfer itself. They constitute a state’s consent to be involved in international organisations.³⁸ The

²⁶ Onuf, *Supra* note, *ibid*, P. 122

²⁷ Philpott, *Supra* note 24, P. 20, see also Wallerstein. I, “states? Sovereignty? The Dilemmas of Capitalists in an Age of Transition” In Smith. D, (1999). (ed) *States and Sovereignty in the Global Economy*, Routledge, New York, Pp. 20-50, P. 22, provides the meaning of internal (in ward looking) and external (out ward looking) that “Sovereignty of the state, in ward looking, is the assertion that, within its boundaries (which therefore must necessary be Clearly defined and legitimated within the interstate system) the state may pursue whatever policies it deems wise, decree whatever laws. And Sovereignty of the state, outward looking, is the argument that no other state in the system has the right to exercise any authority, directly or indirectly, within the boundaries of the given state, since such an attempt would constitute a breach of the given state’s sovereignty”.

²⁸ *Ibid*

²⁹ *Ibid*

³⁰ Grimm. D, (1993). *Sovereignty: The Origin and Future of a Political and Legal Concept*, Columbia University Press, New York, P. 93

³¹ *Ibid*

³² *Ibid*, P. 91, that “This is clearly the case for the member states of the European Union. It is also true, however, for UN member states, and even more so for those that have ratified the treaty on the international Criminal Court. An exception may be made-not purely factual, but based on legal status for states that do not belong to the European Union and hold a permanent seat on the UN Security Council, because no UN measures may be taken without their agreement. If they belong to the WTO, however, their sovereignty, too, has been compromised”

³³ *Ibid*, P. 89

³⁴ Cooley A, and Spruyt H. (2009). *Contracting States: Sovereign Transfers in International Relations*, Princeton University Press, 41 William Street, New Jersey, P. 8

³⁵ *Ibid*

³⁶ *Ibid*

³⁷ *Ibid*

³⁸ *Ibid*



transfer of power is limited only to the exercise of certain sovereigns, but not in their ownership, which is reserved to the states. This power will revert automatically to the state once the objectives of international organisations are accomplished.

The transfer is limited to material. That, the extent of power transfer is limited; normally the Constitution avoids the transfer of the total power of a state. The power transferred will be exercised by international organisations in a much-defined field, executive, legislative, and judicial function, but they can never replace the states. The transfer should be temporal. A delegation should not be construed as a dereliction or a definitive cession of sovereignty. A state can recover its transferred power through unilateral withdrawal from the international organisation.

In the international legal order, states are regarded as “quasi-states”. That, according to Brad Roth is known as “sovereign equality of states” where states acquire the same external rights and responsibilities as all other states.³⁹ To qualify this approach, Roth, came out with three legal irrefutable presumptions; that is, first a state is presumably bound to the extent of its actual or constructive consent, second, the international state’s obligations presumably have legal effect to the extent of incorporation by domestic laws. Third, “the inviolability of a state’s territorial integrity and political independence, as against the threat or use of force or extreme economic or political coercion is presumed to withstand even the state’s violation of international legal norms.”⁴⁰

On the other hand, states may automatically transfer part of their sovereignty on the operation of customary international law or peremptory norms (*jus cogens*); there is no way for the state to opt out when the customary norm is in operation.⁴¹ From these assertions, the ordinary meaning of sovereignty has been eroded by international treaties and customary international law norms to create sovereignty of equality.

III. METHODOLOGY

This study employed qualitative research design using doctrinal legal research method of data collection to establish the significance of sovereign ceding for regional development. The reason why the doctrinal legal research method was selected is because of the common take under the legal research tradition of reviewing authoritative texts that is legislations and case laws reviewed form part of the primary source in the legal research. It is viewed as the best methodology for legal research, since the method assesses law by using statutes and judicial decisions to structure, rectify and clarify the law in any point of interest.⁴² Furthermore, some secondary sources were reviewed that consist of scholarly works, which helped in locating secondary data, such as indexes and digests, and commentaries on the law that include encyclopedias, books, articles, and journals. For data analysis, collection of data was analyzed to develop a common approach to respond to the objectives through discussion.

IV. FINDINGS & DISCUSSIONS

4.1 The Common Market Protocol

The Common Market is the second pillar among four of the EAC integration, which came into operation on 1st July 2010. The negotiations to establish the Common Market commenced in April 2008 and ended in November 2009, after the Protocol on the Establishment of the EAC Common Market was signed by the EAC Head of State.⁴³ A Common Market is an approach whereby Partner States within a regional economic community work as a single market for goods, services, capital and labour, common revenue, and trade laws.⁴⁴

Professor Kennedy Gastorn argues that there are main two grounds stand in support of a common market or absence of internal barriers: firstly, that freedom of trade and movement tries to develop a new system where all undertaken production in the community is supervised in the best sectors that suit it; and secondly, it tries to guarantee that, the presence of commodity large-scale production, it will be produced on large scale in few places, but it covers the whole community area.⁴⁵

³⁹ Roth, B. (2011). *Sovereign Equality and Moral Disagreement*, Oxford University Press, New York, p. 53

⁴⁰ *Ibid*, P. 67

⁴¹ *Ibid*, P. 68

⁴² Hutchinson, T, and Nigel, D, *Defining and Describing What We Do: Doctrinal Legal Research*, Deakin Law Review, 2012, Vol. No.17, Issue No.1, p.102.

⁴³ Gastorn. K & Masinde.W, (2017) “The EAC Common Market” In Ugirashebuja .E, *et al*, (ed) *East African Community Law: Institutional, Substantive and Comparative EU Aspects*, Brill, Pp 285-292, p 285

⁴⁴ *Ibid*

⁴⁵ *Ibid*



The general objective of the Common Market is to expand and deepen Partner States cooperation in the area of economic and social fields for Community development.⁴⁶ The EAC Common Market is mainly grounded on five freedoms and two rights, namely the free movement of goods, free movement of labour, free movement of services, free movement of persons and free movement of capital, the right of establishment; and the right of residence; thus, it involves the integration of the four markets; (a) the goods market, (b) the labour market, (c) the services market, and (d) the capital market.⁴⁷

The spirit of the EAC Common Market depends much on the approximate and harmonisation of Partner States national laws. This is vividly reduced down from Article 4(3) of the EAC Common Market Protocol which suggests the realisation of the EAC Common Market depends much on the Partner States cooperation in the integration and harmonisation of their policies in areas provided for in the Protocol and in such other areas as the Council may determine to achieve the objectives of the Common Market. Therefore, from the above observation, harmonisation of laws and rules on the regulation and supervision of the banking industry as one of the key tools in the EAC Community is still vital to meet the full realisation of EAC Common Market integration.

Principles of the EAC Common Market

The EAC Common Market is subjected to the fundamental and operational principles of the Community as provided under Articles 6 and 7 of the Treaty; where the fundamental principles that shall govern the achievement of the objectives of the Community by the Partner States shall include:⁴⁸

Mutual trust, political will, and sovereign equality;

Peaceful co-existence and good neighbourliness;

Peaceful settlement of disputes;

Good governance including adherence to the principles of democracy, the rule of law, accountability, transparency, social justice, equal opportunities, and gender equality, as well as the recognition, promotion, and protection of human and people's rights in accordance with the provisions of the African Charter on Human and Peoples' Rights;

Equitable distribution of benefits; and

Co-operation for mutual benefit.

Also, there are Operational Principles that shall govern the practical achievement of the objectives of the Community include:⁴⁹

People-centred and market-driven co-operation;

The provision by the Partner States of an adequate and appropriate enabling environment, such as conducive policies and basic infrastructure;

The establishment of an export-oriented economy for the Partner States in which there shall be free movement of goods, persons, labour, services, capital, information, and technology;

The principle of subsidiarity with emphasis on multi-level participation and the involvement of a wide range of stakeholders in the process of integration;

The principle of variable geometry which allows for progression in co-operation among groups within the Community for wider integration schemes in various fields and at different speeds;

The equitable distribution of benefits accruing or to be derived from the operations of the Community and measures to address economic imbalances that may arise from such operations;

The principle of complementarity; and

The principle of asymmetry.

The above fundamental and operational principles of the Community shall govern Partner States on the realisation of Common by subjecting them to undertake the following:⁵⁰

Observe the principle of non-discrimination of nationals of other Partner States on grounds of nationality;

⁴⁶ Article 4(1) of the EAC Common Market protocol, also there are specific objectives provided under Article 4(2) of the EAC Common Market Protocol, that includes;(a) accelerate economic growth and development of the Partner States through the attainment of the free movement of goods, persons and labour, the rights of establishment and residence and the free movement of services and capital; (b) strengthen, coordinate and regulate the economic and trade relations among the Partner States in order to promote accelerated, harmonious and balanced development within the Community; (c) sustain the expansion and integration of economic activities within the Community, the benefit of which shall be equitably distributed among the Partner States; (d) promote common understanding and cooperation among the nationals of the Partner States for their economic and social development; and (e) enhance research and technological advancement to accelerate economic and social development.

⁴⁷ Article 2(4) of the EAC Common Market Protocol and Articles 76 and 104 of the EAC Treaty,

⁴⁸ Article 6 of the EAC Treaty

⁴⁹ Article 7 (1) of the EAC Treaty

⁵⁰ Article 5(1) and (2) of the Common Market Protocol



Accord treatment to nationals of other Partner States, not less favourable than the treatment accorded to third parties;

Ensure transparency in matters concerning the other Partner States; and
Share information for the implementation of this Protocol.

Non-discrimination in this sense means that a “partner state must treat nationals of other partner states as it would treat its own. ‘Not less favourable’ means that a partner state must treat its fellow EAC nationals as well as it would treat non-EAC nationals”.⁵¹ The EAC Common Market offers chances for Partner States to take advantage of the opportunities presented by social, political, and economic provisions in the Protocol, but the restriction on harmonisation of laws and policies across the partner states remain to be a serious challenge to ward the realisation of EAC Common Market Protocol.

4.2 The Challenges Posed by the EAC Partner States' Sovereign Protection

It has to be borne in mind that, for there to be a strong regional financial convergence, a strong financial legal framework has to be in place in any regional integration. And one of the key factors influencing the presence of a strong financial legal framework is the desire of regional integration member states to cede their state's sovereignty in the area of integration and vest it in a supranational body. The realisation of the EAC objectives as provided by the EAC Treaty and the Protocol establishing EAC Common Market has been subject to key obstacle, where each Member State protect its sovereign power in the area of financial control, specifically on banking regulation and supervision. This assertion has led to a major failure in attaining the EAC harmonised banking regulatory legal framework. Unlike integration, which is a typical political process, harmonisation of laws is the legal process that operates as a tool to facilitate the realisation of integration objectives.⁵² Therefore, harmonisation is considered as a legal tool for transforming integration objectives into common applicable principles from the international level to the national level. To attain the highest level of supranationalism, that is, placing the integration laws at uniformity and standard application at the top of the norm's hierarchy, an area where the EAC is still striving to attain for its development.

It has been cited that among the reasons why the EAC Partner States retain their sovereign power of financial regulation is the fragmentation of legal system in the East African countries or diversity of legal tradition.⁵³ These countries' legal system is categorically described by using colonial enterprise, a Eurocentric legal tradition, either common law⁵⁴, civil law⁵⁵ or mixed (hybrid) legal system⁵⁶. Thus, Tanzania, Kenya, South Sudan, and Uganda uses common law, while Rwanda, Burundi, the Democratic Republic of Congo, and Somalia uses civil law legal system. These legal systems lay down differences in legal principles both in substantive and procedural matters that in the end attract hardship during the harmonisation of laws discussion. Lastly, there is no appropriate approach to harmonisation. The Sub-Committee approach does not yield positive outcomes, since there is no effective mechanism to monitor the process and implementation by the Member States. Furthermore, Article ⁴⁶ of the Common Market Protocol requires the Council of Ministers to establish an authority or institution to manage the Common Market. This authority is not yet established; the reason is the Partner States' failure to accommodate ceding of sovereign power on specific issues to the EAC authority.

The study has observed one of the notable challenges posed by non-ceding of sovereignty that faces the banking industry at the EAC level is the fragmentation of the cross-border banking regulations to facilitate banks and financial institutions operating across the East African.⁵⁷ That, cross-border regulation in several jurisdictions attracts prudential regulation of a single financial institution to be shared between regulators, and this approach demands cooperation among regulators. The current status in the EAC, each Member State regulates and supervises banking activities by using domestic laws, there is no common rules in place on regulating and supervising banks that draw a line of the EAC supremacy over national laws. The reason is that each Member State protects its sovereign power to regulate cross-border banking activities. This has attracted slow realisation of the EAC objectives on the Common market because it is not possible to monitor a bank, especially on a cross-border basis, unless the whole of its operations can be considered in a coordinated manner.

⁵¹ The Institute of Economic Affairs, (2011) “Trade Notes,” Issue 33 of January, <https://www.ieakenya.or.ke/downloads.php?page=ISSUE-33-2011.pdf>, p 3

⁵² Mbaye. K (2002). ‘Foreword’ In Mator B, Pilkington N, Sellers. D & Thouvenot. S, *Business Law in Africa: OHADA and the Harmonisation Process*, Evershed, London, P. xxiv.

⁵³ Oppong, *Supra* note 317, Pp. 114-115

⁵⁴ For example: Tanzania, Kenya, Uganda, Gambia, Ghana, and Sierra Leone

⁵⁵ For example: Benin, Burkina Faso, Rwanda, Burundi, the Central African Republic, the Democratic Republic of Congo, and Guinea

⁵⁶ For example: Botswana, South Africa, Cameroon, Lesotho, Mauritius, Namibia, Swaziland, Seychelles, and Zimbabwe.

⁵⁷ Mayes. D, (2012). “Some Rules for Cross-Border Banks in Europe” In Alexander. K & Dhumale. R, (ed) *Research Handbook on International Financial Regulation*, Edward Elgar Publishing Limited, London, p 133



In the EAC, the concept of cross-border banking is generally covered by Cross-border Investments (CBI), where the Partner States undertake to protect cross-border investments and returns of investors of other Partner States within their territories.⁵⁸ The Protocol defined the term Cross-border Investment to mean “any investment by a national of a Partner State in the territory of another Partner State”.⁵⁹ The same has also been defined by the African Development Bank to mean all capital flows, both private and public, between countries, i.e. investment across the geographical borders of countries. Intra-regional CBI is therefore related to capital flows listed within a Regional Economic Community (REC).⁶⁰

In the EAC, banks and financial institutions play a major role in facilitating cross-border investments which are marked as an important indicator to determine the level, content, nature, and depth of the economic and social integration of the EAC. Furthermore, CBI is considered a source of Foreign Direct Investment (FDI), which paves a positive way to innovation and technology transfer, job creation, sustainable business processes, and regional managerial services.⁶¹ Taking into consideration these expected results of CBI, the EAC Common Market protocol subjects the Partner States to ensure the realisation of CBI in the Community by undertaking the following:⁶²

To ensure protection and security of cross-border investments of investors of other Partner States;

To observe non-discrimination of the investors of the other Partner States, by according to these investors treatment no less favourable than that accorded in like circumstances to the nationals of that Partner State or to third parties;

That in case of expropriation, any measures taken are for a public purpose, non-discriminatory, and by due process of law, accompanied by prompt payment of reasonable and effective compensation.

To implement these directives, the EAC Partner States were supposed to take actions and measures within two years after the coming into force of the Common Market protocol,⁶³ but nothing has been undertaken due to sovereign protection. A good example is of a recent order passed and enforced by the government of the United Republic of Tanzania in July 2025, the Business Licensing (Prohibition of Business Activities for Non-Citizens) Order, 2025. This Order prohibits issuing a license to a non-citizen to carry out business activities, some of which are within the area of cooperation under the EAC Common Market Protocol. Such as ownership and operation of micro and small industries.⁶⁴ This Order goes off key with the spirit of the Common Market Protocol, which suggest free movement of capital within Partner States for the of investments. In this regard, Tanzania has demonstrated with a clear and strong voice on how Partner States are jealous of their sovereign power and they're not even intending and willing to cede part of it to the EAC as an intergovernmental organisation so as to make it a full supranational organisation.

Furthermore, protection of sovereignty by the EAC Partner States has stumbled a move towards the realisation of the single currency. Where the Monetary Union Protocol of 2013 and subsequently the establishment of the East African Payment System (EAPS) of May 2014, were both geared toward such achievement.⁶⁵ It is vividly positioned that, the banking industry in EAC is vainly laddering due to uncertainty on its regulation and supervision since each Partner State strives to strengthen her banking system before the full adoption of the EAC Monetary Union. The EAPS facilitates real-time cross-border payments between members of the EAC, as it encourages intra-regional trade by plummeting risks and costs in cross-border money transfer.

Despite these positive initiatives, challenges are being foreseen to include the process of macroeconomic convergence due to serious variations in inflation and economic growth rates to among the EAC members. Another unaddressed challenge is the difficulty of monetary convertibility within the EAC Partner States. All the challenges are influenced due to a stand that each national applies its domestic laws to govern cross border activities, which were supposed to be regulated by at the EAC level so as to attain a common goal.

A good example of how the implication of sovereign protection affects the EAC is taking a case of the banking industry in Tanzania, which is governed by statutes, regulations, and guidelines made by the Bank of Tanzania (BOT).⁶⁶

⁵⁸ Article 29 of the EAC Common Market Protocol

⁵⁹ Article 29(4) of the EAC Common Market Protocol.

⁶⁰ The African Development Bank Group, “Regional Integration Brief”, NEPAD, Regional Integration and Trade Department - No. 2, September, 2013, p 1

⁶¹ The African Development Bank Group, (2013) “Regional Integration Brief”, NEPAD, Regional Integration and Trade Department - No. 2, p 1

⁶² Article 29(2) of the EAC Common Market Protocol

⁶³ Article 29(3) of the EAC Common Market Protocol

⁶⁴ The Business Licensing (Prohibition of Business Activities for Non-Citizens) Order, 2025, Order 3. (1) The business activities specified in the Schedule to this Order shall not be carried out by noncitizens. (2) Upon coming into effect of this Order, licensing authorities shall not issue or renew a licence for a noncitizen to carry out any of the business activities prohibited under this Order.

⁶⁵ Oxford Business Group, “The Report, Kenya 2016”, <https://oxfordbusinessgroup.com/reports/kenya/2016-report>

⁶⁶ Few to mention the laws governing are the Bank of Tanzania Act, No 5 of 2006 the banking and financial institution Act, No 6 of 2006, the Microfinance Act, No 8 of 2018 and the Foreign Exchange Act, No 1 of 1992.



The legal framework on bank regulation and supervision in Tanzania does not provide the best approach to facilitate the process of harmonisation of the banking regime in the EAC. A good example is that currency convertibility within the EAC region is not addressed by banking laws, but rather by a memorandum of understanding which does not form part and parcel of the EAC legal framework, it is only a member states arrangement.

The main challenge in trading currencies from the EAC Partner States is that there is no clear cost-effective arrangement, covered by the domestic laws or the EAC laws. The banking law in Tanzania also does not address issues relating to the EAC currency convertibility to cover the cost aspect. The current practice is that it is the financial institution at the national level that bears the cost of transporting the accumulated currencies to the central bank at the head office.⁶⁷The study found that this challenge is rooted in the requirement of repatriation of the currencies, where most of the time there is an imbalance among the EAC Partner States on the surplus currencies that need to be repatriated. This challenge is attributed by non-ceding of partial sovereign power on the matter by the Partner States, thus escalating the absence of a single rule on currency convertibility made by the EAC, which needs to be adopted within the Partner States' national laws.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

To sum up this discussion, the study has displayed vividly that the concept of sovereignty is a vital aspect for the attainment of the objectives of any regional economic integration. Basic theories of regional integration suggests that member states of any regional integration are subjected to the demand of yielding part of their sovereign to the regional organisation, a demand that has promptly attracted number of challenges. The Partner States are not willing either economically or politically to cede part of the sovereign power to the organisation so it can address its own objectives as provided under the treaty establishing the EAC. It is agreed that efforts have been made to address these challenges, but they are not enough compared to the level of measures taken by the Partner States to protect their sovereign power. This situation has intensively affected the realisation of the EAC Common market, particularly in the regulation and supervision of the banking industry. One of the challenges established by the study is fragmentation of the cross-border banking regulation, also it has been established that monetary convertibility is very difficult within the EAC partner states due to protection of domestic financial industry.

5.2 Recommendations

It is hereby recommended by this study that the Partner States should be willing to cede part of their sovereign powers to create a well organised regulatory authority with legal power to deal with issues related to regulation and supervision of banks and financial institutions. The authority will be there to ensure banks operate in a sound and far away from business risks so as to attract foreign direct investment in order to ensure the realisation of the EAC common market.

For the EAC to realize its objectives, there is a need to have in place an organ that is tasked to monitor and entrench harmonisation of laws, then the same is left to the mere Committee with no legal status to affect the observations. Also, it's difficult for the EAC to monitor its own progress, hence other Civil and Economic societies may be involved and take chances to play a vital role in monitoring and reporting the progress on the implementation of EAC objectives through harmonisation of laws. Also, the call to the realisation of EAC objectives through the banking industry is the adherence to the effective political and economic will among the Member States. These include good governance, respect for fundamental rights, and a budget for harmonisation of laws.

The presence of regional *hegemons* may have a positive or negative impact on the integration progress. A regional hegemon with economic power may monopolies the majority will of the region against other members, but on the other hand, such a hegemon may influence by using their economic power to the harmonisation of laws through financial and administrative assistance to other EAC member states in institutional development that will help the implementation of regional objectives. A good example is in the ECOWAS where Nigeria contributes much to the regional economy and security. For there to be an effective realisation of the EAC pillar there must be effective leadership by regional hegemons, in the EAC, Tanzania and Kenya may lead as hegemons on the whole process of harmonisation of laws that the Common Market and Monetary Union depend on.

⁶⁷ Adam, Christopher S., Pantaleo Kessy, Camillus Kombe, and Stephen O'Connell. "Exchange Rate Arrangements in the Transition to East African Monetary Union." *CSAE Working Paper Series 2012-07*. Centre for the Study of African Economies, University of Oxford, 2012.



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Banking and Financial Institution Act, No. 6 of 2006.

Microfinance Act, No. 8 of 2018.

Foreign Exchange Act, No. 1 of 1992.



Hyponym variations of semantic fields in Lutirichi

Sylvia Khavaya Shiroso¹
Benard Mudogo²
James Matseshe Sasala^{3*}

^{3*}jmatseshe1@gmail.com

^{1,2,3}Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

Studies in the field of semantics show that hyponymy is a basic semantic sense relation through which the nexus between a generic term (hypernym) and a specific instance of it (hyponym) can be manifested. However, to understand hyponymy, the inclusion relation between a hypernym and hyponymy within a semantic field is crucial. The purpose of this study was to examine hyponymic structures and their variations within selected semantic fields in Lutirichi, such as flora, fauna, kinship, and artifacts. The study was anchored in the Semantics Field Theory (SFT). A descriptive research design was employed. Data was collected through administering key informant interviews to native speakers of Lutirichi. The findings established that some semantic fields exhibited a high degree of lexical specificity and multiple layers of hyponymy, whereas others relied on broader, more generalized terms. The study also observed that hyponymic variations were also due to the sense of entailment in Lutirichi hyponyms. The study concludes that hyponymy in Lutirichi is meaningful only in their semantic field, and thus they are bound to change their meanings from one context to another context. These results contribute to a deeper understanding of semantic field structuring in underrepresented languages and provide insights into the cognitive and cultural underpinnings of lexical organization in Lutirichi. We recommend deliberate documentation and preservation of Lutirichi lexical items across semantic fields to safeguard their contextual meanings and promote linguistic vitality within the community.

Keywords: Entailment, Hypernymy, Hyponymy, Lutirichi, Semantic Field

I. INTRODUCTION

There is an inter-related network of lexical items existing in a language. Each group of words related in one way or the other belongs to the same semantic field. However, in the same field, there are entailment variations within different semantic fields thus creating context specific meanings for various lexical items. The present study was interested in the semantic variations of Lutirichi hyponyms from one context to another context of usage. Whereby, the meanings of some Lutirichi hyponyms vary in sense when used in different contexts.

According to Anjiji (2008) Lutirichi is one of the nineteen varieties of the Luhya macro language. Marlo (2011) also posits that Luhya language is made of a minimum of nineteen languages. The members include Lubukusu, Lukhaayo, Lumarachi, Lusamia, Lunyala (East and West), Lutura, Luloogoli, Lutirichi, Lunyore, Lwisukha, Lwidakho, Luwanga, Lumarama, Lutsotso, Masaba, Lukisa, Lukabaras, Lusonga and Lutachooni. Mudogo (2017) identifies Lusonga as one of the Luhya languages. Available studies differ on the exact number of languages that comprise the Luhya language (Kebeya1997). Lutirichi is spoken by Abatirichi. The area inhabited by Abatirichi speakers include: Shiru ward, Shamakhokho ward, Muhudu ward, part of Banja ward, Jepkoyai and part of Gisambai ward.

In this context, the study sought to examine how hyponymic relations in Lutirichi reflect semantic field organization and contextual meaning variation. The overall aim was to analyze how lexical items within selected semantic fields—such as flora, fauna, kinship, and artifacts—interrelate and vary in meaning across contexts of use, thereby contributing to the understanding of how meaning is structured and negotiated within Lutirichi.

1.1 Research Objective

The objective of this study was to analyze the structure and variation of hyponymic relations within selected semantic fields in Lutirichi, specifically flora, fauna, kinship, and artifacts, in order to understand how lexical specificity and entailment shape meaning within the language

II. LITERATURE REVIEW

2.1 Theoretical Review

Scholarly studies reveal that there exist some theories of semantics which deal with the meanings of words and sentences not as isolated entities but as related to situations of occurrence and use. For instance, Field theory developed in Europe by Trier explains the vocabulary or lexicon of a language as a system of inter-related networks or semantic fields. Semantic fields may vary across speakers and words may belong to more than one category. These may include: clothing, parts of the body, emotion, directions etc. For instance, trousers, hat, loafers, shirt, blouse, high heels etc., belong to the same semantic category as 'clothing'.

According to the semantic classification, a lexical unit depends on the meaning and environment in which it is expressed; as well lexical units have the property of interconnectedness. Some relationships in a lexical unit consist of sense relations such as hyponym and hypernym. The relationship between a hyponym and a hypernym is a relationship between a general and a specific (thematic) term that represents the term hyponymy. For example, the words "red", "yellow", "green", and "blue" are hyponyms of the hypernym "color".

According to Griffith (2006, p. 25) entailment occurs when the truth of one proposition depends on the other. It means that the truth of two propositions correlates with one another. On the other hand, Rambaud (2012, p. 70) argues that entailments are related to the knowledge of a particular language, and it has nothing to do with the knowledge of the truth. In other words, in entailments, the meanings of two sentences or lexical elements correlate to each other without regarding the reality of the word. Cruse (2000) posits that entailment has a context-bound relation with regard to identity and inclusion relations. Entailment in hyponymy is a unilateral relation such that the meaning of one hyponym entails the meaning of the superordinate, but the meaning of the superordinate does not entail the meaning of each hyponym. Cruse's views on entailment and hyponymy are crucial to the study of hyponyms in Luterichi.

2.2.1 The Semantic Field Theory

According to (Nordquist, 2017) a semantic field is a set of words (or lexemes) which are related in meaning. Semantic field is also known as a word field, lexical field, field of meaning, and semantic system. Semantic field more specifically is as a set of lexemes which covers a certain conceptual domain and which bear certain specifiable relations to one another (Lehrer (1985). In order to clarify the meaning of semantic field and exemplify it, Nordquist (2017, p.1) states that "the words in a semantic field share a common semantic property. Most often, fields are defined by subject matter, such as body parts, landforms, diseases, colours, foods, or kinship relations."

The core of semantic field theory is to analyze the relationship between genus and species of lexical study. (Mei, 1987) It suggests that the words of a language system are related with each other and they form a complete lexical system. In this system, certain words could form a semantic field under a common concept. For example, under the concept of stationery, pen, eraser, pencil, ruler and etc. could form a semantic field. In this semantic field, stationery represents the genus, or in other words, general concept; pen, eraser, pencil, and ruler represent species, or specific concept. In short, semantic field is a combination of a group of words that interact, dominate, distinguish and depend on each other. The semantic range of the combination is called the field range of the semantic field. Therefore, the semantic field theory is significant to the present study it explains clearly the role of entailment in Luterichi hyponyms.

Semantic field can be also called lexical field or domain, which refers to the combination of a bunch of words with interrelated meanings and dominated under a same concept (Zhou, 2001). It has two folds of meanings. Some words, from a language, which were dominated under one certain concept, combined together and formed a semantic field. This certain concept may be represented by a superordinate, while the semantic field is formed from either hyponyms or semantic features. For example, under the common concept of furniture, words like table, closet, bed, bookshelf, couch, sofa, chairs, etc., could be gathered as a semantic field. Another example, burgundy, purple, pink, green, yellow, blue, orange, white and black, these words go to a common concept of color. On the other hand, words that belong to the same semantic field are not only semantically related, but also interact with each other. That is to say, when checking the meaning of a word, the first step is to compare the semantic meaning of the other words under the same semantic field.

Hyponymy is the most common branch of semantic field theory. It contains all objects that belong to the same category. The most fundamental category is dualistic, for example, paddy field and upland field, autorotation and revolution, etc. Another category is diversified, for example, navy, marine, air force, etc. Hyponymy can be multileveled, which means the basic level could be divided into more specific levels, and even more specific ones. For instance, we could divide animals into human being and birds and beasts, yet birds and beasts could be further divided into birds, fishes, insects and mammals, etc. And the mammals could also be specifically divided into pigs, dogs, cows, wolves and horses, etc. And finally, for example, horses can be further divided into broncos, stallions, ponies and so on. These divisions implicate the system of hyponymy, which is basically the superordinate-hyponym semantic field, also called general terms and specific terms.

III. METHODOLOGY

The present study adopted a descriptive research design (Koh & Owen, 2000). The research site was in Hamisi sub-county which is one of the five sub-counties found in Vihiga County namely: Luanda, Emuhaya, Hamisi, Vihiga and Sabatia. The local language spoken in the areas is predominantly Lutirichi. Primary data was collected from the respondents using through key informant interviews and FGDs. The researcher targeted to collect 250 words from three categories of lexical items that included hypernyms, hyponyms, and subtypes of hyponyms. Every third lexical item from each set was picked. Thus, a total of 27 lexical items which included nouns, verbs and adjectives were sampled for analysis.

IV. FINDINGS & DISCUSSION

4.1 Findings

The analysis of Lutirichi lexical items revealed that several hyponyms exhibit meaning shifts depending on the context of use. These variations illustrate the dynamic nature of semantic relations in the language, where a single lexical item may extend beyond its primary referential meaning to convey figurative or context-dependent senses. Such semantic flexibility demonstrates how cultural, social, and situational factors influence meaning construction in Lutirichi. Table 1 presents selected examples of hyponyms that show notable meaning variations across different contexts of use.

Table 1
Hyponym Variations in Lutirichi

HYPONYM	GLOSS	MEANING VARIATION	SENTENCE UTTERANCES	GLOSS
<i>lipwooni</i>	Potato	Bribe	<i>Shuuma uhani lipwooni kwanyoore mhinsi.</i>	Shuma has bribed in order to get a job.
<i>Vuree</i>	Millet	Alcohol	<i>Khuhuuli vuree vuduukhu vwosi</i>	We drank alcohol the whole night.
<i>Shimuli</i>	Flower	Vanity	<i>Tsirupya ni shimuli vutswa.</i>	Money is vanity.
<i>Shing'ang'a</i>	Fox	Merciless	<i>Oyoo ni shing'ang'a uheense vulaahi.</i>	He is merciless, be careful.
<i>Khuteekha</i>	cooking	To get married	<i>Vuleche wa teekha Kakamega</i>	Vuleche got married in Kakamega.
<i>Shighaari</i>	Big	Leadership/promotion	<i>Unyori vughaari</i>	He has become a leader/He has been promoted.
<i>Imwamu</i>	Black	Evil heart	<i>Urhi nu mwoyo mumwamu.</i>	You have an evil heart.
<i>Isimbwa</i>	Dog	bad behavior	<i>Mwikhula wewe ni isimbwa</i>	His son is behaving badly.
<i>Linani</i>	cheetah	Giant/very big	<i>Yagwaa linani.</i>	He has grown very big/ He is a giant.
<i>Musaala</i>	Tree	Sly person	<i>Anusu ni musaala murherere</i>	Anusu is sly.
<i>Khulola</i>	See	foolish	<i>Akhuloli musiro</i>	He taking you for a fool.
<i>Khuchenda</i>	Walking	Fail to succeed	<i>Lero nda khuchenda vutswa.</i>	Today I did not succeed.
<i>Inasore</i>	Bhang	Stupid	<i>Akhubimii inasore.</i>	He thought you are stupid.
<i>Musaala</i>	Tree	Bhang	<i>Mwikhula wa reve ang'wetsa musaala.</i>	His son is smoking bhang.
<i>Musaala</i>	Tree	A prominent person	<i>Musaala kwa mang'ana kugwire mutirichi.</i>	A prominent person has died in Tiriki land.
<i>Khuchenda</i>	Walking	Prostitution	<i>Khang'ahi achenda lichenda.</i>	Khang'ahi is a great prostitute.

From the data in Table 1, it was observed that there is meaning variations in Lutirichi hyponyms. *Vucheeri*, for example, is a hyponym which refers to intelligence can also be used in a different context to mean a witch. *Uyu nii mucheeri wamaala vanduu tooto*, to mean this one is a witch he has killed so many people. Lutirichi hyponyms such as *lipwooni* (potato), *vuree* (millet), *shimuli* (flower), *shing'ang'a* (fox), *kuteekha* (cook), *shighaali* (big), *imwamu* (black), *isimbwa* (dog) and *linani* (cheetah) have different meaning when used in different contexts. The semantic field theory was relevant in explaining how the meaning of a word can only be fully determined in terms of contrast in which it stands with other words in the field. For instance, in the examples given above, the hyponym *lipwooni* (potato) which is a noun is altered to a verb (bribe) when used in a different context. Therefore, the findings of this study are in agreement with the study and findings of Andriani, 2023 who investigated the central or core meanings of selected fruit,



vegetable and flower names from the viewpoint of hypernym-hyponym relationships. Adrian concluded that dictionary users ought to realize that some word definitions needed improving and lexicographers should pay proper attention to core meanings and hypernym-hyponym connection. However, the present study differs from Andriani's, in the manner that the present study investigated general hyponyms in Lutirichi in terms of verbs, nouns and adjectives.

4.1.1 Hyponyms for nouns

Example 1

Frank & Kathryn (1994) posit that hyponymy is sometimes referred to as inclusion. The superordinate is the included word and the hyponym is the including one. This is because when people utter statements, they often convey entailment whether intentionally or unintentionally because the basis of semantic description is the notion of entailment. However, from the data collected through the FGDs there was a contradiction established in some Lutirichi hyponyms whereby the notion of entailment is lost during usage for example; It is hard to relate the hyponym *lipwooni* (potato) and bribe, the two are different in the sense that a potato is a plant while bribe is a vice but Lutirichi speakers use *lipwooni* (potato) in some contexts to mean bribe.

Example 2

We cannot say that competency entails *iroong'u* (trousers). Trousers are clothes but can be used in Lutirichi to refer to competency. This was the reason why the present study saw it relevant to apply the Semantic Field Theory in the study. According to Wu (1988), he summarized Trier's semantic field theory as follows: Firstly, the vocabulary in a language system is semantically related and builds up a complete lexical system. This system is unsteady and changing constantly. Secondly, since the vocabulary of a language is semantically related, we are not supposed to study the semantic change of individual words in isolation, but to study vocabulary as an integrated system. Finally, since lexemes are interrelated in sense, we can only determine the connotation of a word by analyzing and comparing its semantic relationship with other words. A word is meaningful only in its own semantic field.

Nouwen (2011, p.2) explains that entailment can be used to establish whether two sentences are semantically independent, semantically related, or semantically identical. Technically, Nouwen portrays entailment as sentence S entails sentence S' if and only if S is true too. The present study agrees with Nouwen's explanation on entailment. *Lishaati* (shirt) entails *tsinguuvu* (clothes). This is because if you have a shirt then it means that you have clothes. Tomasello (2003), posits that language structure arises from repeated language use, meaning "structure emerges from use," and that people learn language by building up a mental inventory of specific linguistic constructions based on their experiences with language in context.

Example 3

Entailment is addressed logically since it is the foundation for all other logical relationships. These relationships consist of both "equivalence and contradiction". Therefore, the premise underlying "Molly is a cat" implies the premise underlying "Molly is an animal." As a consequence, one cannot simultaneously assert that "Molly is a cat and deny that it is an animal"; doing so would constitute a contradiction. Therefore, entailments are a crucial component of what is spoken, and they cannot be cancelled or separated (Bertuccelli, 1997, p.141). Likewise, Lutirichi hyponym *Linyolonyolo* (wandering jew) entails *tsinguutsa* (vegetables) which entails *virhaakwa* (plants) as it was established from the FGDs. This means that wandering jew is a type of vegetable which is a plant.

Hyponym for verbs

Finnegan (2008) argues that in spite of the fact that hyponyms can be found in dialects, ideas or words in hyponym relationship shift from one language to the next language. The present study through the FGDs came across a number of hyponyms in Lutirichi language for example *khutsenjeera* (gaze) is a hyponym of *khuloola* (seeing). This means that when we talk about gazing, we entail seeing. This study employed semantic field theory in which it is argued that meaning in use represents an approach to the functional or semantic dimension of linguistic communication. The intention was to combat the idea that meanings are things and instead focus on how people use linguistic conventions to achieve social ends. Therefore, the truth of one hyponym is the truth of the second hyponym which is one of the major characteristics of hyponyms. However, this study observed a unique characteristic in Lutirichi hyponyms.

Example 4

Miao (2020) presented the importance of lexical/sense relations in learning vocabulary. During the FGDs the researcher deduced that meanings of vocabulary are largely determined by the lexical sense relations, which makes the understanding and analysis of lexical sense relations helpful in the mastery of meanings of words. However, some Lutirichi hyponyms are against Miao, for instance, *khuteekha* (cooking) a hyponym in Lutirichi Language when used in



a different context changes its meaning to getting married. For example, *Vuleche wa teekha Kakamega* (Vuleche got married in Kakamega.) Therefore, the present study found the semantic field theory apt for the study.

The findings of the present study established that the role of entailment in Lutirichi hyponyms is lost during the usage of the hyponyms in the language. This is because the dictionary meanings of some Lutirichi hyponyms change their meanings when used in different contexts as discussed above. The study observed that entailment in hyponyms was utilized by the young generation and middle-aged people thus those below 45 years old while those above 46 years mostly used the hyponyms in table 4.2 and 4.3 thus applying the semantic variations.

4.1.2 Hyponyms for Adjectives

Example 5

According to Cruse (2000), entailment has a context-bound relation with regard to identity and inclusion relations. Entailment occurs freely with propositional synonymy. Although the two lexical items in near synonymy are close in meanings or related, entailment relation cannot be attained. Entailment in hyponymy is a unilateral relation. i.e., the meaning of one hyponym entails the meaning of the superordinate, but the meaning of the superordinate does not entail the meaning of each hyponym. However, during the FGDs it was established that some Lutirichi hyponyms lost this characteristic of entailment when used in a different context. For instance, *Vucheeri*, is a hyponym which refers to intelligence in Lutirichi language but it can also be used in a different context to mean a witch. For example; *Uyu nii mucleeri, wamaala vanduu tooto*, (This one is a witch, he has killed so many people.) Lutirichi hyponyms process this characteristic for example *Limaanya* (wisdom) entails *vucleeri* (intelligence). This means if you are wise then it means you are intelligent.

Example 6

According to Yule (1996) hyponymy is a word that shows relationships between a general and a specific meaning of a word. This means that the meaning of a word is included in the meaning of another word. In Lutirichi the hyponym *imuuchi* (red) entails *likoondo* (colour). This means that when we talk about red then we are referring to a colour. This means that some Lutirichi hyponyms like *imuuchi* (red) agree with Zule's definition of a hyponyms.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study has examined the variation of hyponyms across several semantic fields in Lutirichi, revealing patterns of lexical organization that are both linguistically significant and culturally grounded. The analysis demonstrated that certain semantic domains, such as kinship and local flora, exhibit deep and finely differentiated hyponymic hierarchies, reflecting the cultural and ecological relevance of these categories within the Lutirichi-speaking community. In contrast, other fields, such as technological artifacts or abstract concepts, tend to have broader, less differentiated lexicons, often influenced by contact with other languages or limited functional necessity. The findings underscore the importance of considering both linguistic structure and sociocultural context in the analysis of semantic systems. The study not only contributes to the documentation of Lutirichi, a lesser-studied language, but also enriches our understanding of how languages can differ in the ways they classify and name the world. Future research could expand on this work by exploring diachronic changes in hyponymic structures or by comparing these patterns across related or neighboring languages.

5.2 Recommendations

Based on the findings, the study recommends the deliberate preservation and promotion of Lutirichi vocabulary, especially within domains that reflect the community's cultural and ecological identity, such as kinship and flora. Language revitalization initiatives, including curriculum development, local literature, and oral documentation, should incorporate these context-specific lexical distinctions to sustain their semantic richness. Additionally, community-based language programs and cultural forums should be encouraged to ensure that evolving concepts, especially those influenced by external languages, maintain their relevance and authenticity within the Lutirichi linguistic system.

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Impact of the ‘Pink October’ campaign on breast cancer awareness levels and screening uptake among students of Masinde Muliro University of Science and Technology in Kakamega County, Kenya

Kevin Omwayi Ngaira^{1*}

Lydia Anyonje²

Rose Auma³

Roselyne Abwalaba⁴

^{1*}kevinomwayi@gmail.com

^{1,2,3,4} Masinde Muliro university of Science and Technology, Kenya

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ABSTRACT

This study investigated the extent to which the annual Pink October campaign influences knowledge levels and breast health-seeking behavior among students of Masinde Muliro University of Science and Technology (MMUST) in Kenya. The study employed a mixed-method research design that was both quantitative and qualitative. A semi-structured questionnaire was administered to a representative sample of 400 students, selected through multi-stage cluster sampling and proportionate stratified sampling from the target population of university students at MMUST. The questionnaire aimed to assess the levels of breast cancer awareness and screening practices among university students after the campaign month of October 2024. This study was undertaken between the 4th and 24th of November 2024. Data analysis was carried out using the Statistical Package for the Social Sciences (SPSS) version 19. Findings indicated that the Pink October campaign was effective in improving general awareness levels among the targeted audience. Challenges such as lack of awareness about screening, limited access to screening equipment, and the financial costs of the procedure, however, limited its effectiveness with regard to the uptake of breast cancer screening. The study concluded that the Pink October campaign is a useful tool in raising awareness, but uptake of screening was very low despite it being the primary intervention measure, as it increases chances of early detection and treatment. There is thus a need for consistent engagement with the target audience and the use of audience-focused communication strategies alongside policies that facilitate free screening services throughout the year.

Keywords: Breast Cancer Awareness, Health-Seeking Behavior, Pink October Campaign, Screening Uptake, University Students

I. INTRODUCTION

Breast cancer (BC) accounts for 23% of all cancer cases in Kenya, making it the most prevalent form of cancer. Despite the many campaign strategies for BC awareness creation, which are mainly communicated during Breast Cancer Awareness Month, globally recognized as the *Pink October* campaign, including BC screening, breast self-examination, and social media campaigns, BC remains prevalent, with the majority of cases presenting at late stages (III and IV) when the disease is already advanced and most difficult to treat. The most common communication strategy used by national governments and health service providers in creating BC awareness is the *Pink October* campaign, yet information about its suitability in creating the expected awareness for early detection and treatment is scarce. Previous studies have focused on BC survivors, BC patient statistics, and Google Trends-based research about prevalence and mortality rates. In addition, traditional mass media (print, radio, and television) coverage of BC has focused on survivor testimony and treatment options, which goes against the World Health Organization, (WHO, 2025) recommendation through the Global Breast Cancer Initiative (GBCI) that emphasizes awareness creation as the primary means of managing the disease. There are very few documented studies that investigate the utilization of the *Pink October* campaign as an awareness tool in BC. It is against this background that the study seeks to fill this knowledge gap by investigating the utilization of the *Pink October* campaign as an awareness tool in BC awareness among students of Masinde Muliro University of Science and Technology in Kakamega County, Kenya.

BC, the leading and most common cancer type, affects people of all ages and is most prevalent among women. Despite the many campaign strategies for BC awareness, it still accounts for 23% of all new cancer cases in Kenya. BC is the most common type of cancer among women globally, but many people remain ignorant of the most basic self-inspection techniques that can help women detect BC early, when it is most responsive to treatment. BC is a non-

communicable disease that does not exhibit obvious symptoms in the early stages (I and II), resulting in over 6,000 new cases and approximately 3,000 fatalities annually (Ministry of Health, 2021; Sayed et al., 2019). Furthermore, 70% of patients in Kenya are diagnosed in stages III and IV, when it is most difficult to treat (Wambalaba et al., 2019).

Early detection and awareness creation are thus the key strategies to manage the disease, and this requires that the population be informed on the significance of regular and voluntary screening even when there are no symptoms or health complications (WHO, 2025). These concerns regarding awareness led to the development of the *Pink October* campaign, whose origins can be traced back to 1985, when former United States First Lady Betty Ford, a BC survivor, launched the National Breast Cancer Awareness Month (NBCAM) in partnership with the American Cancer Society and Imperial Chemical Industries. Their objectives were to promote BC awareness and screening for risk reduction and early detection (Kumar et al., 2023). Despite these annual efforts and their success in Western countries, the incidence and mortality rates of BC patients in Third World countries continue to rise. It is against this background that this study aims to assess the impact of the *Pink October* campaign on BC awareness levels and screening uptake among students of MMUST.

1.1 Research Objective

The objective of this study is to **assess** the impact of the Pink October campaign on breast cancer awareness levels and screening uptake among undergraduate students at Masinde Muliro University of Science and Technology (MMUST) in Kakamega County, Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

This study was underpinned by the Health Belief Model (HBM) and the Elaboration Likelihood Model (ELM). The ELM describes the two routes that influence how recipients process information they are exposed to: the appeal to logic and the aesthetic appeal of the presentation format (El Hedhli & Zourrig, 2022). The HBM, on the other hand, proposes that an individual's decision regarding their health is influenced by perceived susceptibility, benefits, severity, barriers, cues to action, and self-efficacy (Nortje, 2024). Whereas the ELM focuses on the format and content of awareness messages, the HBM focuses on the psychological factors that influence an individual's health decisions. When used together in this study, they assist in establishing how audiences process awareness information and the psychological processes that drive behavior change regarding health after exposure to awareness messages during the *Pink October* campaign.

2.2 Conceptual Review

Over the past three decades, the *Pink October* campaign has evolved into a special event marked in countries across the world every October. It has become a global call to action that seeks to raise awareness, promote early detection, and offer support to those affected by BC while advocating increased access to screening, treatment, and research funding. The event helps to increase attention and support for awareness, early detection, treatment, and palliative care of the disease. A variety of activities are undertaken during this period to encourage public participation in awareness creation, including but not limited to public educational lectures, walks, sporting events, "wear pink" days, and free screening campaigns (Mattos et al., 2024; Breast Cancer Awareness Month – Pink October, 2023).

The *Pink October* campaign has had relative documented success in other parts of the world, such as Brazil. A five-year study of its impact on audiences every October from 2017 to 2022 established that it resulted in an increase in the number of mammograms performed. There was also an increase in demand for mammograms by up to 39% during October, November, and December, after which demand decreased by up to 20% in the subsequent nine months until the next campaign period (Antonini et al., 2022).

In a related study by Luna-Abanto et al. (2022) on the impact of cancer awareness campaigns in Peru, it was established that *Pink October* was the most widely recognized cancer awareness campaign. The qualitative study, conducted over a five-year period using Google Trends, also registered increased demand for screening and online interest in BC during the months of October, November, and December. Declining interest was observed from mid-January, and this consistent decline continued until October, when the cyclical pattern repeated itself.

Similar results have been documented in other countries such as Malaysia, the United States, and Finland during the *Pink October* campaign month. The results of these studies highlight the positive influence of BC awareness campaigns on target audiences. This is supported by the increase in online searches for information about BC and the increased demand for mammograms during the campaign period. The data from these studies document the impact of *Pink October* on screening uptake in the populations of these countries during and after the campaign period (Luna-Abanto, 2022).

Despite all these awareness efforts, Africa still has the highest BC mortality rate, yet the continent does not lead in incidence rates compared with Western countries. In 2012, for example, Nigeria recorded 27,304 BC occurrences and 13,960 deaths, resulting in a mortality rate of 51% (Salako et al., 2017). Prevention should therefore be the primary strategy in combating BC before incidence rates reach or surpass the current statistics from developed countries. This will enable prioritization in the face of limited resources, as is currently the case (Azubuike, 2016; WHO, 2024).

Sub-Saharan Africa, for example, has a survival rate of 40% compared to the United States, which has a survival rate of 86% within the first five years. According to the IARC, with prevalence rates on the rise, the implementation of early detection policies and preventive measures are key factors in combating the disease. BC in African women tends to be the aggressive triple-negative subtype, which is non-responsive to commonly used therapeutic drugs. Unless medical care and screening practices are dramatically improved in Africa, BC mortality rates can be expected to remain disproportionately high (Koech et al., 2024).

Despite being the leading cause of death among women in Africa, accurate BC statistics are still lacking, as most African countries, especially in Sub-Saharan Africa (SSA), do not have national cancer registries to aid in this objective. Furthermore, ignorance about risk factors and symptoms places women in SSA at high risk not only of developing BC but also of late diagnosis when they do (Tsoka-Gwegwenia et al., 2017).

Information from reliable sources is vital in educating people about the characteristics of the disease, as this places them in a position to identify symptoms, understand causes, and know how best to access treatment. As a key component in addressing such a challenging health issue, the importance of information should not be downplayed. When individuals are armed with relevant knowledge, they are able to make informed decisions about their health and choose the best treatment options. In developing countries, ignorance about preventive healthcare has been established as a major factor that discourages individuals from vaccinations and screening procedures, which are among the best modes of cancer prevention (Koech et al., 2024; Igwilo, 2013).

Kenya is among the 20 African countries with the highest incidence and mortality rates of BC, indicative of challenges facing timely diagnosis and treatment. Over 60% of those affected are below 70 years old, with statistics indicating that only one in ten children diagnosed with the disease survives (WHO, 2022; Azubuike, 2018).

BC is not necessarily a fatal disease, and the probability of successful treatment is highest when it is detected at the early stages. Effective awareness communication on signs and symptoms will lead to early diagnosis and increase the chances of prevention and successful treatment. This can only happen when people are aware of the significance of screening, even when they are not displaying any symptoms. Furthermore, the causes of BC are still under research (WHO, 2024). Therefore, early detection remains the best method of control, as it increases the probability of successful treatment. This study therefore aimed to assess the impact of the *Pink October* campaign on BC awareness levels and screening uptake among MMUST students in Kakamega County, Kenya.

III. METHODOLOGY

3.1 Research Design

The study adopted a descriptive cross-sectional research design to assess BC awareness among undergraduate students at MMUST. This design was appropriate because it allowed for the collection of data from a large population at a single point in time, enabling the researcher to describe and analyze the current level of awareness, knowledge, and preventive practices related to BC. The approach facilitated the identification of patterns and relationships between demographic characteristics and awareness levels without manipulating any study variables.

3.2 Study Area

The study was conducted at MMUST, located in Lurambi Constituency, Kakamega County, Kenya. MMUST is among the 30 public universities in Kenya. It was established in 1972 as the Western College of Arts and Applied Sciences and was upgraded to a fully accredited university in 2007. The university has approximately 16,580 students and covers an area of about 133 acres (0.538 square kilometers). Students come from all parts of Kenya, representing the national demographic, and are the target audience of BC awareness campaigns, which aim to sensitize susceptible populations about preventive measures that can be employed to manage the disease.

3.3 Study Population

The study population consisted of Undergraduate students of MMUST in Kakamega County, Kenya. This population was estimated at 16,580 students, according to the records based on the data from the University's registrar's office records for the academic year 2024/2025. The study excluded students who were yet to join or had deferred and focused on those students that were in session during the period the study was undertaken.



3.4 Sampling Procedure

When it is not possible to study an entire population but the population is known, a smaller representative sample is taken and categorized using the proportionate stratified sampling technique. The Slovin’s formular (Tejada & Punzalan, 2012) was used to establish the number of students in the sample population and was calculated as follows:

Equation: $N / (1 + Ne^2)$ Stephanie (2013)

n= Sample size

N= Total population

e= Margin of Error (0.05)

Where N is 16578

$n = 16578 / (1 + 16578 \times 0.05^2)$

$n = 16578 / 41.44 = 399.9$. Therefore, the sample size will be 400 respondents.

We employed the multi-stage cluster sampling and proportionate stratified sampling techniques to ensure the distribution of the 400 study participants was a fair representation of the population under study. Three out of the eleven Schools at MMUST—School of Arts and Social Sciences (SASS), School of Education (SEDU), School of Public Health, Biomedical Sciences and Technology (SPHBST) were initially selected as they had unique characteristics relevant to this the study. SEDU and SASS were chosen due to their shared characteristics as well as the large number of students pursuing undergraduate programs there. SPHBST was picked for the perceived or expected exposure of their students to health awareness campaigns.

Table 1

Population in the Selected Schools

School	Department	Population
SEDU	Language and Literature Education	1393
SASS	Criminology and Social Work	1600
	Journalism and Mass Communication	797
	Social Science Education	657
	Geography	560
SPHBST	Medical Laboratory Sciences	392
	Optometry and Vision Sciences	250
	Health Promotion and Sports Science	261
	Health Professions	150
	Nutrition and Dietetics	230
Grand Total		6290

Source: Masinde Muliro University of Science and Technology Records

Within these selected Schools, multi-stage cluster sampling was further employed to determine the specific departments to be included in the study basing on population size and categorize the participants according to their degree programs. SASS had five departments (Language and Literature Education, Criminology and Social Work, Journalism and Mass Communication, Social Science Education, Geography) SEDU comprised of five departments (Curriculum Institutional Technology, Educational Foundation, Educational Planning and Management, Educational Psychology, Science and Mathematics) while SPHBST contained six departments (Medical Laboratory Sciences, Optometry and Vision Sciences, Health Promotion and Sports Science, Health Professions, Nutrition and Dietetics, Public Health), that provided a structured basis for sampling across diverse demographic contexts within MMUST and also determined the number of questionnaires to be issued per department. Table 3.2 indicates the number of questionnaires to be distributed to each department

Table 2

Proportionate Stratified Sampling According To Departments Selected

Department	Population	%	Number of questionnaires to be distributed to each department
Criminology and Social work	1708	37.52	150
Journalism and Mass Communication	797	17.51	71
Medical Laboratory	392	8.62	35
Health Promotion and Sports Science	261	5.73	24
Language and literary Education	1393	30.62	125
Totals		100%	400



Proportionate stratified sampling was applied to ensure equal representation across the selected undergraduate courses according to the total number of students pursuing it. Students were further divided into strata based on year of study and the percentage of students in relation to the total number of students per course to determine the number of questionnaires to be issued. For example, criminology had 820 students who represented 18.01% of the sample population which translated to 72 questionnaires out of 400. 1st years in criminology numbered 252 out of 820 which represented 30.2% of all criminology students meaning the number of questionnaires to be issued to 1st year criminology students would be 30.2% of 72 which is 22 questionnaires issued randomly to 1st year criminology students. The same sampling procedure was applied to all the courses that were selected for the study.

Table 3
Proportionate Stratified Sampling According to the Degree Program

Program	Population	%	Number of questionnaires to be distributed per program
Criminology	820	18.01	72
Social work	888	19.51	78
Journalism and Mass Communication	797	17.51	70
Medical Laboratory	392	8.62	35
Health Promotion and Sports Science	261	5.73	23
Language and Literature Education	1393	30.62	122
Totals	4551	100%	400

3.5 Data Collection

Research assistants were trained on the proper method of administering the questionnaire survey collection tool as per the sample size arrived at via Multi-stage cluster sampling and proportionate stratified sampling methods before commencement of fieldwork. Data was collected from the 400 university students using interviewer-administered questionnaires. This resonates with suggestions by Duggal (2023) regarding data collection for a mixed study.

3.6 Data Analysis

This study employed the Statistical Package for the Social Sciences (SPSS) version 19 for data analysis. Descriptive statistics were used to analyze the quantitative data as follows: measures of frequency showing how often a response was given, and measures of central tendency showing the most commonly indicated response using the median and mean. Results were presented in the form of discussions, tables, percentages, and pie charts.

Qualitative data from the open-ended responses were coded into categorical variables, which were then analyzed using the same SPSS software. Manifest and latent content analysis, which included data preparation, reading and reflecting, coding and categorizing, and the development of conceptual models, was used to process qualitative data into themes and patterns. These themes and patterns were then used to explain correlations between variables in the quantitative data analysis (Tenny et al., 2017; Ravindran, 2019).

This approach allowed for the integration of the quantitative and qualitative aspects of the study under a single analytical framework, thereby enhancing consistency in the interpretation of the findings.

IV. FINDINGS & DISCUSSION

4.1 Socio-Demographic Information of the Sample Population

This section presents the socio-demographic characteristics of the respondents who participated in the study. The information includes variables such as gender, age, year of study, and faculty of enrollment. Understanding these characteristics provides important context for interpreting the findings, as demographic factors may influence the level of breast cancer awareness, knowledge, and preventive practices among undergraduate students.

Table 4
Gender Variation of the Sample Population

Male	193/48.5%
Female	207/51.75%
Total	400/100%

Table 4 Indicates the Gender variation of the Population Sample in the study. Out of the 400, 193 (48.5%) were men while 207 (51.75%) were women. Majority were therefore female.

Table 5
Age Variation of the Sample Population

18-28 years	376/94%
29-39 years	24/6%
Total	400/100%

Table 5 Indicates the Age variation of the Population Sample in the study. 94% were aged between 18-28 years while only 6 percent were between 29 and 39 years old. This indicates that majority of the students in the selected schools are below the age of 29.

4.1.1 Awareness Levels about Breast Cancer

When the 400 respondents were asked if they had heard about Breast Cancer, it was established that 92.5%, (370 out of 400) of the respondents had heard and were aware of the existence of breast cancer disease, while 7.5% (30 men out of 400 respondents) heard about breast cancer for the first time during the questionnaire interview. The 7.5% males who were not aware of the existence of breast cancer attributed their lack of knowledge to inadequate information about breast cancer as they were yet to encounter any information regarding the disease

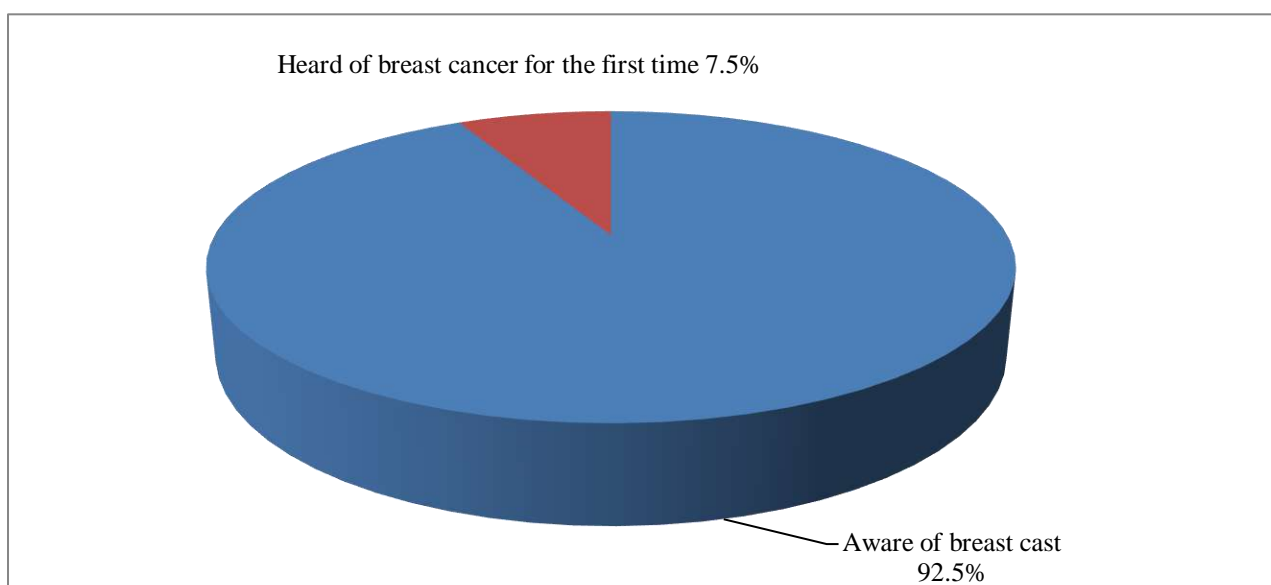


Figure 1
The Percentage of Respondents that are Aware of B.C and that Were Not Aware.

4.1.2 Awareness about Gender Specificity

When the 400 respondents were asked if B.C was gender specific 47% of the sample population were aware Breast Cancer affects all genders, while 21.5% believe it only affects women with 30.5% responding that they did not know which gender was most affected. This means that despite high awareness levels about its existence, information about the actual characteristics of the disease has managed to reach 47% of the sampled population with 53%(22.5+30.5) still unaware about its actual characteristics. It was evident that more than half of the sampled population (53%) did not know or had not been exposed to information that communicates the disease affects all genders as 1% of men account for all global breast cancer cases and male immunity to B.C is not backed by any scientific research (Newman, 2021).

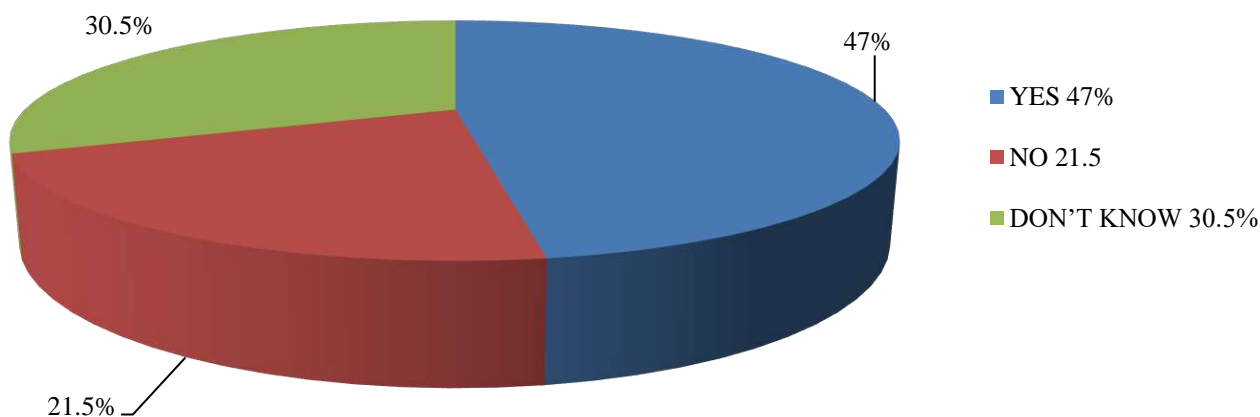


Figure 2
The Respondents’ Knowledge about Breast Cancer and Gender Specificity.

The findings in Figure 2 indicates that 47% of the respondents thought breast cancer was gender specific, 30.5% did not know if its gender specific and 21.5% was aware it is not gender specific.

4.1.3 Awareness about Symptoms

When the 400 respondents were asked to list B.C signs and symptoms they were aware about, 57% said they did not know any signs, while 16.7% listed lumps in the breast, 11.7% the change in the appearance of breasts, 7.75% knew about pain in the nipple area, 3% knew of discharge from the breast, 2.1% knew of itchininess on the breast, 0.75% listed fatigue, 0.75% listed hair loss while 0.25% listed lumps in the breast, discharge from the nipple and pain on the breast as symptoms. Whereas 57% said they did not know any symptoms, the 0.75% who listed hair loss and the 0.75% who listed fatigue as a symptom also do not know any symptoms as hair loss and fatigue are both side effects of treatment through radiotherapy and chemotherapy This meant that 58.5% (57+0.75+0.75) of the sampled population was unaware of B.C symptoms. Out of these, 1.5% listed the side effects of treatment procedures inaccurately as symptoms.

Of the 42.5% (16.7%+11.7%+7.75%+3%+2.75%) who were aware of the signs and symptoms, 0.25% were the only ones who listed more than one symptom while 42.25% listed one symptom. (Figure 3)

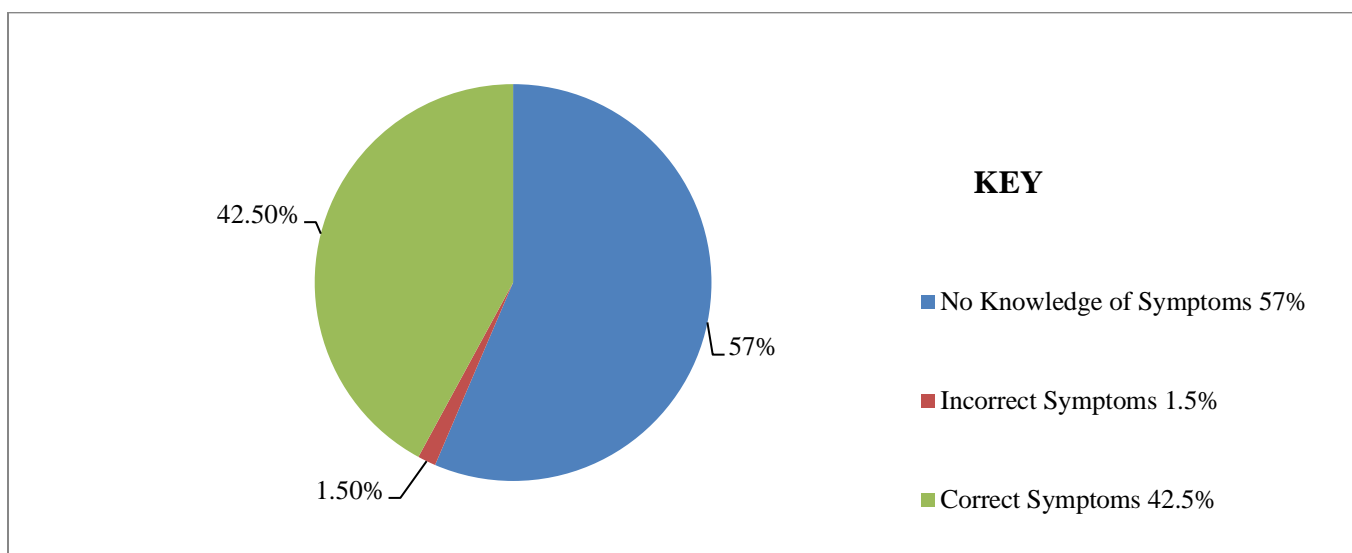


Figure 3
The Percentage of the Sample Population that was Aware of B.C symptoms

Those that had incorrect information and the majority who were not aware of any sign or symptom. These responses indicated that the level of knowledge about the signs and symptoms among the sample population of 400 respondents was below average at 42.5%. This means the content of breast cancer awareness communication should emphasize on the different signs and symptoms which include an increase in size or change in shape of the breast(s), changes in the appearance of one or both nipples, nipple discharge other than breast milk, general pain in/on any part of



the breast, itchiness/tingling sensations and Lumps or nodes felt on or inside of the breast (WHO, 2024). This is because majority of the respondents 58.5% were not aware about any of them. In addition breast cancer is asymptomatic in stage 1 and 2 when the chances of successful treatment are highest hence the significance of including regular screening as the best strategy for early detection and treatment in the awareness messages.

Awareness about screening

Table 6
Respondents' Awareness Levels about Breast Cancer Screening

Respondents that are aware of Breast Cancer Screening		Respondents that are aware of types of Breast Cancer screening Tests		Have you ever gone for Breast Cancer screening?		Do you know anyone who has gone for screening before?		Are these tests paid for offered for free?		Significance of Breast Cancer screening				
No	79.9%	None	82.25	No	89.2	No	75.5	Yes	37.5	Early Detection & treatment	39.3			
Yes	20.1%	Mammograms & Biopsy	15	Yes	9.8	Yes	24.5	I don't know	36	For accurate diagnosis of breast health	I don't know	37		
		Breast Self-Examination (BSE)	1					I don't know	1				Free	16.5
		Both Self Breast Examination, Mammograms & Biopsy	1										Not sure	6.5
		Testing tissue and discharge samples	0.75										Both free & Paid for	3.5
Total	100%		100%		100%		100%		100%		100%			

Table 6: Indicates the number of respondents from the sample population that had heard of breast cancer screening, types of screening tests, those who had done the screening; know a person who had done it and those who know its significance. When the 400 respondents were asked whether they had heard about breast cancer screening, it was established that 79.9% had not heard about the procedure while 20.1% had heard and were aware of the same.

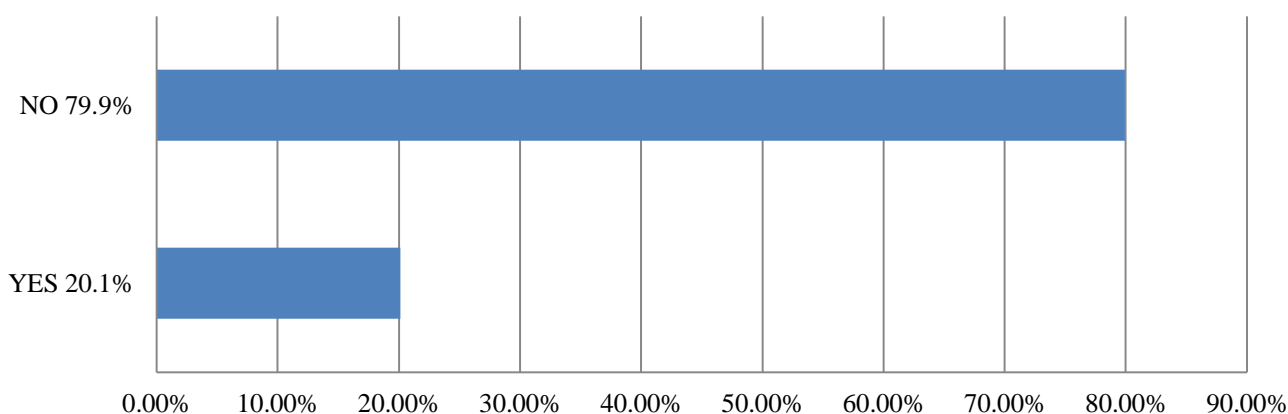


Figure 4
Percentage of Respondents who were Aware about Breast Cancer Screening and those who not yet Aware.

Of those who are aware, 15% knew about Mammograms and Biopsies, 1% knew about self-breast examination, mammograms and biopsies, 1% knew about self-breast examination and 0.75% were aware about testing tissue and discharge samples.

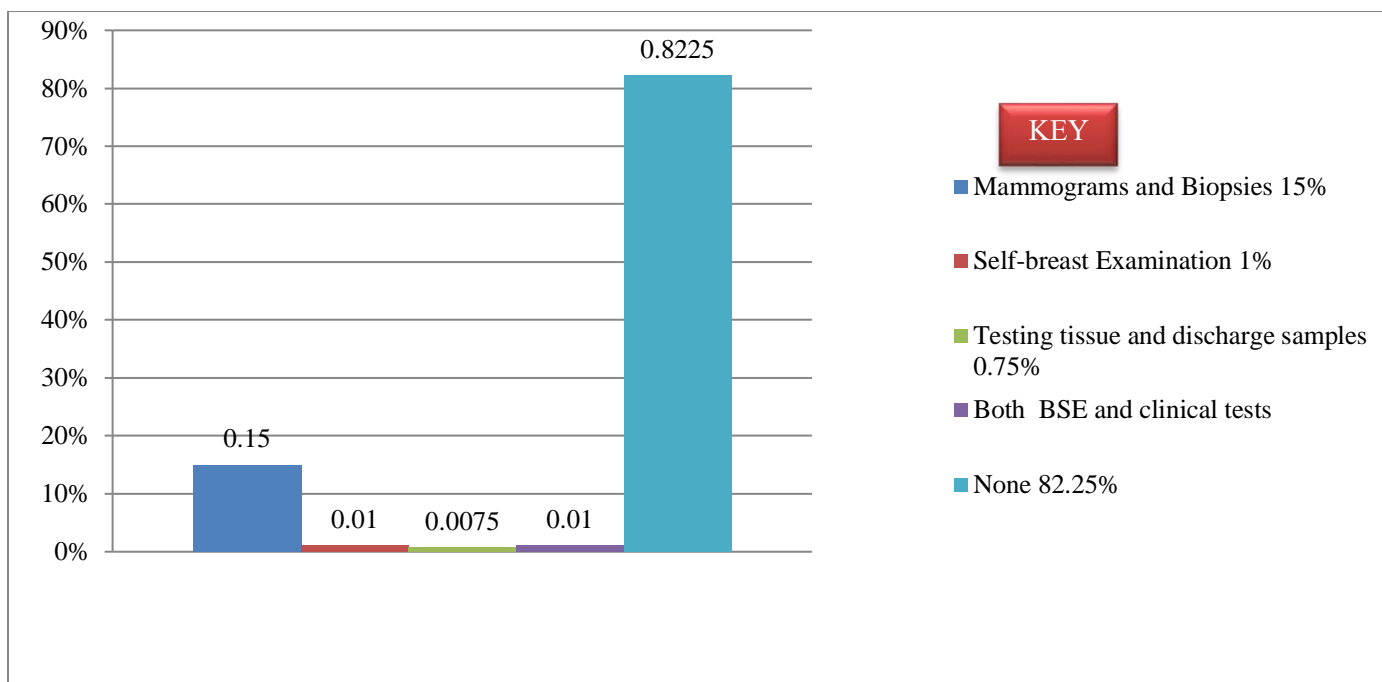


Figure 5
The percentage of respondents that were aware of types of B.C screening tests and those that were not yet aware.

When asked whether they had ever been motivated to go for screening by the information they encountered, 9.8% said yes while 89.9% had not. Furthermore, 24.5% knew a person who had gone for screening while 75.5% did not know of anyone who had done the procedure.

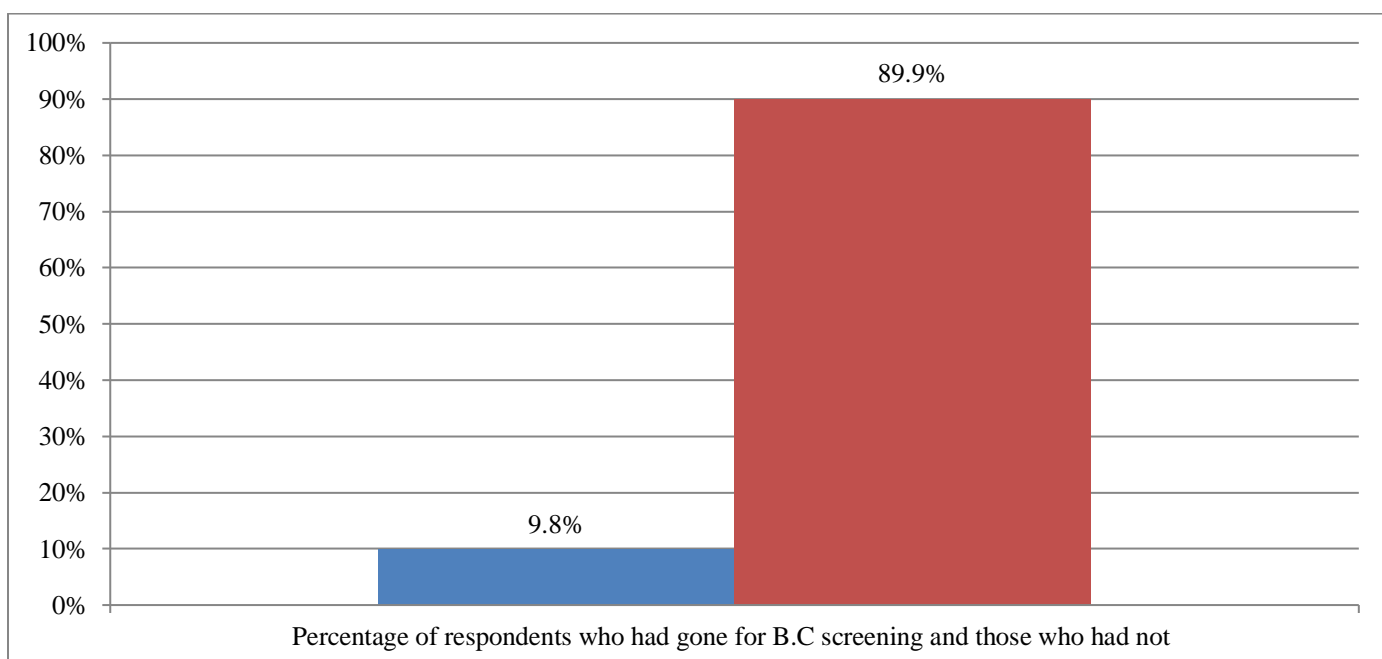


Figure 6
The Percentage of the Respondents who had been influenced to go for B.C Screening and Those Who had not been influenced

When the 400 respondents asked if they had heard about the costs of the procedure, 37.5% had heard that it is paid for hence their reluctance due to financial constraints, 16.5% had heard that the tests were offered for free, 6.5% were not aware about costs or lack thereof as they had never had about it while 3.5% were aware that it was both free and paid for depending on the institution involved. In addition, when the 400 were asked about the significance of screening, 37% of the respondents did not know while 39.3% said it was for early diagnosis and treatment which is partially true in the event one is diagnosed with the disease. The remaining 23.8% stated the screening tests were

important for accurate diagnosis of breast health which is the correct description of the screening test as not all individuals who are screened get diagnosed with B.C.

4.1.4 Barriers to B.C Screening

When the 400 respondents were asked via a Likert scale whether they had seen, heard, read, or experienced any of the listed factors as a hindrance to breast cancer screening uptake and breast health seeking behavior, 90% of the respondents listed lack of awareness as a major hindrance, followed by 79.8% listed Inadequate information about the procedure both of which align with a study in Western Kenya about the impact of educational intervention on B.C by Kisuya et al. (2018) which established that the major challenges facing the fight against Cancer included limited access to information, inadequate Health Facilities from where said information about the disease can be accessed and the illiteracy levels in the rural sections of the country. 67.8% listed limited access to screening equipment and specialized medical personnel which are valid claim supported by the National Cancer Institute Kenya (2023) report which lists the number of Oncologists in Kenya at 58 with 60 oncology nurses and 12 oncology pharmacists in a country of 54 million people. 71% listed fear of outcome from screening as a hindrance due to the perception that it is untreatable, a perception fueled by Broadcast Media reports that focus on incidence rates and fatalities. This supports the results of a related study by Nyambane et al (2015), investigating the influence of radio and television on creating awareness about cervical cancer which established that broadcast media (Radio and Television) have failed to communicate any information related to disease presentation and prevention instead focusing on statistics and victim testimonials.

72.5% of the 400 respondents' listed financial constraints since the procedure was perceived as being costly, unaware that screening tests are offered for free during the BCAM, Cultural and religious beliefs accounted for 50% and 44.5% of the sample population respectively as respondents felt they still had some level of influence on a person's choices, these results align with Sayed et al. (2019) who noted that the beliefs and values of the targeted community of an awareness campaign should be understood and it is only through such a process that these programs can formulate culturally relevant messages that reflect cultural awareness resulting in productive partnerships and interactions with community members that can lead to behavior change. Similarly, Bugshan (2022) noted that the most effective awareness campaigns are those that resonate with the cultures of the target audience as familiarity with the content of awareness campaigns makes it easier for the target audience to relate and embrace the information. 47% listed language barrier as a hindrance especially in rural areas as the awareness messages they had seen were either in English or Kiswahili limiting the reach. This is a challenge Mudogo, (2017) opines can be solved through the use of vernacular radio stations as radio not only transcends the barrier of illiteracy but also has the advantage of transmitting information in local languages understood by a majority of both Rural and urban dwellers.

These responses resonate with the ELM (Petty et al, 2009) theory that posits logical arguments (Direct route) aimed at changing perceptions should be accompanied by peripheral/aesthetic packaging (Indirect route) that relate with the target audience to trigger the subconscious mind into retaining the information for longer periods of time. This combination of logic and aesthetic inclusions in the awareness messages should then result in a logical argument for the direct route and packaged in format familiar to the targeted audience be it through language, beliefs, social norms or a shared cultural identity to aid retention via the indirect route or subconscious which stores information long-term.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The results of the questionnaire survey established that the level of awareness about the existence of Breast Cancer in was very high at 92.5%. However, aside from having heard about it or being aware of its existence, the level of awareness about the actual nature of the disease, treatment options and preventive measures against was very low with 42.5% of the sample population aware of the signs and symptoms. 32.5% were aware of potential causes while 19.9% were aware of breast cancer screening out of which 9.8% (All female) had managed to go for screening. 90% of the respondents stated that lack of awareness about the breast cancer screening was the reason for not doing the test while 79.9% listed inadequate information as the major hindrance towards uptake of breast cancer screening. 71.5% of the respondents also listed fear of outcome as a reason for not going for screening, this was due to the fact that cancer and breast cancer in particular has the unofficial reputation of being a fatal disease.

5.2 Recommendations

The first recommendation is that the framing of the content used in awareness messages should highlight the actual nature of the disease, significance of screening, treatment options, preventive measures and survivor testimonials which offer encouragement to current victims or those yet to undergo screening as compared to the current trend of highlighting incidence and mortality/fatality rates which instill fear in the recipients. Public Health communication



specialists must ensure to develop messages that appeal to both the direct and indirect routes of the conscious mind while highlighting the significance of regular screening, treatability and the 4 stages of breast cancer.

The government through its Ministry of Health should offer more support in terms of developing policies that address funding and acquisition of; Specialized human resource and adequate breast cancer screening equipment acquisition for public health facilities to increase accessibility as the current 58 oncologists, 60 oncology nurses and 12 oncology pharmacists are not sufficient for an at risk population of 54 million individuals

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Bridging skills gaps in higher education through industrial attachment to academic staff in Tanzania

Geoffrey John Shahanga^{1*}
Elimeleck Parmena Akyoo²

^{1*}geoffrey.shahanga@tia.ac.tz

²elimeleck.akyoo@tia.ac.tz

^{1,2}Tanzania Institute of Accountancy (TIA), Tanzania

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ABSTRACT

Academic staff is the instrument for students' competence development; therefore, their lack of industrial experience, either because they have not had opportunities to practice what they teach or because significant changes in knowledge, skills, and technology have occurred since they last worked in the field, negatively impacts their students' employability and contributions to the national, regional, and global development agenda. Therefore, this study aimed to address the practical skill gap by examining industrial attachment for academic staff. Guided by Kolb's experiential learning theory, the study used an exploratory sequential mixed-methods design. Data were collected through semi-structured questionnaires from 145 (57%) of 255 academic staff sampled via cluster sampling across eight campuses of the Tanzania Institute of Accountancy. Key informant interviews were conducted with 10 senior staff members purposively sampled from each department. The analysis involved descriptive statistics and thematic analysis techniques. Results revealed a lack of a broad range of practical skills among academic staff. Although they were aware of potential organisations for enhancing their practical skills, the programme requires institutional, financial, and policy strategies to facilitate effective and successful industrial attachment. The study concludes that since academic staff are aware of the practical skills they lack and the organisations suitable for acquiring such skills, it is now imperative for higher education institutions to develop effective strategies for successful industrial attachment programmes for their academic staff. Equipping academic staff with relevant practical skills through industrial attachment will enable them to better plan, teach, assess, and review curricula to enhance the practical skills required in the labour market. Future research will focus on developing a measurement scale for assessing practical skills in post-industrial attachment.

Keywords: Academic Staff, Higher Education, Industrial Attachment, Practical Skills, Skill Gaps, Tanzania Institute of Accountancy

I. INTRODUCTION

Globally, the industry is suffering from an imbalance between the demand and supply of a skilled workforce, creating a need for reskilling and upskilling (Kennedy & Sundberg, 2025; European Labour Authority, 2024). Skill gaps are affecting both employed individuals and job seekers due to technological changes. As a result, skill development has become a global research and development priority (Mhaske et al., 2025). European countries have been working to address these skill gaps caused by various economic, social, and environmental disruptions over the past 25 years (European Labour Authority, 2024; Braun, 2023). In the United States, the government has allocated funds to promote apprenticeship programmes as a way to address the skill mismatch between supply and demand in the workforce (Hodes & Kelley, 2017). Similarly, the Asian Development Bank has identified the skill gaps needed to support industrial transformation and has developed strategies to mitigate the issue (Ra et al., 2020). Developing countries, including those in the Caribbean and Latin America, also face skill imbalances that impact employability and economic growth (Vargas, 2023). In Africa, the same gap exists across the continent, affecting poverty reduction efforts and economic development initiatives, highlighting the need for targeted intervention (AUC/OEC, 2024; Arias et al., 2019).

In Tanzania, the World Bank, in collaboration with the Ministry of Education, Science and Technology, through the Higher Education for Economic Transformation (HEET) project, has identified skill gaps among higher education graduates that hinder both employability and productivity. This underscores the importance of industrial attachments for students and academic staff to bridge these gaps (Ministry of Education, Science & Technology [MoEST], 2021; World Bank, 2021). If these skill gaps are not addressed, most graduates may remain



unemployed, unable to find or create jobs, which threatens the country's progress toward achieving sustainable development goals, specifically goals 1 and 8—poverty alleviation and decent work. Therefore, training institutions need to implement deliberate intervention measures to meet the evolving skill needs (United Nations, 2025; Munishi, 2022).

The Tanzania Institute of Accountancy, a public institution tasked with providing training, research, and consultancy services in business-related fields, responds to national, regional, and global skill development initiatives. Its efforts support and advance the National Development Vision 2050, the East African Community Development Agenda 2050, SADC Development Vision 2050, African Development Agenda 2063, and the global Sustainable Development Agenda 2030 (Shahanga & Kasambala, 2023; Kasambala, 2025). Since its establishment in 1973 with a single campus in Dar es Salaam, the institute has expanded to eight campuses in Mbeya, Singida, Mtwara, Mwanza, Kigoma, Zanzibar, and Tanga, separate from the main site in Dar es Salaam. This growth has established it as a strategic training center capable of supplying a diverse range of employers with skilled, competitive graduates (Tanzania Institute of Accountancy, 2024b).

Furthermore, the number of students graduating from TIA has increased by 90%, from 6,131 in 2014 to 11,625 in 2024. This increase aims to meet labor market demands across various levels, from technicians to managerial roles (Tanzania Institute of Accountancy, 2024b). The academic staff has also grown from 82 in 2014 to 252 in 2024, representing a 207% increase, with qualifications ranging from bachelors to doctoral degrees. The institute has expanded its program offerings from short courses to certificates, ordinary diplomas, postgraduate diplomas, and master's degree programs (Tanzania Institute of Accountancy, 2024b). These developments have made TIA a distinctive institution for workforce training. Possessing practical skills among graduates of TIA is vital for improving production, service delivery, and ultimately driving economic growth and sustainable development (Shahanga & Kasambala, 2024).

Nevertheless, there is increasing concern worldwide over the rising unemployment among higher education graduates, driven by limited practical experience due to geoeconomic shifts, technological disruptions, economic uncertainties, and demographic changes, which have transformed the nature of work (Ministry of Education, Science & Technology, 2021; World Bank, 2021). As a river cannot flow higher than its source, the skill gaps must be addressed first by academic staff before being passed on to students. This highlights the importance of exposing academic staff to industry experience to develop the practical skills needed in the labor market (Shahanga et al., 2023; World Bank, 2021).

1.1 Statement of the Problem

The Tanzania Development Vision 2050 focuses on skills development to foster a prosperous, just, inclusive, and self-reliant economy (United Republic of Tanzania, 2025). This vision serves as a tool for promoting just, sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all by 2030, aligned with Sustainable Development Goal 8 (United Nations, 2025). However, the World Economic Forum predicts a growing practical gap in the labour market, estimating that by 2030, about 59% of the global workforce will require retraining to meet job skill demands (Mhaske et al., 2025). In Tanzania, most of the higher education graduates are jobless due to a lack of employability skills (Ndyali, 2016; National Council for Technical Education, 2021). To address the skill gaps, partnership and collaboration between higher education institutions and industry are essential through industrial attachment (World Bank, 2021). Although academic staff play a crucial role in students' skill development—as facilitators, assessors, mentors, coaches, and role models—they often lack vital industrial experience, either because they have not had opportunities to practice what they teach or because significant changes in knowledge, skills, and values have occurred since they last worked in the field (National Council for Technical Education, 2021; University of Dar es Salaam, 2023; Mbeya University of Science and Technology, 2024; World Bank, 2021; Ministry of Education, Science and Technology, 2021). This lack or limited hands-on skill among academicians risks producing unemployable graduates, highlighting the need for industrial attachment programmes for academic staff to bridge the practical experience gap.

1.2 Research questions

- i. What are the practical skills needed by academic staff in Tanzania's higher education institutions?
- ii. Which organizations are seen as crucial for developing practical skills for academic staff in Tanzania's higher education institutions?
- iii. What are the implementation strategies for the industrial attachment programme to academic staff in Tanzania's higher education institutions?



II. LITERATURE REVIEW

2.1 Theoretical Review

The study was guided by experiential learning theory, proposed by David Kolb (1984), to highlight the important role of experience in the learning process (Kolb, 1984). The theory was selected because of its strength in addressing the need to combine learning with the work environment to develop essential practical skills; therefore, it underscores the importance of industrial attachment for academic staff to gain experience of labor market needs (Villarroel et al., 2020). The theory emphasizes that learning should be adaptable to the real world; such adaptation requires interaction within actual working environments, hence the need for industrial attachment for academic staff (Kolb & Kolb, 2012; Kolb et al., 1999). Through experiential learning, learners gain opportunities to solve problems, communicate, and think critically, thereby developing soft and technical skills. The theory highlights the critical role of practice in moving from cognitive understanding to psychomotor skills through repeated practice and exposure, evolving from explicit to implicit knowledge. This process facilitates a gradual transition from deliberate and effortful use of a cognitive skill to more automatic and fluent application of the same (Kachinske, 2021). Therefore, experiential learning theory was chosen as a relevant framework for this study to explore the practical skills required by academic staff in Tanzanian training institutions, assess potential organizations for industrial attachment to develop such skills, and examine strategies for implementing the industrial attachment program. When they gain practical experience in these skills, they will be better equipped to teach, assess, mentor, and coach their students.

2.2 Empirical Review

Globally, improving productive skills has become a policy priority to boost not only graduates' employability but also their contribution to economic growth and sustainable development. For example, Kennedy and Sundberg (2025) highlighted the importance of practical involvement in skill development. In developed countries, especially in European nations, the literature points to industrial engagement in practical skill development to address the skill imbalance in the workforce caused by disruptive economic, social, and environmental challenges (European Labour Authority, 2024; Braun, 2023). In the United States, the skills gap is tackled through apprenticeship programs for students and industry placements for academic staff (Hodes & Kelley, 2017). Asian countries have also adopted similar measures to reskill and upskill workers to meet the demands of industrial digital transformation (Ra et al., 2020; OECD, 2021). In developing countries, Southeast Asia launched skill development initiatives as part of post-COVID recovery efforts to address digital technology needs, climate change, globalization, aging populations, and migration, all of which have transformed production and service delivery across the region and globally (OECD, 2021). In the Caribbean and Latin America, vertical and horizontal skill gaps have impacted productivity and economic growth. About 29% of the workforce needs retraining due to a lack of essential skills, prompting increased industry attachment for practical skills development (Vargas, 2023). In parts of Africa, including East Africa, skill gaps threaten not only graduate employability but also economic growth, underscoring the importance of partnerships with employers to meet the demands of the digital and green economies (AUC/OEC, 2024). In Sub-Saharan Africa, practical skills deficiencies among the workforce are linked to poverty and hindered economic growth, calling for collaborative efforts involving the private sector to address these gaps through systemic change (Arias et al., 2019). Such skill mismatches contribute to graduate unemployment, reducing their productivity and ability to contribute to the economy (Biraori & Ouko, 2023).

Therefore, most Higher learning institutions in different countries have embarked on industrial attachment programmes for students as an intervention to bridge such skill gaps. The industrial attachment is meant to enable training institutions to align their academic programmes with industrial needs in terms of knowledge and skills (Khumalo & Dewah, 2018). Studies indicate that: The University of Colombo in Sri Lanka, the Institute of Technology and Management Hamirpur in India; Murang'a University of Technology and the Aga Khan University in Kenya; the National University of Science and Technology, the Gweru Polytechnic College and Chinhoyi University of Technology in Zimbabwe; The University of Namibia in Namibia and Mbeya University of Science and Technology in Tanzania attach their students in the industries or institutions related to their study programmes to develop essential skills required by employers in the labour market which can hardly be imparted in higher learning institutions (Bhardwaj, 2016; Khumalo & Dewah, 2018; Mwaura et al, 2022; Lakicha, 2024; Mabhandu, 2016; Shaanika et al, 2021). The literature indicates that most of the scholars have emphasized the need and importance of industrial attachment for students to bridge the skill gap between graduate students and the labour market needs, giving little attention to their instructors who teach and assess hands-on skills to their students (Bhardwaj, 2016; Biraori & Ouko, 2023; Khumalo & Dewah, 2018; Mwaura *et al*, 2022; Lakicha, 2024; Mabhandu, 2016). However, the success of the industrial attachment for students relies mainly on the academic

staff's skills and support for the effective securing, placement, management, and assessment of students in the industrial attachment (Shaanika *et al*, 2021). Although higher education institutions have developed guidelines for industrial attachment for their academic staff, little is known about the practical skills needed by academic staff in Tanzania business training institutions, the potential organizations for equipping academic staff with business related industrial experiences, as well as the implementation strategies for effective and successful industrial attachment for academic staff in Tanzania, hence a reason for this study (National Council for Technical Education, 2021; University of Dar es salaam, 2023; Mbeya University of Science and Technology, 2024).

III. METHODOLOGY

The study was conducted at the Tanzania Institute of Accountancy, a public training institution mandated to conduct training, research, and consultancy services in business-related disciplines. The institute has eight campuses strategically located in economic zones: Dar es Salaam, Mbeya, Mtwara, Kigoma, Singida, Mwanza, Zanzibar, and Tanga. The choice of the study area was influenced by its geographical coverage, programme diversity, enrollment capacity, and staff profile; hence, a potential public business training institute was selected as a case study for industrial attachment to academic staff to address practical skill gaps (Shahanga & Kasambala, 2024). It adopted a pragmatist philosophical paradigm, a mixed approach, and an exploratory mixed methods design (Creswell & Creswell, 2022). The nature of the study required this design to address its counterpart weaknesses, as the study required numbers, views, discussions, and opinions across the academic staff. The quantitative data were collected and analyzed first from academic staff and then triangulated with qualitative data from the key informants for validation purposes (Creswell & Creswell, 2022). The study population involved 155 (61%) out of 255 academic staff of the Tanzania Institute of Accountancy sampled through a clustering technique from each programme and each campus of the institute, among them 10 key informant interviewees were purposely sampled from 10 senior staff to validate and consolidate the information which were collected through questionnaires from 145 academic staff. The quantitative data were analyzed descriptively through the Statistical Package for Social Science (SPSS) to generate frequency, percentage, mean, and standard deviation. The qualitative data were subjected to thematic analysis techniques and presented through thematic paraphrases and verbatim quotes (Bacon-Shone, 2020; Ghanad, 2023).

IV. FINDINGS & DISCUSSION

4.1 The Respondents' Demographic Information

The study sought the profile of the respondents' demographic information, which included their age, sex, education level, and the academic programmes they teach. The results are presented in Table 1.

Table 1
Respondents' Profile

Category		Frequency	Percentage
Age	30-35	11	7.1
	36-40	35	22.6
	41-45	49	31.6
	46-50	35	22.6
	51-55	20	12.9
	Above 55	05	3.2
Sex	Male	112	72.3
	Female	43	27.7
Education	Bachelor Degree	13	8.3
	Masters	133	86.0
	PhD	8	5.1
	Professors	1	0.6
Taught programmes	Accounts and Finance	35	22.6
	Procurement and Logistics	30	19.3
	Marketing and Public Relations	25	16.1
	Human Resource Management	30	19.3
	Law	10	6.5
	ICT	10	6.5
	Education	15	9.7
Total		155	100

The results in Table 1 indicate that most of the academic staff of TIA 95 (61%) are young adults, aged between 30 to 45 years, hence they still have several years to prepare the employable workforce. This means, if they are attached to the industry, they are capable of acquiring relevant practical skills, which they will impart to their students and produce competent and employable graduates for over fifteen working years before their 60-year retirement age. Similarly, the institute has a gender consideration of male and female of 1:3, which is reasonable. In terms of education level, most of the employees have a master's degree. Which means, exposing them to the labour market will open up their mind on what to pursue for a doctorate, because the academic ladder requires professional development beyond a master's degree. Moreover, these academic staff they have a diverse range of skills in different business-related fields; hence, they have a wide choice of employers for industrial attachment, in both public and private sectors. The composition of the respondents brings hope to bridge the practical skills gaps by exposing them to the working environment, as stressed by experiential learning theory, where learning as a process is extended beyond the classroom setting to the working environment. In this juncture, the development of the employability skills entails the collaboration between men and women, adults and youth, academic institutions and employing organizations, as well as different expertise (Kolb, 1984; Munishi, 2022).

4.2 The Practical Skills Needed by Academic Staff in Tanzanian Business Training Institutions

The study sought the views of the academic staff on the practical skills they need in relation to their area of specialization. The results from the open-ended questions in semi-structured questionnaires are presented in Table 2.

Table 2

Practical Skills Needed by Academic Staff in Tanzania Based on Their Academic Sections

Academic Sections	Specific practical skills needed by academic staff
Accounting and Finance	The use of computerized accounting and payment systems (GePG; MUSE) The use of advanced Microsoft Excel in accounting activities Tax laws and tax assessment systems Financial auditing standards and practices
Procurement and Logistics Management	Interpretation of Public Procurement ACT (2023) and its regulations (2024) The use of Public Electronic Procurement Systems (NeST) Interpreting procurement guidelines, policies, procedural forms, and circulars World Bank standards and guidelines for international procurement
Marketing and Public Relations	Practical business advertisement, promotion, and branding The use of social media platforms in marketing and building public relations Writing professional press releases, captions, and news articles Preparation, management, addressing, and responding to the press conference
Human Resource Management	The use of digital systems in staff recruitment and performance management Employees' dispute resolution principles and practice Management of employees' remuneration, compensation, and benefits Interpreting employment and labour relations (ACT and its regulations)
Law	Drafting and executing legal proceedings for criminal and civil cases Statute and contract preparation procedures and practice The interpretation and application of Tax laws and regulations The interpretation and application of the Cybercrimes ACT and its regulations
Information and Communication Technology (ICT)	System analysis, development, and management Cyber-attacks detection, prevention, and control Development and Management of Artificial Intelligence Data science
Teacher Education	Competence-based Curriculum design and development Curriculum standards, validation, and approval procedures Competence-based innovative pedagogies and assessment Teaching and assessment materials design, development, and use

The results from open-ended questions with academic staff from different sections indicated different aspects of practical skills that they require for effectively cascading the same to their students. The skills fall into seven categories of skills, namely: Accounting and finance; Procurement and logistics management, marketing and public relations, human resource management, teacher education, and management studies (ICT and business



law). Validating this information, key informant interviews were conducted with senior academic staff about the key practical skills they need in their area of specialization, and how to develop them. The response was:

We need to update ourselves with the computerized accounting systems to keep pace with the changing world and the nature of accounting for effectively teaching and assessing our students for the same. We need exposure to the industry where we can access accounting and tax assessment systems” (Senior Staff Accounting and Finance, August 2025).

Paraphrasing the responses from a senior staff member from procurement and logistics management, she argued that there is a new Public Procurement Act of 2024, which operates, and all the procurement issues are guided by that ACT and its 2024 regulations. Most of the academic staff are less aware of the ACT and its regulations because when they were in college, they were taught the previous ACT and regulations, which are not in use currently. Therefore, they need an opportunity in the institution where they can practically apply that law and its regulations. Other respondents added that:

“I theoretically teach and insist to my students on the need for effective use of social media platforms in business branding and promotion, or even the use for press releases and press conferences in building public relations. But I have never practiced it myself because I lack such practical skills. My exposure to the labour market may equip me with such skills, which will improve teaching and mentoring my students” (Senior staff marketing and public relations, August 2025).

Paraphrasing the response from a senior staff member from the ICT department, he said that the advancement in science and technology has brought artificial intelligence and online business platforms such as eBay, Alibaba, and Kikuu. He added that there are reported students being robbed of their money through irresponsible online purchasing. Therefore, he thought that the academic staff from the ICT department requires digital experiences to enable them to practically teach students in the development of secure digital business platforms, detection and control of cyber attach, and ethical AI use in academics.

The senior staff views concur with those of academic staff that they need practical skills, which they lack. The lack of practical skills among academic staff deviates from previous reports from the World Bank and the Ministry of Education, Science and Technology (MoEST), which established the practical skill gaps among graduates but not among their instructors (MoEST, 2021; World Bank, 2021). Similarly, the results differ from previous studies, which established a lack of practical skills among Tanzanian graduates and not the academician who teaches, assesses, supervises, mentors, and coaches them (Munishi, 2022; Mashenene et al., 2024; Mayenga, 2024). Based on experiential learning theory, it can be argued that if academic staff require practical skills related to their area of specialization to be able to cascade the same to their students, they should undertake an industrial attachment to the relevant organizations to develop such skills and inculcate the same in their students through curriculum review, teaching, assessment, and field administration.

4.3 Organizations Perceived as having Potential for Practical Skills Development to Academic Staff

The study sought the perception of the academic staff on the potential organizations where they can develop practical skills through industrial attachment. The results are presented in Table 3.

Table 3

The Organizations Perceived as Having Potential for Practical Skills Development.

Skills categories	Potential organization for developing potential practical skills
Accountancy and Finance	BOT, TRA, DSE, Treasury Registrar, Ministry of Finance, National Audit Office of Tanzania, Audit Firms, Social Security Funds (PSSSF & NSSF)
Business Administration	Commercial Banks, Water Supply Authorities, TCCIA, TAN trade, Clearing and Forward Companies
ICT	Telecommunication Companies, e-GA, TCRA, UCSAF
Law	High Court, TRAT & TRAB, BRELA, Social Security Organizations
Procurement and Logistics	PPRA, PPAA, MSD, Beverage Industries, TASAC, Tanzania Ports Authority, LATRA, TARURA, REA, EWURA
Human Resource Management	Public Service Recruitment Secretariat, TAESA, ILO, LGAs, PSC.
Marketing and Public Relations	Broadcasting Corporations, Telecommunication Companies, TANESCO, BAKHRESA Group, Sports Clubs (Simba & Young Africans)
Teacher Education	NACTVET, TCU, TIE, NECTA, TEA, UNESCO

The results in Table 3 show that the academic staff identified several employing organizations' potential for the development of practical skills. They included government agencies, parastatal organizations, corporate, private institutions, and international organizations. The abbreviated institutions names' stand for Central Bank of Tanzania (B.OT); Tanzania Revenue Authority (TRA); Dar es salaam stock exchange (DSE); Public Service

Social Security Funds (PSSSF); National Social Security Fund (NSSF); Tanzania Chamber of Commerce, Industry & Agriculture (TCCIA); Tanzania Trade Development Authority (Tan Trade); electronic government agency (e-GA); Tanzania Communication Regulatory Authority (TCRA); Energy & Water Utility Regulatory Authority (EWURA); Tax Revenue Appeals Board (TRAB), Tax Revenue Appeals Tribunal (TRAT); Land Transport Regulatory Authority (LATRA); Public Procurement Regulatory Authority (PPRA); Public Procurement Appeals Authority (PPAA); Tanzania Rural and Urban Roads Agency (TARURA); Medical Store Department (MSD); Rural Energy Agency (REA); Tanzania Employment Service Agency (TAESA); Public Service Commission (PSC); International Labour Organization (ILO); Business Registrations and Licensing Agency (BRELA); Tanzania Electricity Supply Company (TANESCO); National Council for Technical and Vocational Education and Training (NACTVET); Tanzania Commission for Universities (TCU); Tanzania Institute of Education (TIE); National Examination of Tanzania (NECTA); and Tanzania Education Authority (TEA). The follow-up with the key informants on the criteria of their choice received the following responses.

My choice of the industrial attachment entity was mainly influenced by the primary function of the organization in relation to the essential skills employed. Because I teach modules related to human resources, my attachment to the Public Service Recruitment Secretariat (TPSRS), intended to equip me with skills related to digital recruitment systems (Senior staff human resource, August 2025).

The response from senior staff aligns with the responses from academic staff, indicating that developing practical skills requires relevant organizations with primary skills and functions matching those of academic staff. The findings are consistent with the regulatory body's view on partnerships between training organizations and employers to address practical skills gaps (National Council for Technical Education, 2021). They also support experiential learning theory, which states that learning is a process that involves interaction in real environments, allowing individuals to acquire specific practical skills (Kolb, 1984; Villarroel et al., 2020). If academic staff from Tanzanian business training institutions feel they lack the practical skills their students need, and if they are aware of potential organizations where these skills can be developed, and if such organizations are accessible, then it is time to enhance practical training for academic staff through industrial attachments. For effective and successful industrial attachments, academic staff should be allowed to select relevant organizations for their practical skills development. Providing this opportunity will help them feel more comfortable because they will have a clear reason and purpose for their choice. Additionally, they are more likely to achieve their career and professional development goals.

4.4 Implementation Strategies for Industrial Attachment to the Academic Staff of Tanzania Business Training Institutions

The study determined the implementation strategies for the industrial attachment of academic staff of Tanzania business training institutions. The results are presented in mean and standard deviation in Table 4.

Table 4

Implementation Strategies for Industrial Attachment to Academic Staff of Tanzania Business Training Institutions

Implementation Strategies	M	SD
Establishment of Industrial Attachment Office at the Institute	3.84	.915
The establishment of the industrial skill gap inventory	3.99	.876
The development of an industrial attachment plan and schedules	4.39	.893
Memorandum of Understanding with potential employers	4.55	.615
The development of an Assessment plan for Industrial attachment	3.67	.979
The establishment of the sustainable industrial attachment fund	4.86	.535
The development of an incentive scheme for industrial attachment	4.49	.714
The development of the feedback and reporting mechanism	3.71	.963
The establishment of the Monitoring, Evaluation, and Learning Plan	3.80	.873
Training academic staff on the ethics and standards of industrial attachment	3.83	1.962

The results in Table 4 indicate 10 key strategic areas proposed by academic staff to enhance their industrial attachment. All the strategies were positively rated because they had a mean score above the average mean of 3.0, which is the midpoint for a five-point Likert scale questionnaire. The agreement of the respondents indicated by the standard deviation, was higher in the funding mechanisms, signing memorandum of understanding, and the development of incentive schemes as the key issues. Triangulating these results, an interview was conducted with senior staff on what should be done for effective and successful implementation of the industrial attachment to academic staff. Their responses were:



It is not easy to secure an industrial attachment chance in some sensitive organizations; therefore, the institute should have a binding agreement with them and an extra funding source to support the academic staff during their industrial attachment because they will be away from their work stations (Senior officer, Human Resource, August 2025).

The results from senior staff agree with other academic staff that the institute needs to take certain actions to ensure the success and effective implementation of industrial attachments. This view is supported by the Tanzania Council for Technical Education, which advises that industrial attachment requires additional funding, a monitoring and evaluation system, and partnerships with industry for practical skills development (NACTE, 2021). Few studies have focused on implementation strategies for industrial attachment for academic staff, as most existing research concentrates on student attachment. These strategies aim to address the challenges highlighted in the University of Dar es Salaam (UDSM) and Mbeya University of Science and Technology (MUST) guidelines (University of Dar es Salaam [UDSM], 2023; Mbeya University of Science & Technology [MUST], 2024). If industrial attachment involves working away from their usual workplace, implementing such programs requires integrating institutional, policy, and financial strategies. With these strategies, the programs can be successfully carried out. The successful implementation of these guidelines depends on collaboration among academic staff, employers, development partners, policymakers, and the government.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Academic staff are the key determinants for students' competence development, therefore their lack of industrial experience—either because they have not had opportunities to practice what they teach or because significant changes in knowledge, skills, and technology have occurred since they last worked in the field—negatively impacts their students' employability and contributions to the national, regional, and global development agenda. Therefore, the study examined essential practical skills required by academic staff in Tanzania's higher learning institutions. It identified specific skills related to accounting and finance, procurement and logistics management, human resource management, marketing and public relations, teacher education, ICT, and business laws. The study also highlighted organizations important for developing practical skills aligned with the specialization areas of academic staff. The selection of these organizations was based on the programmes taught and the primary functions of the organizations to be attached. Additionally, the research outlined policy, economic, institutional, and managerial strategies for effective and successful industrial attachments. Based on these results, the study therefore concludes that academic staff as the engine and steering wheel for students' skill development; their lack of practical skills results in primarily theoretical teaching, negatively impacts employability, workforce development, and sustainable growth. Since academic staff are aware of the practical skills they lack and the organizations suitable for attachments, it is now essential to develop effective strategies for successful industrial attachment programs. Equipping academic staff with relevant practical skills will enable them to better plan, teach, assess, and review curricula with practical skills for employability.

5.2 Recommendation

The study has found the need and importance of industrial attachment to academic staff, since the programme has cost implications; a cost-sharing approach between training institutions and employers, given the mutual benefits, is recommended. Securing an industrial attachment organization requires signing memoranda of understanding with employing organizations for industrial attachment programmes. For academic staff to cope with the working environment in the hosting organizations, capacity-building for academic staff is essential. Moreover, ongoing assessment, monitoring, and evaluation are necessary to achieve the intended goals. Since the Higher Education for Economic Transformation (HEET) project is currently implemented in Tanzania to foster graduates' employability and their contribution to economic growth, higher learning institutions should prioritize industrial attachment for academic staff to promote the HEET goals and objectives. Future research should aim to develop a measurement scale for practical skills gained through industrial attachments among academic staff.

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Occupational safety and health practices, government policy and performance of small and medium-size enterprises in Kenya

Florence K. Guantai^{1*}
Hezron M. Osano²
Tabitha G. Murerwa³
Phares O. Ochola⁴

^{1*}florence.guantai@tukenya.ac.ke

²hezron.osano@tukenya.ac.ke

³tabitha.murerwa@tukenya.ac.ke

⁴phares.ochola@tukenya.ac.ke

^{1,2,3,4}The Technical University of Kenya

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ABSTRACT

Small and Medium-sized Enterprises (SMEs) are critical to any national economic development, yet workplace accidents and occupational diseases remain a major challenge. This study explored the moderating effect of government policy on the relationship between occupational safety and health practices and performance of small and medium-size enterprises in Kenya. The study was founded on the Classical Deterrence Theory. The study was conducted using an inferential research design and a cross-sectional descriptive survey. The sample size comprised 294 organizations selected from a population of 1,118 SMEs using the stratified random sampling technique. In each SME, the manager or human resource officer was identified as the respondent. A structured questionnaire was employed to collect primary data for the study. Consequently, the data was analyzed using an ordinal logistic regression model. The study's moderated ordinal regression analysis showed that government policy does not significantly moderate the relationship between occupational safety and health (OSH) practices and SMEs performance ($p > 0.05$). However, at rating category 4 (agree), government policy had a significant main effect ($b = -3.064$, $p = 0.010$), supporting its role in ensuring compliance with OSH requirements. The model accounted for 90.3% of the variance in SMEs' performance ($R^2 = 0.903$), exceeding the non-moderated model ($R^2 = 0.828$). This indicates that government policies have a significant impact on the effectiveness of OSH practices in improving SME performance. The study findings demonstrated the need for stronger collaborations between government and SME managers to establish effective and sustainable OSH policies. In addition, more studies should be conducted to compare OSH adoption between SMEs and large enterprises and to evaluate the role of government policy across different national contexts.

Keywords: Government Policy, Occupational Safety and Health, Risk Management, Small and Medium Enterprises

I. INTRODUCTION

Empirical studies and global agencies such as International Labor Organization (ILO) and World Health Organization (WHO) contend that safety, health and welfare of employees, who comprise of approximately half of the global population, is fundamental to workers and their relations, as well as to the sustainability, productivity and competitiveness of an enterprise hence, to the growth of the national and global economy (Deloatch, 2020). It is estimated that every year, the world loses \$ 1.25 trillion, approximately 4 percent of GDP as a result of occupational accidents and sicknesses (Ayub & Iqbal, 2012). Similarly, the ILO estimates that every year, more than 2.78 million persons lose their lives due to work-related accidents and illnesses (ILO, 2021). In addition, approximately 374 million workers agonize non-fatal occupational injuries each year, resulting to economic losses equivalent to 3.94 percent of globally (ILO, 2021). Such occurrences decrease productivity and regularly result in at least three days of absenteeism for affected employees.

According to Dugolli (2021), poor safety and health consequently adversely affects organizations as they are forced to cater for compensation covers in case of accidents, losses due to poor production, and legal fees as well as deal with diminished morale. To prevent such accidents, the ILO and WHO have played a key role in supporting OSH practices globally. At the moment they have developed more than 40 codes of practice on workplace health and safety (Olabode et al., 2017). The World Health Organization (WHO, 2021) defines Occupational Safety and Health (OSH) as the discipline of the anticipation, assessment, acknowledgment and prevention of workplace hazards or exposures that



may cause injury to employees, while taking into account of the possible effects on the general environment and the surrounding populations. While conventionally, OSH stressed on the physical work environment, focusing mainly on physical, chemical, biological, and ergonomic risks, the contemporary perspective integrates additional dimensions such as psychosocial factors, organizational culture, and workplace practices as reflected in employee' lifestyle along with the integration of other wider linkages to public health, all of which significantly may affect well-being of employees (ILO, 2021). Therefore, OSH remain central to supporting decent working conditions and fostering healthy workplace safety cultures (Ombasyi, 2019). Gbadago et al. (2017) argue that protecting employees' safety requires vigorous hazard prevention and management systems that address four broad categories of hazards: physical (e.g., noise, poor lighting, high temperatures), biological (e.g., microorganisms, infections, waste), chemical (e.g., fumes, gases, dust), and psychosocial (e.g., stress, harassment, workplace violence).

In Africa, a dedicated WHO regional office was established in 2000 to strengthen policy frameworks, build capacity, facilitate knowledge sharing and regulate policies and legislation within the scope of safety and health. However, it is evidenced that many African countries continue to face challenges in formulation, planning and implementation of effective OSH strategies due to scarce resources, weak institutional frameworks, and limited inter-ministerial collaboration (Ravindran, 2019). Despite efforts such as the WHO's Global Plan of Action on Workers' Health (2008–2017), improvement remains slow, with many African enterprises still concentrating primarily on traditional physical hazards while neglecting psychosocial and organizational factors (Mat et al., 2021). A 2009 global survey of employers from mainly found that only 32 percent of African enterprises mostly in South Africa provided wellness or health promotion programs, which is significantly lower than other parts of the world surveyed.

Similarly, it is evidenced that a big percentage of all fatalities relating to OSH in Ghana, Kenya, and Zimbabwe result from accidents (Dugolli, 2021). Employers have a responsibility to protect employees from harm and perils to health. Recognizing and averting such hazards could shirk accidents. If organizations must have an effective safety and health management system. Senior management must be accountable for the execution of safety-enhancing arrangements and the development of a safety-oriented culture (Harshitha & Senthil, 2021).

In Kenya, the Constitution of 2010 and the bill of rights espouses the right to fair labor practices and safe working environment that advocates for cleanliness to all citizens (GoK, 2010). In addition, the Occupational Safety and Health Act (2007) provides the legal framework for promoting and improving workplace safety standards. Besides, the Act establishes the administrative structures through the Directorate of Occupational Safety and Health Services (DOSHS), the National Council for Occupational Safety and Health (NACOSH), and other regulatory bodies. To Supplement ASHA, is the Work Injury Benefits Act (WIBA) which provides for compensation of employees who suffer work-related injuries or illnesses. Despite these provisions, implementation gaps still continue to be evidenced. For instance, although Kenya has ratified only 10 of the 49 International Labour Organization (ILO) conventions, further ratification would be a demonstration of stronger commitment to adherence to global OSH standards (ILO, 2017). Additionally, DOSHS has also not been able to achieve its obligation fully as it faces severe capacity constraints resulting from shortage of staff specifically occupational safety and health inspectors. Out of an estimated 140,000 workplaces requiring inspection annually, only about 4,000 (2.9%) are actually inspected (ILO, 2022). Consequently, many hazards remain unidentified, and numerous incidents go unreported (Murithi, 2021). Strict sanctions for non-compliance in OSH regulations can enhance adherence to safety standards, as non-compliance becomes more expensive than compliance (Ravindran, 2019).

According to European Commission (2025) Micro, Small, and Medium Enterprises (MSMEs) are classified as follows: micro enterprises employ 1–9 workers, small enterprises employ 10–49 workers, and medium enterprises employ 50–200 workers. The MSE Act (2012) of Kenya categorizes SMEs by their size, number of workers engaged, annual revenue generated and amount of capital invested. Based on capital base, SMEs are defined as firms which are properly registered, with sales revenue ranging from Kshs 500,000 to Kshs. 50,000,000 yearly, capital base of between Kshs, 5,000,000 to Ksh. 50,000,000 and about ten (10) to 100 workers. The SME sector has been recognized and prioritized as a crucial mover to growth and development for accomplishment of the Kenyan's development blueprint and achievement of vision 2030. However, despite the critical role SMEs play in the country, they often face considerable challenges to provide decent work. SMEs are relatively exposed to safety and health risks since they mainly operate in a more perilous environment than larger establishment (Harshitha & Senthil, 2021). Murithi (2021) argue that whether businesses are formalized or not, it is important that governments guarantee safety of all employees mainly through sensitization and trainings. Therefore, this study was considered necessary to closely examine the moderating effect of government policy on the relationship between occupational safety and health practices and performance of small and medium-size enterprises in Kenya.

1.1 Statement of the Problem

In most developing countries, SMs form the backbone to the economic growth and development of those countries (Varianou-Mikellidou et al., 2019). According to European Union, SMEs represent 99 percent of all



enterprises and provide about 75 million jobs regionally. In Kenya, they provide about 80% of employment opportunities (Bowen et al., 2009). Despite the critical role SMEs play in the economy, they unfortunately report a 90 to 95% failure rate due to a number of social impediments and poor implementation of policy (Kersten et al., 2017). Studies indicate that OSH issues considerably impact negatively on SME performance due to limited financial and technical capacity to implement effective safety measures (Arocena & Núñez, 2019). Inadequate OSH implementation leads to poor employee performance, higher turnover rates, and reduced business continuity (Bello & Oyekunle, 2021; Patel et al., 2023). The ILO (2017) survey estimates that approximately 317 million people experience occupational accidents, out of which 6,300 are fatal. Additionally, approximately 160 million cases of occupational diseases reported lead to loss of employee productivity, absence from duty and a rise in employee work injury compensation costs and medical expenses (Singh et al., 2019; Murithi, 2021). These challenges highlight that OSH has been neglected and subsequently has become an impediment to achieving sustainable development for SMEs. In addition, some empirical studies indicate that workplace injuries and illnesses reduce overall firm efficiency, leading to decreased employee morale and increased operational costs (Shikdar & Al-Hadhrami, 2020; Oluwaseun et al., 2020). Several empirical studies have not thoroughly examined the connection between government policy and OSH practices and performance of SMEs, which has resulted in a failure to address important gaps in the relationship. Although Harnois and Gabriel (2000) found employee satisfaction and well-being significant in improving performance, their study did not include government policy as a moderating variable between OSH and performance of SMEs. Another related study by Gunyomi and Bruning (2016) conducted in Nigeria found human capital development and occupational health and safety closely correlated to performance, but did not focus on SMEs. Further, recent studies have emphasized the importance of OSH compliance but have failed to explore the moderating effect of government policy on the relationship between OSH and Performance of SMEs in Kenya (Aminu & Ezekiel, 2020) Therefore, the purpose of this study was to analyze the moderating effect of government policy on the relationship between occupational safety and health practices and performance of SMEs in Kenya.

1.2 Research Objective

To assess the moderating effect of government policy on the relationship between occupational safety and health practices and performance of Small and Medium Enterprises in Kenya.

1.3 Research Hypothesis

H_{01} : Government Policy has no statistically significant moderating effect on the relationship between occupational health and safety practices, and performance of small and medium-size enterprises in Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 The Classical Deterrence Theory

The study was anchored on the Classical Deterrence to give a deeper understanding on occupational safety and health practices, government policy and performance of SMEs of Kenya. Deterrence is an essential component in the promotion of compliance of rules and regulations. Consequently, the theory has attracted extensive attention from both regulators and scholars, drawing back from the time of the classical theorists such as Hobbes (1996), Beccaria (1986), and Bentham (1988). These philosophers argued that when penalties are severe, swift, and certain, rational individuals are likely to evaluate potential benefits against likely costs before engaging in prohibited deeds thereby discouraging them from violating rules when the expected cost overshadows the benefits. Thus, the severity of punishment remains one of the key legal mechanisms designed to encourage law-abiding behavior (Abramovaite et al., 2022). In the 18th century, Cesare Beccaria played a pioneering role in shifting the focus of punishment from vengeance to deterrence. He argued that the purpose of deterrence was not only to prevent offenders from repeating wrongful acts but also to deter others from engaging in similar misconduct (Purse et al., 2014). Despite its widespread application, deterrence theory has been subject to significant critique. Some of its critics claim that its foundational assumption that individuals consistently act according to rational, rule-based calculations is overly simplistic and has been described as exaggeratedly one-dimensional. Nevertheless, OSH provides a relevant platform for examining deterrence theory because breaches often go undetected and sanctions for non-compliance are generally insufficient, leading to what has been described as a “deterrence gap” (Purse et al., 2014). Acknowledging this gap, the Australian Industry Commission in its 1995 review of OSH regulations recommended measures to increase the likelihood of detecting and penalizing non-compliance, alongside raising penalty levels. This study therefore adopts deterrence theory to explain the moderating role of government policy on the relationship between OSH practices and performance of SMEs in Kenya. When government imposes restrictions or penalties for non-conformance by small and medium size enterprises and



enforces for those regulations such enterprises are bound to follow the law and adhere to the set regulations and standards thus reducing accidents.

2.2 Empirical Review

2.2.1 Government Policy on the Relationship between OSH Practices and SMEs Performance

The empirical literature on government policy was analyzed in order to establish the study gaps. These studies show different views on the relationship between OSH practices, government policy and performance of SMEs. Kersten et al. (2017) examined the whether health measures moderated the relationship between safety practices and employee engagement in selected construction enterprises in Bamenda, Cameroon. Using survey data from 203 respondents, the study concluded that health measures moderated the link between safety initiatives and employee commitment. The findings recommended strengthening safety and health practices to promote organizational commitment but also highlighted a knowledge gap, suggesting the need to explore moderating variables beyond health measures. In response, the present study adopted government policy as the moderating variable.

Kelwon (2021) investigated the moderating role of government policies, practices, and procedures on the antecedents of occupational safety and health among police personnel in Nairobi City County. Targeting 4,000 police officers from 33 police stations, the study used a descriptive and inferential research approach and used a stratified random sample of 200 respondents, including commanders. Findings revealed that 42.4% of respondents perceived government policies as helpful during emergencies. The moderated model results suggested that government policies significantly strengthen the relationship between leadership style, legal frameworks, work environment, resource availability, workload, and occupational safety and health outcomes. Nonetheless, the study was limited to leadership, environment, and workload while excluding critical variables such as employee wellness and ergonomics which a critical components of OSH. These gaps justify the current study, which incorporates government policy as a moderator of the relationship between wellness, work environment, ergonomics, and SME performance.

Hafeez et al (2019) explored the impact of workplace environment on employee performance using: Mediating Role of Employee Health. Using questionnaire survey method, data was collected from 250 employees working in software houses in Pakistan. The results revealed that employee health significantly increased employee productivity and employee health mediates the relationship between workplace environment factors and employee performance. This study was narrowed to workplace environment omitting other subcontracts of OSH that were used in the current study. Similarly, the study explored health as a mediator variable thus justifying the need to use a different moderator variable in the study. These gaps justify the need for the current study to use government policy as a moderator variable.

In Kenya, Jared et al. (2019) investigated how workplace accidents affected business performance. Their results showed that workplace accidents have a major impact on organizational performance, modulated by health and safety policy restrictions. The study used stratified, convenient, and proportionate sampling to select 414 respondents from a target population of 2,107, with an emphasis on the General Adaptation Syndrome and Contingency Theory. The authors recommended that both government and management integrate OHS policy regulations to mitigate accidents and enhance firm performance. However, reliance on a limited theoretical framework suggests the need for further studies grounded in alternative theories. Consequently, the present study adopted Behavior Reasoning Theory, Domino Theory, and Deterrence Theory as its theoretical foundations.

III. METHODOLOGY

3.1 Research Philosophy

The positivist approach, grounded in epistemology, was used in this study to examine the moderating effect of government policy on the relationship between occupational health and safety practices and performance of SMEs in Kenya. The positivism philosophy approach ensured the hypothesis was established based on recognized theories and verified empirically using numerical tools, guaranteeing a rigorous, objective, and quantitative evaluation of the research questions enabling decision on whether to accept or reject the null hypothesis to be made. In addition, the approach ensured findings are reported as obtained the new knowledge described effectively and facts on the ground disclosed.

3.2 Research Design

To collect data from the sampled small and medium-sized businesses in Kenya, the study adopted cross-sectional descriptive survey an inferential research design. Cross –sectional data was gathered using questionnaires. The design ensured ease in realizing the aspects of OSH practices and performance of SMEs in Kenya.



3.3 Study Population

The study population comprised of 1118 SMEs registered under KAM member categorization listing of 2022. The SMEs are classified into 14 sectors covering a wide range of businesses. In each enterprise, either the human resource manager or safety representatives (where applicable) was identified for data collection.

3.4 Sample Size Determination

The study applied the Yamane formulae to obtain an appropriate sample size from the target population of 1118 SMEs, at a 5% estimation error, as shown in equation below.

$$n = \frac{N}{1 + N(e)^2}$$

Where:

- n = sample size,
- N = total target population
- e = error term,
- N = 1118

Using the formula, a sample of 294 SMEs was arrived at as illustrated below

$$nf = 1118 \div (1 + 1118 (.05 * .05)) = 294 \text{ SMEs.}$$

The 294 sample size was ideal representation of the target population as it surpassed the 20% recommended.

3.4.1 Sampling Techniques

The study employed stratified simple random sampling technique to select the 294 data collection units in this case the small and medium-size enterprises identified from the target population.

3.5 Collection Procedure

The study used both primary and secondary sources where self-administered structured questionnaires were employed to collect primary data. Relevant theories, models and empirical studies explored in chapter two aided in interpretation of the literature on occupational safety and health practices, performance of SMEs and government policy that moderated the relationship between the dependent and independent variables.

3.6 Data Analysis

To analyze the influence of occupational health and safety practices on performance of SMEs in Kenya, data collected from the 294 SMEs was coded and then uploaded into spreadsheet document for analysis. Information on the OSH practices and government policies were analyzed using descriptive statistics and ordinal regression analysis.

3.6.1 Ordinal Regression Model Estimation

The study applied Ordinal Logistic Regression (OLR) to model the relationship between the ordinal response variable and the explanatory variables. OLR was suitable since it separates data into two sets made up of first- and second-order constructs, with binary dependent variables and nominal/ordinal independent variables. Ordinal regression is predicated on the idea that there is an identical relationship between every set of outcome groups. The Likelihood Ratio Test, Wald Chi-Square Test, and other tests to determine whether the OLR Model was suitable for the study were used in the Parallel Lines assumption test for this investigation. In order to determine whether or not the assumption is true, these tests also looked at how equal the various categories are.

The Equality below shows the hypothesis that tested whether coefficients of independent variable are equal or not for every single category.

$$H_0 = \beta_{1j} = \beta_{2j} = \dots = \beta_{(k-j)j} = \beta \quad J=1,2, \dots, j$$

Where parallel lines assumption holds, Proportional Odds Models are commonly used. Therefore, the OLR Model was used to test the hypothesis of the study.

3.6.2 Main Effect of Ordinal Regression Model Estimation

In this model, the aspects of occupational safety and Health practices (that is employee wellness, working environment and ergonomics) were subjected to incremental addition to determine their individual and collective effect on performance of SMEs.

Let the probability of SMEs performance be denoted by:

- Y = Performance of SMEs, an ordinal variable
- X₁ = Employee Wellness an ordinal variable
- X₂ = Work environment an ordinal variable
- X₃ = Ergonomics an ordinal variable



Consider

$$\text{Logit } P(Y \leq j / X_k) = \alpha_j - (\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3)$$

Where α_j represents the threshold values which values do not depend on the values of the predictor variables and β_k s are the coefficient of the k predictor variables in the estimated model and $j=1,2,3,\dots,j-1$.

The equation was used to evaluate how OSH Practices constructs influence performance of SMEs in Kenya

3.6.3 Moderated Ordinal Regression Model Estimation

A moderator is a factor that influences the direction and/or the strength of the relationship between an exogenous and an endogenous variable. A variable z is a moderator if the relationship between two or more other variables, say x and y, is a function of the level of z. In this study, Government Policy was used as a moderator variable to determine whether it results in the following effect of the three independent variables on the outcome variable. Enhancing effect: The presence of the Government Policy enhances the effect of the predictors on the outcome variable, Buffering effect: The presence of the Government Policy reduces the effect of the predictor on the outcome variable, Antagonistic effect: The presence of the Government Policy reverses the effect of the predictor on the outcome variable,

As specified earlier

Y = performance of SMEs, an ordinal variable

X₁ = Employee Wellness an ordinal variable

X₂ = Work environment an ordinal variable

X₃ = Ergonomics an ordinal variable

Additionally, let

Z= Government Policy as an ordinal moderating variable

Consider,

$$\text{Logit } P(Y \leq j / X_k) = \alpha_j - (\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 ZX_1 + \beta_5 ZX_2 + \beta_6 ZX_3)$$

Where α_j represents the threshold values which values do not depend on the values of the predictor variables and β_k s are the coefficient of the k predictor variables in the moderated estimated model

IV. FINDINGS & DISCUSSIONS

4.1 Descriptive Statistics

The study proposed to perform descriptive statistical analysis to summarize, describe, and organize the basic characteristics of the research variables dataset using selected summary statistics and visualization tools.

Table 1

Descriptive Statistics for Government Policy

Statement	SA	A	N	D	SD
SMEs are aware of OSH laws and regulation.	14.0%	41.5%	17.0%	18.3%	9.2%
The OSH Policy is formulated in line with the OSH Laws.	23.1%	43.7%	24.9%	2.2%	6.1%
Management ensures that employees adhere to OSH Laws.	44.5%	38.9%	6.1%	9.6%	0.9%
DOSHS inspects our premises quite often.	36.7%	46.3%	16.2%	0.4%	0.4%
We are aware of the penalties of non-compliance.	22.7%	44.5%	19.2%	11.8%	1.7%
We pay heavy penalties for non-compliance.	33.2%	47.6%	16.2%	2.6%	0.7%
The government is committed towards improving OSH.	30.6%	52.8%	15.7%	0.4%	0.4%

The results on Government policy in table 1 indicate that the level of awareness of OSH laws and regulation is average as confirmed by average level, 55.5% of confirmation among the respondents. The employees feel that OSH Policy is somehow formulated in line with the OSH Laws as confirmed by average agreement of 66.8%. The findings through high agreement of 83.4% further confirmed that employees adhere to OSH laws as confirmed by DOSHS inspection at 83%. Employees exhibited average awareness of penalties of non-compliance at 67.2%. Lastly, there was a general feeling that the government is committed towards improving OSH as confirmed by high percentage of 83.4%.



Table 2
Descriptive Statistics for Performance

Statement	SA	A	N	D	SD
Organization experiences improved employee morale, job satisfaction and productivity of staff.	27.7%	53.7%	5.7%	12.7%	0.9%
There is reduction of accidents in work place	38.0%	48.5%	9.6%	3.5%	0.4%
Organization experiences absenteeism and lateness of staff.	23.1%	43.7%	24.9%	2.2%	6.1%
Organization adheres to government OSH regulations and records improved OSH	22.7%	44.5%	19.2%	11.8%	1.7%
Organization experiences efficiency of workers.	31.4%	47.6%	17.0%	3.5%	0.4%
Organization experiences positive psychological outcome among staff.	38.0%	48.5%	9.6%	3.5%	0.4%
Organization experiences reduced medical bills.	46.3%	34.5%	16.6%	0.4%	2.2%

Findings shown in table 2 revealed that the organizations experience improved employee morale, job satisfaction and productivity of staff at 81.4% agreement. The organizations experience reduced accidents in work place; at 86.5% and reduced absenteeism and lateness of staff at 66.8%. The respondents confirmed that the organizations adhere to government OSH regulations and records improved OSH as evidenced by high acceptance level of 67.2%. Similarly, the respondents contend that the organizations experience efficiency of workers; at 79% acceptance level. Similarly, the respondents were confident that the organizations realized positive psychological outcome among staff at 77.5% and reduced medical bills at 80.8%. In the study, SMEs registered acceptable performance as evidenced by higher percentage responses of strongly agree and agree (above 70% in all categories confirming the proposition of behavioral theories that acceptable performance is achieved through comfortable workforce.

4.2 Correlation Analysis

The results of the Correlation analysis examined the degree of relationship between the dependent variable and independent variable using Pearson correlation coefficient (r), which yield a statistic that range between -1 to 1. The Pearson correlation results between the Performance of SMEs and the OSH practices indicated that working environment (.606) had the highest significant correlation followed by ergonomics (.390) and employee wellness (.371) trailing with lowest coefficient. From the results there is evidence that relationship between all the variables was significant as all coefficients are positive. The findings are consistent with Oluoch (2017) study that established significant correlation between occupational safety practices and the performance of staff in SMEs.

4.2.1 Moderation Effect of Government Policy on Relationship between Occupational Health and Safety Practices, and Performance

The hypothesis for the study was:

H₀₁: Government Policy has no moderating effect on the relationship between occupational health and safety practices, and performance of small and medium-size enterprises in Kenya.

To analyze the effect of mediating effect of government policy on the relationship between OSH and performance of SMEs, the proportional assumptions tests were conducted.

4.2.2 Testing the Proportional Assumption

The test checks the assumption of parallel lines (proportional odds) which essentially is a precondition for using ordinal logistic regression modeling methodology. A non-significant result ($p > 0.05$) would suggest that the assumption holds. Table 2 presents the test results for the moderated effect modeling under ordinal regression.

Table 3
Test of Parallel Lines

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	.000			
General	.000	.000	75	1.000

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories. The test of parallel lines or proportional odds assumption is not significant which indicates that the odds are proportional across the response variable. SMEs performance ($P = 1.000 > 0.05$) Hence, proportional odds assumption is satisfied for moderated data.



4.2.3 Overall Adequacy of the Moderated Ordinal Regression Model

Given the test of parallel lines confirms the model is appropriate for the data, the next step is to assess whether the estimated moderated has improved in terms of adequacy when government policy is included as a moderator. Introducing the moderating variable would bring either an enhancing effect i.e. strengthening the relationship between the predictor variables and the dependent variable, buffering effect that reduces the relationship or finally bring in an antagonistic effect of negating the relationship. Table 3 shows the model fit information with the inclusion of government policy.

Table 4
Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	403.638			
Final	.000	403.638	25	<.001

By comparing the final model against the baseline to see whether it has significantly improved the fit to the data, the -2 log-likelihood (-2LL) values for the baseline (403.638) and the final model (0.000) using a correct [zoning chi-square to test the difference between the -2LL for the two models gives a significant result]. The significant chi-square statistic ($p=0.000<0.05$) suggests that the Final Model results into a significant improvement over the baseline intercept-only model. This shows that the moderated model gives better predictions than the intercept only case.

4.2.4 Evaluation of the Goodness of Fit of the Model

This evaluation employs two tests, Pearson and the Deviance goodness-of-fit tests. If the p-value for the goodness-of-fit test is lower than the selected significance level in this case 0.05, then the predicted probabilities deviate from the observed probabilities. Table 4 shows the output of the goodness-of-Fit.

Table 5
Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	348.704	135	<.001
Deviance	23.277	135	1.000

The results give a Pearson chi-square of $\chi^2_{(135)} = 348.704, p = 0.001 < 0.05$ leading to the conclusion that the model does not fit the data well, a result which is contrary to the deviance test statistic test result which shows a good fit. It can therefore be concluded using the latter result that the estimated moderated ordinal regression model fits the data well.

4.2.5 Assessment of Proportion of Variability in Outcome Variable Explained by the Moderated Predictors

As discussed for the mean effect model, the assessment of the proportion of the variance explained by the moderated model was done using the Nagelkerke statistic shown in Table 5 output below.

Table 6
Pseudo R-Square

Cox and Snell	.828
Nagelkerke	.928
McFadden	.789

It is clear from the result that the moderated model with the pseudo R^2 values (Nagelkerke = 0.928(93%) better explains the variability in the outcome variable than the main effect model (Nagelkerke =0.795 (80%)), these against the threshold of 70% pseudo R^2 value

4.2.6 Evaluation of the Moderating Effect of Government Policy between the Predictor Variables on the SMEs Performance

The parameter estimates result is the core of the output of this analysis which specifically indicates the effect of the moderating variable on the relationship between the various aspects of occupational safety and health practices (employee wellness, working environment and ergonomics) and SMEs performance (Table 7).



Table 7

Evaluation of the Moderating Effect of Government Policy between the Predictor Variables on the SMEs Performance

		Estimate	Std. Error	Wald	df	Sig.
Threshold	[SMEs Performance = 1]	-36.093	48.772	.548	1	.459
	[SMEs Performance = 2]	-22.224	19.124	1.351	1	.245
	[SMEs Performance = 3]	-15.602	19.064	.670	1	.413
	[SMEs Performance = 4]	-2.199	.814	7.302	1	.007
Location	[Employee Wellness =1]	33.892	98.070	.119	1	.730
	[Employee Wellness =2]	8.723	235.330	.001	1	.970
	[Employee Wellness =3]	.233	1.615	.021	1	.885
	[Employee Wellness =4]	.369	.992	.139	1	.710
	[Employee Wellness =5]	0 ^a	.	.	0	.
	[Working Environment =1]	-25.169	153.179	.027	1	.869
	[Working Environment =2]	-6.411	2.734	5.498	1	.019
	[Working Environment =3]	3.624	22.354	.026	1	.871
	[Working Environment =4]	-1.807	.909	3.954	1	.047
	[Working Environment =5]	0 ^a	.	.	0	.
	[Ergonomics =1]	0 ^a	.	.	0	.
	[Ergonomics =2]	1.807	4.461	.164	1	.685
	[Ergonomics =3]	-1.771	2.287	.599	1	.439
	[Ergonomics =4]	.911	1.130	.650	1	.420
	[Ergonomics =5]	0 ^a	.	.	0	.
	[Government Policy =1]	-29.007	303.489	.009	1	.924
	[Government Policy =2]	-27.719	37.176	.556	1	.456
	[Government Policy =3]	-18.913	19.475	.943	1	.331
	[Government Policy =4]	-3.064	1.186	6.680	1	.010
	[Government Policy =5]	0 ^a	.	.	0	.
	[Employee Wellness =2] * [Government Policy =3]	-5.781	235.376	.001	1	.980
	[Employee Wellness =2] * [Government Policy =4]	-12.614	236.390	.003	1	.957
	[Employee Wellness =3] * [Government Policy =3]	6.533	4.928	1.758	1	.185
	[Employee Wellness =3] * [Government Policy =4]	-8.976	19.146	.220	1	.639
	[Employee Wellness =4] * [Government Policy =3]	-.369	5.613	.004	1	.948
	[Employee Wellness =4] * [Government Policy =4]	-.062	1.330	.002	1	.963
[Working Environment =3] * [Government Policy =3]	-13.348	22.546	.351	1	.554	
[Working Environment =4] * [Government Policy =4]	.580	1.098	.279	1	.598	
[Ergonomics =3] * [Government Policy =3]	5.239	3.416	2.352	1	.125	
[Ergonomics =4] * [Government Policy =4]	-1.630	1.277	1.631	1	.202	

The results above show the parameter estimates, standard errors and, Wald and p values for a fit of the moderated model. As it was noted earlier, a key question of interest was whether government policy moderates the effect of the relationship between occupational health and safety practices on SMEs performance. It is clear from the p-values for the interaction effect that government policy does not have a statistically significant effect on the relationship between OSH practices (employee wellness, working environment and ergonomics) and SMEs performance since all the P values are above the significant level of 0.05. It is however useful to note that the moderated variable (government policy) under main effect conditions of the intervening rating category 4-Agree ($b = -3.064$, $\chi^2_{(1)} = 6.680$, $p = 0.010 < 0.05$) was statistically significant since the p-value 0.010 was less than the significant level 0.05. Accepting the null hypothesis implies that government policy has no moderating effect on the relationship between occupational health and safety practices in SMEs but when test on its own showed a significant result with a p value of 0.10. The Results showed no significance moderating effect at ($p = 0.849 > 0.05$) which led to acceptance of the null hypothesis.

The findings of the main effect condition of government policy rating category 4-Agree ($p = 0.010 < 0.05$) statistically significant is supported by the propositions of deterrence theory that government policy ensures availability of adequate, safe and appropriate working tools, facilities and environment. Government policy on regulation and



enforcement of health and safety enhance compliance with the OHS requirements. This explains why there is a moderation outcome, though non-significant. Government institutions have a statutory responsibility to ensure safety of all employees through trainings and sensitizations whether business enterprises are formalized or not (Murithi, 2021). In order to mediate the relationship between the antecedents of occupational safety and health among police personnel in Nairobi City County, Kenya, Kelwon (2021) employed government policy in conjunction with practices and procedures. 42.4% of those surveyed said they found government programs useful in times of crisis. The data also demonstrated that the R squared following government policy moderation was .903, which was greater than the R square for the non-moderated effect, which was .828. The study concluded that 90.3% of the variations in police officer occupational safety and health in Kenya can be explained by government policies, practices, and procedures that moderate the relationship between leadership style, the legal framework, the nature of the work environment, the availability of resources, and the workload.

4.3 Discussion

The study analyzed the moderation role of government policy on the relationship between occupational health and safety practices, and performance of SMEs in Kenya.

4.3.1 Summary of Findings on Occupational Health and Safety practices

The positive estimate coefficient ($r=0.371$), and Wald test statistic results indicated that employee wellness is statistically different from zero in estimating organizational performance, implying that employee wellness has significant positive relationship with performance of SMEs. SMEs with higher levels of investment on employee wellness were similarly found to have, notwithstanding none statistically significant effect on performance as respectively demonstrated by ($b= -1.665$) and ($b= 0.126$). The Pearson correlation results between the Performance of SMEs and the predictor variables indicate working environment (.606) had the highest significant correlation compared to ergonomics (.390) and employee wellness (.371). Similarly, the inferential statistics results show working environment has the largest coefficient as compared to ergonomics and employee wellness. Whereas controlling for the effect of employee wellness and ergonomics, working environment ($\beta = 1.225$, Wald 23.007, $p = 0.000 < 0.05$) was found to have the biggest positive coefficient in the overall parameter estimates with a statistically significant effect on SMEs performance. This implied that SMEs perform better when working conditions are suitable as employees feel comfortable and more satisfied. The Pearson correlation results indicated a positive relationship between performance of SMEs and the ergonomics (.390). Compared to those other investment and controlling for working conditions and employee wellness, SMEs investment in ergonomics ($b= -6.075$, $\chi^2_{(1)} = 18.131$, $p = 0.01 < 0.05$) shows the results are statistically significant since the P-value is less than 0.05. The findings are consistent with Oluoch (2017) study that established significant correlation between occupational safety practices and the performance of staff in SMEs. Similarly, Hafeez et al (2019) found working environment considerably improved employee productivity and that employee health mediates the relationship between workplace environment and employee performance. The findings are supported by Jared et al. (2019) study that found workplace accidents to significantly impact on organizational performance.

On the basis on the results of the ordinal moderated regression model, the null hypothesis H_0 : Government Policy has no moderating effect on the relationship between occupational health and safety practices, and performance of small and medium-size enterprises in Kenya is rejected. Therefore, although government policy was found significant in regulating occupational safety and health practices, the null hypothesis was rejected

4.3.2 Summary of Findings on Government Policy

The study aimed at assessing the moderating effect of government policy on the relationship between occupational safety and health practices and performance of small and medium-size enterprises in Kenya. Its null hypothesis indicated that government policy has no statistically significant moderating effect on the relationship between occupational health and safety practices, and performance of small and medium-size enterprises in Kenya. These results are inconsistent with the findings by Murithi (2021) that government policy regulates OSH Practices and may in turn moderate performance outcomes of the organization. Accepting the null hypothesis implies that government policy has no moderating effect on the relationship between occupational health and safety practices in SMEs but when test on its own showed a significant result with a p value of 0.10. The findings are consistent with Gitonga (2023) study on the assessment of factors influencing e-procurement adoption by small and medium-sized enterprises in Nyeri County, Kenya that used government policy as a moderating variable. The results showed no significance moderating effect at ($p=0.849>0.05$) which led to acceptance of the null hypothesis. Contrary to the results of the current study, Kelwon (2021) found government policy in conjunction with practices and procedures had a significant moderating effect on the relationship between the antecedents of occupational safety and health among police officers in Nairobi City County,



However the study findings agree that government policy and regulation are useful in occupational safety and health promotion.

The findings on government policy showed that there is average level of awareness of OSH laws and regulation among SMEs. The respondents were of the opinion that OSH Policy is somehow formulated in line with the OSH laws and they confirmed adherence to OSH laws. The respondents were confident that DOSHS inspection is done on SMEs adequately and regularly and in line with the regulations. However, the level of awareness among employees was evident, especially on penalties of non-compliance. Lastly, the respondents had a general feeling that the government is committed towards improving OSH as confirmed hence the need for organizations to operate in compliance with OSH policy.

4.3.3 Summary of Findings on Relationship between Occupational Health Safety Practices, Government Policy and Performance

Government policy was found to have an insignificant moderating effect on the relationship between occupational health and safety practices, and performance. It is clear from the p-values for the interaction effect that government policy does not have a statistically significant effect on the relationship between the three aspects of OSH practices (i.e. employee wellness, working environment and ergonomics) and SMEs performance since all the P values were found to be above the significant level of 0.05. Similarly, it was observed that the moderated variable (government policy) under main effect conditions of the intervening rating category 4-Agree ($b = -3.064$) was statistically significant since the p-value 0,010 was less than the significant level 0.05. However, since the overall moderating effect of government policy on all other variables at different categories was insignificant, it would be concluded from the moderated test results that government policy has no significant effect on the relationship between the dependent and independent variable. The Null hypothesis was thus accepted. Accepting the null hypothesis implies that government policy has no moderating effect on the relationship between occupational health and safety practices and performance of SMEs. The findings are consistent with Gitonga (2023) study on the assessment of factors influencing e-procurement adoption by small and medium-sized enterprises in Nyeri County, Kenya that used government policy as a moderating variable. The Results showed no significance moderating effect at ($p = 0.849 > 0.05$) which led to acceptance of the null hypothesis.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusion

The study examined how government policies moderate the association between occupational safety and health practices and SME performance in Kenya. The study's analysis of the moderation interaction revealed a negative, albeit negligible, moderating influence of government policy on the connection between Kenyan small and medium-sized businesses' performance and occupational health and safety practices. These finding imply that government policy controls organizational approach to execution and implementation of internal strategies. Success of an organization in realizing the desired performance outcome is significantly influenced by the extent to which its internal strategy is in line with government policy. Most of the time, government policy moderates the activities of an organization, hence inhibits realization of maximum potential.

5.2 Recommendations

The study recommends that SMEs develop strategies and adopt organizational approaches that are consistent with government policy. Further, government agencies such as DOSHI should closely work with SMEs managers in relation to regulation and implementation of government policies relating to occupational health and safety practices so that government policies do not have adverse outcomes on business performance. On the other hand, SMEs manager should collaborate with government agencies for better performance. Consequently, the study recommends a comparative analysis to be conducted between SMEs and large organizations, especially in evaluating the moderation effect of government policy on the relationship between occupational safety and health practices and performance of large enterprises in Kenya. A further study may be conducted where Government Policy is used as an independent variable among other variables to test whether a relationship exists between Government Policy on occupational safety and health and Performance of SMEs.



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Origins, nature and the development of ethnic identity in Kenya since 1963

Samuel Wafula Mukanda^{1*}

^{1*}swafulam@gmail.com

¹<https://orcid.org/0009-0006-5171-9631>

¹Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

This article set out to explore the origin, nature, and formation of ethnic identity in Kenya since the year 1963, when the country gained its independence. Ethnic identity has also been among the most persistent aspects of the political and social landscape in Kenya and has been a frequent factor in the distribution of resources, political contestation, and nation-building. Basing itself on pre-colonial kinship systems established during the colonial reign and exploited by the post-colonial elites, ethnicity has transformed itself into a form of belonging as well as a tool of exclusion. The proposed study uses a qualitative and historical methodology, with references to the academic literature, policy documents, and political history, to examine the development of ethnic identity in five different political regimes: Jomo Kenyatta (1963-1978), Daniel arap Moi (1978-2002), Mwai Kibaki (2002-2013), Uhuru Kenyatta (2013-2022), and William Ruto (2022-present). Results indicate that ethnicity has been used by peoples to offer cultural strength and identity, although it has been extensively politicized to consolidate power, allocate resources, and attract and maintain support at the cost of national unity. This article is significant because it contributes to the discussion on ethnicity, democracy, and development in Africa, and this information can help the policymakers and scholars that have an interest in identity politics and state-building. The paper concludes that ethnicity has been both a blessing and a curse to the socio-political development of Kenya—both as a unity element and a source of division. The paper recommends inclusive governance systems, civic education, and grassroots reconciliation programs as some of the most suitable measures in alleviating ethnic polarization and enhancing sustainable national cohesion in Kenya.

Keywords: Ethnic Identity, Ethnic Mobilization, Kenya, Nation-Building, Politics

I. INTRODUCTION

Ethnicity has greatly influenced the course of the history of Kenya since independence in 1963. The issue that is tackled in this paper is associated with the maintenance of ethnic identity as the cultural anchor, and the political weapon in the post-colonial state of Kenya. Ethnicity is not simply a descriptive term of cultural belonging, it has been politicized, manipulated and mobilized by the elites to define power, resource and opportunities. This duality, unifying and divisive, is what has made it one of the most complicated challenges in nation-building processes in Kenya. The pre-colonial origins of ethnic identity in Kenya were fluid and relational. The Kikuyu, Luo, Kalenjin, Luhya, Kamba, Somali, and Mijikenda communities used to engage in trade, intermarry and migrate. Identity was more founded on kinship, lineages and territorialism as opposed to strict tribal divisions (Ogot & Ochieng', 2000). The British colonial rule (1895-1963) turned these seen identities into fixed tribes, however, the policies of indirect rule, census categories and land alienation turned them to hard-bodied tribes. Categories of ethnics were institutionalized and this influenced access to education, employment and land (Lonsdale, 1992).

The new Kenyan state inherited at independence in 1963 not just a sovereign government but also a polity which was more than divided. The politics of mobilization in the nationalist struggle was also characterized by ethnic arithmetic whereby the Kenya African National Union (KANU) that was dominated by larger ethnic groups opposed Kenya African Democratic Union (KADU) representing minority communities that favored federalism (*majimboism*). Despite Kenya becoming a unitary system, these ethnic divisions continued to exist during the post-colonial rule especially in land sharing and political favors. The importance of researching ethnic identity in Kenya is that it has forever affected the political stability, democracy and development.

Ethnic identity in Kenya is thus not fixed but has been redesigned in historical and political backgrounds. Ethnic consciousness was heightened by the emergence of multiparty politics of the 1990s, whereby political parties were mostly ethnic blocs that needed to gain control of the region and state resources (Muigai, 2004). The patron-client networks also strengthened this ethnic politicization as the leaders used the development resources to strengthen their power base along the ethnic line. As a result, ethnicity emerged as the hegemonic principle of political rivalry and social



existence in Kenya. This relationship has been perpetuating electoral formations and voting trends whereby national interests are usually at cross with ethnic elites (Branch & Cheeseman, 2008).

In addition to politics, ethnicity and the socio-economic and spatial disparities also interact in Kenya. The past land injustices, especially in the Rift Valley and Coast have made some people feel excluded and left behind (Boone, 2012). These grievances have been periodically taken out in ethnic clashes and most so during times of political transition. Meanwhile, ethnicity is another way of ordering society and preserving culture that determines the feelings of belonging and unity in people. Therefore, even though ethnicity has been used as a political manipulative instrument, it is also at the center of the Kenyan cultural life, which gives individuals and communities a sense, security, and identity (Ndegwa, 1997). The history of ethnic violence in Kenya and especially in 1992, 1997, and 2007-08, shows the mobilization of ethnicity in the process of competitive elections. Meanwhile, ethnic identity is a source of cultural pride and cultural belonging, in the language, traditions, and solidarity as a community. This article hence looks at the formation, the nature, and evolution of the ethnic identity in Kenya since 1963 and how successive political regimes have influenced its course.

1.2 Research Objectives

This research article was guided by three research objectives that were informed and addressed by the research findings. They are as follows:

- i. To examine the historical origins of ethnic identity in Kenya and assess the role of colonial policies in shaping rigid tribal classifications.
- ii. To analyze the nature and dual function of ethnicity in post-independence Kenya as both a mechanism of political exclusion and a source of social cohesion.
- iii. To investigate how successive political regimes in Kenya have influenced the development and transformation of ethnic identity from independence to the multiparty era.

II. LITERATURE REVIEW

Ethnic identity in Africa has a long history of being examined through the historical, political and anthropological perspectives. Geertz (1973), writing more generally about primordialism, claimed that ethnicity "is founded upon 'givens'--shared language, kinship, religion, and traditions--that offer people deep attachments." While this is an appropriate description of the affective appeal of ethnicity, it is mute to the diffusivity and instrumentalising of identities. The opening here is that primordialism is not thoroughly able to account for the changes in the ethnic custodianship found in Kenyan experience of colonialism and post-colonialism. A valuable Kenyan contribution was that of Ochieng (1975) who showed that there were no static "tribes" in pre-colonial times but that these groupings were fluid collectivities which came together through movement by trade, intermarriage, and migration. This result attacks static notions of ethnicity. However, Ochieng's work skips light on the contribution of external forces, particularly colonialism in hardening the categories, thereby leaving an opening to understand how colonial interventions established "tribes."

Lonsdale (1992) developed the proposition that through colonial rule, in Kenya, marked by socialist and nationalist labeling, tribalization, therefore the conversion of liquid patterns into viscous ethnic categories were carried out by the implementation of censuses, alienation of land, and indirect rule. He called this process "political tribalism." This framework is helpful in terms of understanding the roots of Kenyan ethnic identity, but it is mostly oriented toward structural impositions than it is on how ordinary Africans responded to or resisted, leaving a gap on how Africans in terms of agency molded identities. Boone (2012) further examined the colonial legacy, while relating ethnic politics to land distribution, specifically within the "White Highlands." Her work shows how land alienation politicized ethnicity among the Kikuyu, Maasai and Kalenjin. However, what is missing from Boone's study is that these measures are mostly relying on the notion of space (land) while neglecting other colonial institutions including education and labor that also shaped ethnic inequalities.

At independence, the infrastructure of the state was fragile and the new state was built on the politicization of ethnic cleavages. Oyugi (1997) argued that ethnicity became the agriculturally strong-seeded political mode which determines voting, state appointments and allocation of resources. His analysis identifies the primacy of ethnicity in governance but is missing the sociality of ethnicity, or in other words how ethnicity would have informed social contact beyond formal politics. Throup and Hornsby (1998) have noted that after independence the political parties in Kenya were ideologically non-aligned and mobilized on ethnic lines. The Kenya African National Union (KANU) of Khrushchev led to the Kenya African Democratic Union ensured the dominant and minority leaders represented contrasting ideas. However, although this sort of work examines high elite competition it lacks analyses of how various individual-producing grassroots cultures understood these alignments as part of their everyday life.

Mueller (2008) noted that patronage and state resources were channeled along ethnic lines and created the perceptions that "it is our turn to eat." While her analysis of the prominent political role played by ethnicity is accurate, it runs the danger of presenting communities as passive beneficiaries of patronage and opens up a vacuum on the ways in which citizens negotiated access to state resources, either through ethnic or otherwise. Ogot (1995) researched the multiparty period in the 1990s and noted how political elites used ethnicity as one way of mobilizing people to engage in violence, particularly in the Rift Valley. This is reflective of the destructive aspect of ethnic politics but leaves a breach regarding its constructive dimension -- solidarity, cultural identity and mediation of conflicts in Klopp's work.

Branch (2011) documented the experience of Jomo Kenyatta's presidency during which the inequality of land allocation and the inequitable redistribution of state patronage advantaged Kikuyu elites and institutionalized ethnicity in the state. This is useful to characterize ethnic discrimination, but it does create a void in terms of explaining how groups outside Kikuyu responded to these ethnic discriminatory practices. The recurrency of Daniel arap Moi's politics of division behind rhetorical words of unity was further illuminated by Throup and Hornsby (1998) who demonstrated the extent to which the Kalenjin elites remained central to his repressive politics. They dismiss the view that ethnic groups played a marginal role in History, claiming that Moi instead used it as a shield, as well as a sword. While the study captures the state-level elite-level politics, less is said about the often-remarkable implications daily life of Kalenjinization has for inter-ethnic relations at the community level. Cheeseman *et al.*, (2014) have explored the Uhuru Kenyatta-William Ruto alliance of 2013 to illustrate the way in which ethnic blocs can be reconciled by deals between elites. However, this alliance did not probe much further than elite settlements and therefore, significantly lacks an exploration of the viability of elites' alliance with ordinary Kikuyu and Kalenjin commoners.

Southall (2020), for example, examined the 2018 Kenyatta-Odinga "handshake" and showed the way in which elite consensus de-escalated tensions at the expense of broader democratic addressing of the situation. This highlights the importance of elite negotiations but there is a gap in understanding whether the citizens accepted the handshake as authentic conciliation or whether the handshake was just the interest of elites. Atieno (2023) linked the Ruto presidency to how the "hustler vs. dynasty" narrative is actually fractured by class politics rather than ethnicity. While impressive, her work suffers from a lack of analysis on whether this is a real change, or a reshaping of ethnic politics under a new label.

III. METHODOLOGY

This article makes use of a historical study design. Data were obtained from secondary sources such as books, journal articles, government reports and archival records relating to Kenya's political history and ethnicity. The sampling strategy was purposive as it focused on targeting literature that specifically addressed the question of ethnic identity in Kenya including development with shift of political regimes. The approach to the analysis was thematic categorization under three areas namely: on the origins of ethnic identity, its nature in the social and political life in Kenya and on a development since the independence. The findings were then synthesized to draw out continuities and transformations in ethnic identity in different times. This design was felt to be suitable because it allowed for an in-depth exploration of how ethnicity, as a social and political construct, has evolved over the period of time as a response to evolving historical and governance situations. Adopting a qualitative approach driven by historical analysis allowed the research to interpret events, policies and discourses that have shaped identity politics in Kenya, and provide an all-encompassing understanding opposed to the generalisations of statistical interpretation. The inclusion criteria were scholarly works, policy documents, and archival documents which directly discussed ethnicity and the creation of identities and political regimes in Kenya from 1963 to 2025. The sources that were excluded were those that were purely descriptive in nature without any analytical background, works that dealt with the theme of ethnicity outside the Kenyan context and those that were not credible and lacked academic content.

IV. FINDINGS & DISCUSSION

4.1 Origins of Ethnic Identity in Kenya

The origins of Kenya's ethnic identity are deep in the colonial period, during which British policy turned malleable pre-colonial identities into hard-edged "tribal" groupings, the study found. Pre-colonial communities were also not strictly defined because there was trade, intermarriage, and cultural overlap between communities. However colonial rulers used indirect rule, which needed clearly defined "tribes" to practically administer for ease and convenience (Lonsdale, 1994). Evidence gained from the colonial period censorship of the 1910s and 1920s indicates that the census classified people by "tribe," and ethnic groups were cut off by the establishment of Native Reserves, which allocated a particular area of the land for each group (Ogot, 1995). Institutionalized identity made ethnicity the key determiner of membership. Scholars agree that colonial statecraft created and solidified these cleavages: Lonsdale (1992) wrote of such a process as "the invention of tribes," while Anderson (2005) drew attention to the way in which



colonial land alienation in the Rift Valley exacerbated inter-ethnic tensions. In short, the results reveal that Kenyan ethnic identity was not primordial in its birth, but that colonial strategies of appropriating and mobilizing difference for its own process of governance created it.

The conclusions brought forth illustrate that the source of ethnic identity in Kenya was not based on ancient divisions of the culture but mostly forged by the colonial experience. But before colonialism, pre-colonial societies like the Kikuyu, Luo, Kamba and Maasai had fluid identities, defined more by foregoing alliances and intermarriages and economic exchange than by hard-bound ethnic walls. Trade systems, cattle exchange, and ritual exchange clearly led to breakdowns between communities and a blurred sense of belonging that could well be seen as situational. However, the introduction of colonial rule during the second half of the 19th century hardened these fluid associations into rigid 'tribal' types. British administrators, seeking good governance, took to indirect rule, which made it essential to build out clearly defined ethnic units over which control could be exercised through local chiefs. This led to what Lonsdale (1992, 1994) so memorably called the "invention of tribes," a planned administrative tactic that set formerly permeable social boundaries.

Further entrenching of these identities during the 1910s and 1920s is shown by the way in which colonial census and Native Reserve demarcation processes reinforced them. Ogot (1995) emphasizes the ways in which individuals were made to register under one "tribe" which ignored the history of multiple affiliations most had held previously. This process of ethnic spatial segregation with areas occupying ostensibly separate territorial reserves helped to shape a spatial aspect of ethnicity that continues to this day. These results confirm the continued salience of Anderson's (2005) argument that the histories of colonial alienation of land, especially fertile land in the Rift Valley, increased competition between "settler" and "native" populations and laid the foundations of the long-suffered conflict. Identity change was thus not just cultural but very material, based on the politics of land dispossession and economic injustice.

The argument presented here has much in common with other scholars' views that Kenyan ethnicity is the product of a relatively recent historical and political construction rather than primordial heritage as Kenyan state and political elites have tried to portray it. Whereas essentialist formulations tend to depict inter-ethnic hostility as both natural and primordial in nature, evidence instead shows that it was colonial rule that actively created the divisions that were to form the basis of post-independence politics. Interestingly, colonial remnants passed on not only consolidated boundaries but a political logic which put ethnicity as the key identifier of belonging and access to resources. By institutionalizing difference itself for the purpose of domination, the colonial state provided the scaffolding for the ethnic displacements and mobilizations, exclusions and conflicts that marked the twentieth and twenty-first centuries in Kenya's political history.

4.2 Nature of Ethnicity in Post-Independence Kenya

The research found that ethnic identity began to take on a dual nature after independence in 1963: both as a mechanism to create political exclusion and as a source of social cohesion. Politically, access to state resources (land, jobs, and development projects) became closely linked to one's ethnic affiliation. Kenyatta I's government was widely charged with favoring Kikuyu elites in the redistribution of land in the Rift Valley that created a legacy of resentment (Berman, 1998). Moi regime subsequently institutionalised Kalenjin patronage and multiparty politics in the 1990s inflamed inter-ethnic violence (Branch, 2011). These findings concur with the argument by Mueller (2008) who stated that ethnicity in Kenya is a political currency that is used to mobilize and have access to resources. At the same time, ethnicity was not totally destructive. Communities were using ethnic solidarity to develop welfare associations, savings groups (*chamas*) and cultural societies promoting resilience and mutual support (Ndege, 2019). This reveals a duality in the effects of the politics: if it provided a mechanism for exclusion decompression by instrumentalizing ethnicity tutgee languages, in social life it often acted as a mechanism of inclusion and survival.

The findings expose the extent to which ethnicity in post-independence Kenya developed a very specifically dual dimension; working simultaneously as a mechanism of political exclusion and of social cohesion. Politically, ethnicity came to be the dominant organising principle through which distribution of state resources and access to power was negotiated. The redistribution of land in the Rift Valley, under Kenyatta I, had a largely pro-Kikuyu bias in favor of the Kikuyu elite, a process that led to grievance accumulation by marginalized ethnic groups (e.g., the Kalenjin and Maasai). This fits in with the analysis by Berman (1998) of patrimonial politics, which illustrates how Kenya experienced a transformation of the state into specific means of ethnically based accumulation, by Kenya's first regime. Similarly, the deliberate bargaining advantage for the Kalenjin and coalition communities aligned with the ignoring of the state's role by Moi's reckless government through using KAMATUSA network was a reflection of the entrenchment of ethnic patronage as a sustenance strategy. Branch (2011) further notes that in the following of multiparty politics in the 1990s elite manipulation of ethnicity translated into the prevalence of ethnic clash, especially as in the Rift Valley, thus corroborating Mueller 2008's view of ethnicity as having been a powerful political currency in Kenya.

Yet, another less often emphasized dimension, and one that is particularly apparent in this study, is the integrative and cohesive function of ethnicity in everyday life. Communities marshalled ethnic solidarity to complement



state provision by forming welfare associations, burial societies, women's savings groups (*chamas*) and cultural organisations that provided mutual support in contexts where the provision of the state was often absent or inefficient. Ndege (2019) highlights this social aspect of ethnicity, where kinship relations and belonging for culture are protections against shocks that often benefit livelihood funds and safety nets; most prevalent in rural areas and peri-urban settings. Far from being just being divisive, ethnic identity in these spaces has served as the basis for trust and cooperation.

This duality makes it difficult to reduced, authoritarian understandings of ethnicity as destructive. Political science scholarship has tended to see ethnicity as the source of elite manipulation and violence, but anthropological perspectives emphasize the importance of ethnicity in the survival and cohesiveness of communities. The case of Kenya shows that ethnicity is not so easily sorted into a binary of "good" or "bad." Instead, it serves as both an instrument of exclusion in the political sphere, and of inclusion in the social sphere. This paradox is what makes ethnicity so potent an issue in Kenya, as it is both a source of conflict and hence a source of fight. The understanding of this dual role is therefore fundamental in contenting with Kenya's political trajectory, and viable interventions to deal with Kenya's divisive aspects without compromising its ability to maintain solidarity.

4.3 Development of Ethnic Identity across Political Regimes

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V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion



This study focused on the origins, nature and development of ethnic identity in Kenya since the time of independence. The results show that ethnic identity is not primordial but rather was the creation of politics in the colonial period, when the British carved the fluid precolonial affiliations into stern "tribal" categories through indirect rule and administrative practices. In the post-independence era, ethnicity came to have a paradoxical nature, in that it both served as a mechanism of elite exclusion, resource distribution, and political mobilization and as an element of solidarity, resilience, and cultural identity in the community. Across successive regimes, the results indicate, while strategies of mobilization and rhetoric have changed, ethnicity has been the dominant organizing principle of Kenyan politics. This persistence does highlight its dual value as a resource of power and a structure of belonging, which shaped political social and economic life.

5.2 Recommendations

Based on the results obtained, the current study suggests the Kenyan government along with the relevant policy institutions should seriously implement better frameworks for inclusive governance, which could ensure equitable distribution of resources especially land allocation, employment, public services, because ethnic favoritism has in many cases led to resentment; such could be done through transparent national auditing systems and equitable representation in state appointments. The Ministry of Education, cultural institutions, and the media should encourage civic nationalism by including histories and similarities enshrined in the school curriculum, encourage patriotism through cultural programs, and run media campaigns to highlight unity in diversity in order to reduce dominance of ethnic-based belonging over citizenship. At the same time, local leaders, civil society organizations and religious groups should advocate for reconciliation at the grassroots level by organizing community dialogues, peace committees and truth-telling forums to address prevailing historical grievances such as the issues over disputed land and ethnic violence to make peace sustainable and not just between elites. To reduce ethnicized political mobilization, political parties, the Independent Electoral and Boundaries Commission (IEBC), and parliament should encourage issue-based politics by enforcing regulations that discourage ethnic hate speech, institutionalization of inclusive candidate nomination and incentivization of policy-driven politics that focus on issues such as youth unemployment, poverty, and inequality. Lastly, comparative research on ethnicity in Africa should be further promoted by universities, research institutes, and international partners, DE Kenya learning lessons from a country such as Tanzania or Nigeria on effective best practice with regard to the management of diversity and evidence-based policymaking.

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E-commerce readiness of booksellers in Kenya

Angella C. Kogos^{1*}

Tom Kwanya²

Tabitha Mbenge-Ndiku³

^{1*}ackogos@gmail.com, akogos@tukenya.ac.ke

²tkwanya@tukenya.ac.ke

³tabbmbenge68@gmail.com

^{1,2,3}The Technical University of Kenya

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ABSTRACT

Booksellers in Kenya have traditionally sold printed books through physical stores. However, this is changing as e-commerce technology disrupts the industry. Booksellers need to adopt e-commerce and eBook selling to remain competitive and profitable. This paper investigates the barriers and benefits of publishers adopting e-commerce and eBook selling and the level of readiness for the same. The study adopted the Technology, Organization, and Environment [TOE] framework for technology adoption. The study targeted booksellers in Nairobi, Kenya; it was a survey of bookshops within the central business district of Nairobi and targeted 38 bookshops. Quantitative data collected using questionnaires was analyzed quantitatively using SPSS Version 29 software to provide both descriptive and inferential statistics. Findings of the study showed that the barriers to the adoption of e-commerce were inadequate funding, which correlated to poor online marketing systems (P value 0.017); high delivery costs, which correlated with lack of data protections (P value <0.001); and lack of awareness among booksellers about eBooks. Benefits were higher customer loyalty (P value 0.015), which correlated with new revenue streams (P value 0.015), and higher visibility of the stores. Only 3.7% of booksellers sold eBooks, and only 48.1% of the booksellers indicated readiness for adoption of e-commerce. There was a significant correlation between gender and the likelihood of adoption of eBook selling (P value 0.034). The study recommends that booksellers take advantage of funding initiatives by the government for SMEs to enable them to fund the expansion of their business into eBook selling and e-commerce. It also advocates for a campaign by the Kenya Publishers Association to increase awareness of eBooks and e-commerce among booksellers. The study provides empirical data on the adoption of e-commerce and eBook selling among booksellers in Kenya. It provides insights into the challenges they face as well as the benefits open to them through eBook selling. These findings contribute to the scarce body of data about the publishing industry in Kenya in particular and Africa in general.

Keywords: Booksellers, E-Commerce, E-Publishing, eBooks, Kenya

I. INTRODUCTION

The advent of digital publishing has led to the disruption of the book trade. The change to digital production has brought unprecedented changes to bookshops because of changes in reading habits and, consequently, in the purchasing habits of readers. Bookshops that rely on selling printed books are declining as more readers adapt to reading eBooks (Caine, 2023; Schwabe et al., 2023). The shift to eBooks has become more apparent in the developed world, where most readers can access digital devices and the Internet. For instance, a survey conducted in America revealed that 7% of the readers only read eBooks, with 27% saying they read both printed and eBooks (Jess, 2022). In addition to eBooks, booksellers have had to adapt to e-commerce to remain relevant. This has led to the growth of industry giants such as Amazon, which sells eBooks and currently holds 72% of the e-reader devices market. This shift has not been without casualties. Many brick-and-mortar bookshops have been pushed out of business for failing to adapt to the new e-commerce and digital publishing environment (Stern, 2021).

In developed world bookshops are more than distribution points for books. They act as a third space in which members of a community can interact away from work and home (Philips, 2023). They are a centre for events such as book launches, poetry readings, book club meetings among others that providing readers with opportunity to meet and have intellectual discourse. Readers can also get on the spot advice and expert recommendations from booksellers while at the store (Leitch, 2021). They also form the nexus of community outreach and are instrumental in promoting literacy by providing access to books for schools and supporting reading activities (Laing, 2020). In developing nations, the role of bookshops is reduced but essential nonetheless. They are an essential part of the distribution chain especially in countries like Kenya where all the publishers are based in the capital city and rely on distributors to reach



their consumers countrywide. Most bookshops in Kenya are set up as small business enterprises often as sole proprietorship. Similar to other SMEs they face challenges with access to credit and credit facilities such as loans, high taxation, poor adoption of technology, and inadequate managerial training leading to high failure rates (Bilal, 2023).

In Kenya, bookshops have been the mainstay of the country's book distribution channels. This is especially the case with school textbooks, the primary type of books sold by most bookshops in the country (Momanyi, 2017). Recently government changed the textbook procurement policy limiting schools to buying only one textbook per subject, this reduces the market for textbooks by focusing only on the vetted and approved titles reducing options for readers (Sigei, 2020). Additionally, the business to government procurement model set up by the textbook policy means that publisher often by pass booksellers and sells directly to government who then distribute the books to schools. Bookshops are therefore facing a challenge of disintermediation and the adoption of e-learning and digital publishing is going to exacerbate be the issue. This means that books now face stiffer competition to remain relevant.

Swindells (2022) posits that books lend themselves particularly well to e-commerce because what customers see is what they get. There is no need to test-fit or measure dimensions since these are standardised. They are not perishable or delicate; hence, they can be delivered easily. eBooks are even more suited for e-commerce since they can be delivered quickly over the Internet without complicated logistics. Costa and Castro (2021) conducted a meta-analysis of the adoption of e-commerce by small and medium enterprises (SMEs). They concluded that they must go online to remain competitive and dynamic. Adoption of e-commerce is, however, not without its challenges. Some of these include high delivery costs, which make goods costlier to consumers (Mogire et al., 2022); poor cybersecurity, and lack of data protections which lead consumers to distrust online platforms hence the reluctance to purchase (Dodevska & Nuredini, 2021; Kurniasandi et al., 2024; Ogolla et al., 2023); inadequate funding, high level of competition faced by other business online, and resistance to new technologies by the consumer (Talwar et al., 2020).

Bookshops in Kenya, like other small and medium enterprises, have had to grapple with the change in the market, with consumers shifting to online rather than in-store purchases. This shift was further accelerated during the COVID-19 pandemic, during which only firms already set up for e-commerce could continue operating while most had to shut down, resulting in losses. Therefore, for bookshops to remain visible, attract and retain consumers, and remain competitive through reaching new markets, they need to adopt e-commerce. However, there is little information on the status of the adoption of e-commerce by bookshops in Kenya, the challenges they face in adopting e-commerce, and the factors that may influence the adoption of e-commerce. This paper, therefore, investigates the adoption of e-commerce among booksellers in Kenya, perceived benefits and challenges of adoption of e-commerce by booksellers.

1.1 Research Objectives

The objectives of the study were to:

- i. Investigate the extent of adoption of e-commerce among booksellers in Kenya
- ii. Identify the perceived challenges and benefits of e-commerce to booksellers in Kenya and their impact on adoption of e-commerce by booksellers in the country
- iii. Investigate the state of readiness and likelihood of adoption of e-commerce by booksellers in Kenya

II. LITERATURE REVIEW

2.1 Theoretical Review

2.2.1 Technology, Organization and Environment [TOE] Theory

The study adopted the Technology, Organisation and Environment (TOE) theory of technology adoption by Tornatzky and Fleischer (1990). The theory posits that the adoption of new technology is affected by the technology available, the organisation characteristics such as age, size and organisational structure, as well as the environment in which it exists, which includes competitors and government policies (Religia et al., 2021). The adoption of e-commerce among small and medium businesses, such as bookshops, depends on the technologies available to both the organisation and consumers. Kenya boasts of being among Africa's best-connected countries, often called the Silicon Savannah (Kwanya, 2023; Muchiri, 2024). The International Trade Administration (2024) ranks Kenya as Africa's third-largest e-commerce market after South Africa and Nigeria, respectively. This has been made possible by the high level of internet penetration, with 22.71 million internet users in the country and an internet penetration of 40.8%, meaning nearly half of Kenyans have access to the Internet. This access is mainly through mobile phones, of which there are 66.4 million active cellular connections in Kenya in 2024, which is 118.7% of the population (Kemp, 2024; Kwanya et al., 2022). Additionally, Kenya has a unique mobile banking system, MPesa, which uses mobile phones instead of bank accounts to transact. This technology has greatly impacted e-commerce by revolutionising financial transactions and making them accessible to the Unbanked population. It has also provided seamless payment options

for e-commerce platforms in the country (Abdulhamid, 2020; Faster Capital, 2024). Therefore, it is clear that Kenya is uniquely adaptable to e-commerce through having access to the requisite technology and technological infrastructure.

The economic environment for e-commerce in the country is primarily affected by the laws and regulations governing the same. The widespread participation of citizens in e-commerce in Kenya has led to developing and implementing laws to govern the activity. However, these laws are not a comprehensive legal framework but rather laws affecting specific aspects of technology use and information access (Gitari, 2020). For example, the Data Protection Act 2019 focuses on public and private organisations' general protection of personal information and is not specific to e-commerce. The Computer Misuse and Cybercrimes Act 2018 is focused on cyber security and cybercrime and is not specific to consumer protection while engaging in e-commerce. The Consumer Protection Act 2012 does not define e-commerce business but refers to internet agreements for online transactions. Because of the fragmented nature of the laws that affect e-commerce, enforcement is difficult; therefore, the e-commerce industry is plagued with fraud, user privacy violations and poor customer protection (Ralarala, 2020). These challenges have become a barrier to businesses adopting e-commerce in Kenya. Additionally, the government of Kenya introduced a digital service Tax of 1.5% of the gross transactional value. This further reduces the profits for businesses engaging in e-commerce and has further slowed its adoption (Opiyo, 2022).

2.2 Empirical Review

There is a dearth of literature on bookselling and bookshops in Kenya. Early publications on the subject focused on the national textbook policies that influence the procurement and selection procedures of textbooks both at the school level and at the ministry of education level, bookshops were inadvertently left out of the investigation (Adakai, 2018; Babu, 2011; Kimanga, 2011; Rotich, 2000). This gap translates to the adoption of new technologies specifically the adoption of e-publishing by publishers in the country where the focus has been on publishers while ignoring the larger eco-system of book distribution (Chacha & Okinda, 2012; Muita, 2017). The existing studies that alluded to booksellers and adoption of e-publishing or e-commerce have examined specific aspects of e-publishing adoption—such as publishers' organizational readiness, readers' technological preparedness, or distribution challenges however these investigations remain fragmented and narrowly focused. Little attention has been given to how adoption of e-publishing transforms the broader publishing ecosystem, including the interdependent roles of authors, publishers, distributors, readers, and regulators. Adebite-Badmus and Folayan (2020) found that adoption of e-publishing benefits publishers more than authors and booksellers pointing to an imbalance of benefits across the publishing value chain, showing uneven effects on different stakeholders in the ecosystem. Ifeduba (2020) highlights disruptions in the distribution ecosystem, where end-users leap ahead of traditional intermediaries. Gaigher (2012) examined trade publishers in South Africa and noted that e-publishing was disruptive, lowering production costs but being constrained by lack of investment and supportive structures. This points to structural changes in the publishing ecosystem, where cost efficiencies alter competition but institutional readiness lags.

On the global stage, the discourse around e-commerce and bookselling is focused on the disruption of bookselling by digital platforms such as Amazon which currently dominates the market for both print and eBooks globally in an almost monopolistic fashion (Fundación GSR, 2024). Alarm has been raised over the place of the bookshop in the new world order of digital book platforms, specifically ways in which independent bookshops can fight to reclaim market share in a world that is dominated by multinational digital platforms such as Amazon, Adlibris, (Creamer, 2025). This discourse while important and productive as indicated by the setting up of bookshop.org as a multi-store bookselling platform is only applicable if booksellers are willing and able to adopt e-commerce practices in the first place which is a challenging prospect especially in less developed countries. Hendricks and Mwapwele, (2024) investigated factors influencing the adoption of e-commerce in developing countries and found that major barriers to adoption were inadequate infrastructures, ever expanding digital divide, low IT skills, unreliable logistics infrastructure, and low awareness. There is need to investigate if the same challenges face booksellers in Kenya.

III METHODOLOGY

The study adopted a correlational research design. Consequently, it uses quantitative methods for data collection, specifically a survey. The study population was bookshops in Kenya. There were 941 registered bookshops in the country as of 2017 (MOE, 2017). These bookshops were stratified according to the chapters of the Kenya Booksellers Association (KBSA) they belonged to; thus, they were categorised into 20 regions, which form the chapters of the KBSA. These are: Kisumu, Makueni, South Nyanza, Baringo, Kisii, Kitui, Murang'a, Narok, North Rift, Machakos, Bomet, Nyeri, Kakamega, Mombasa, Nakuru, Meru, Embu, Bungoma, Central Rift, and Nairobi. The researcher purposefully selected the bookshops registered under the Nairobi chapter, which has 91 bookshops. The researcher further used convenience sampling to narrow the sample to bookshops within Nairobi's Central Business District and immediate environs, as these locations were easily accessible to the researcher. The sample for bookshops, therefore, was 38 bookshops within Nairobi's CBD. This study used a quantitative research design, which focused on

collecting data that can be statistically analysed. The study, therefore, used questionnaires as a data collection tool. The questionnaires were self-administered to the bookshop managers of the 38 bookshops, and 27 were filled and returned. The data was then coded and analysed using SPSS, as well as both descriptive and inferential statistics.

IV. FINDINGS & DISCUSSION

4.1 Products Sold by Booksellers

The research investigated the products booksellers sold in their bookshops to ascertain if they also sold digital publications as part of their stock. The study showed that almost all bookshops, 19(73.1%) sold stationery and art supplies. Only three (11.5%) stores sold digital books. School textbooks and novels were a significant part of the stock sold in 18(69.2%) bookshops. Additionally, only 3(11.5%) bookshops sold audiobooks. Table I summarises the data on products sold by bookshops in Kenya.

Table 1
Products sold by bookshops in Nairobi, Kenya

Products	Responses	
	N	Per cent
School textbooks	18	19.1%
Novel or storybooks	18	19.1%
Stationery and art supplies	19	20.2%
Office equipment	9	9.6%
Computers and computer equipment	5	5.3%
Self-help books	12	12.8%
Higher education books	7	7.4%
Audio Books (CD-ROM, tapes)	3	3.2%
E-books (PDF, Epub, Mobi)	3	3.2%
Total	94	100.0%

4.2 Consumers Served by Booksellers in Nairobi, Kenya

The study's findings showed that parents were the main customers for booksellers, with 15(39.5%) booksellers indicating that they sold books mainly to parents who purchased textbooks for their school-going children. There were 7(18.4%) stores were wholesalers and sold directly to retail bookshops while only 7(25.9%) of the booksellers sold directly to schools. The booksellers who indicated that they sold books to others (9, 33.33%) further specified that they sold them to churches, clubs, and the general public. Table 2 summarises the customers served by booksellers in Nairobi, Kenya.

Table 2
Customers Served by Bookshops

Customer	Responses	
	N	Per cent
Schools	7	18.4%
Parents	15	39.5%
Other booksellers	7	18.4%
Others	9	23.7%
Total	38	100.0%

4.3 Channels used for sales by booksellers in Nairobi, Kenya

Almost all the booksellers, 25(92.6%), used their physical stores as their primary distribution channel. Of these, 13(48.1%) felt that their physical stores were a very effective channel for sales. The number of booksellers sold books through the websites for their bookshops was 15(55.6%). This indicates that more than half of the booksellers engage in e-commerce and sell books through their online channels. Despite website sales, only 7(25.9%) of the booksellers felt that their websites were moderately effective as a sales channel, while 3(14.8%) felt that the websites were not an effective channel to sell books. The booksellers also mainly used social media as a channel for sales. Facebook emerged as a favourite, with 9(40.7%) booksellers using it. However, 4(14.8%) of the booksellers observed that it was moderately effective as a channel for sale. Table 3 summarises the channels used by bookshops to sell their products.

Table 3

Channels for Sales for Bookshops in Nairobi, Kenya

Channels	Not effective	Less effective	Moderately effective	Very effective	Valid%
Physical store (n)	1	3	8	13	25
%	3.7	11.1	29.6	48.1	92.6
Bookshop website (n)	4	1	7	3	15
%	14.8	3.7	25.9	11.1	55.6
Facebook(n)	4	2	4	1	11
%	14.8	7.4	14.8	3.7	40.7
Instagram (n)	3	2	3	1	9
%	11.1	7.4	11.1	3.7	33.3
YouTube (n)	3	1	0	0	4
%	11.1	3.7	0	0	14.8
LinkedIn (n)	2	1	0	0	3
%	7.4	11.1	0	0	11.1
Other (n)	8	1	0	0	0
	29.6	3.7	0	0	0

4.4 Challenges of E-Commerce Faced by Booksellers in Nairobi, Kenya

The research further sought to investigate the challenges that booksellers faced when engaging in e-commerce and the level of seriousness of these challenges. The findings were presented in Table 4.

Table 4*Challenges of E-Commerce Facing Booksellers in Nairobi, Kenya*

Challenges	Not serious	Less serious	Moderately serious	Very serious	Valid %
High delivery cost (n)	5	4	6	5	20
%	18.5	14.8	22.2	18.5	74.1
Lack of data protection (n)	4	1	4	7	16
%	14.8	3.7	14.8	25.9	59.3
Inadequate financial structures(n)	6	3	2	5	16
%	22.2	11.1	7.4	18.5	59.3
Poor online marketing systems (n)	6	6	2	2	14
%	14.8	22.2	7.4	7.4	51.9
Lack of skilled personnel in e-publishing (n)	8	1	2	3	14
%	29.6	3.7	7.4	11.1	51.9
Inadequate funding (n)	4	4	7	4	19
%	14.8	14.8	25.9	14.8	70.4
High level of competition (n)	1	1	5	11	18
%	3.7	3.7	18.5	40.7	66.7
Poor customer management relations (n)	4	2	6	4	16
%	14.8	7.4	22.2	14.8	59.3
Resistance from customers who prefer physical stores (n)	5	4	1	6	16
%	18.5	14.8	3.7	22.2	59.3

The findings in Table 4 showed that high delivery costs were a major challenge for booksellers, with 20 (74%) indicating it was a significant issue. Six (22.2%) of these booksellers felt it was a moderately serious challenge, while 5(18.5 %) felt it was very serious. The second most selected challenge by booksellers was inadequate funding. This was indicated by 19(70.4%) of the booksellers. However, only 4(11.1%) felt it was a serious challenge. The majority, 7(25.9%), felt it was a moderately serious challenge. Lack of data protection, inadequate financial standards, poor customer management relations, and resistance from consumers who prefer physical stores were all selected as a challenge by 16(58%) of the booksellers.

The booksellers who felt that lack of data protection was a very serious challenge were 7(25.9%). Although lack of adequate financial infrastructure was indicated as a challenge, 5(18.5%) of the booksellers felt it was very serious. This could be attributed to the availability of digital financial systems in Kenya, such as mobile money (Mpesa, Airtel Money), which makes virtual payments easy for most buyers. There were 6(22.2%) booksellers who felt that poor customer management was a moderately serious challenge for e-commerce. This could be because conducting business online requires the seller to communicate with the buyer during sales constantly. The findings



also showed that 18(66.7%) of the booksellers felt that high competition in e-commerce was a challenge to selling books online. Of these, 11(40.7%) felt this was a serious challenge. This could be because being online opens a wider market for the booksellers but also brings them into direct competition with other booksellers than they would if they were to sell offline. Table 4 summarises the challenges of booksellers undertaking e-commerce.

4.5 Level of Awareness on E-Publishing by Booksellers in Nairobi, Kenya

The researcher sought to find out how aware the booksellers were about e-publishing. The findings showed that a majority of 9(33.3%) of the booksellers were moderately aware, while 5(18.5%) were extremely aware. Only 5(18.5%) of the booksellers were unaware of e-publishing. Table 5 shows the level of awareness of booksellers about e-publishing.

Table 5
Level of Awareness on E-Publishing by Booksellers in Nairobi, Kenya

Level of Awareness	Frequency	Per cent
Not at all aware	5	18.5
Slightly aware	8	29.6
Moderately aware	9	33.3
Extremely aware	5	18.5
Total	27	100.0

4.6 Benefits of electronic commerce to booksellers in Nairobi, Kenya

The research investigated the benefits of e-commerce to booksellers. This was specifically in the context of the sale of eBooks. The findings showed that 20(74.1%) of the booksellers indicated the main benefits of selling eBooks were that they were cheaper, the e-commerce enhanced the store’s online presence and visibility and opened it to worldwide and regional accessibility. Twenty (74.1%) of the booksellers indicated that the sale of eBooks would enhance the presence and visibility of a bookstore online and would open up the store's global and regional markets that they had no access to before. High customer loyalty and feedback were selected by 17(63.0%) of the booksellers. Of these, 9(33.3%) felt it was not a main benefit for booksellers. Table 6 summarises the benefits of e-publishing for booksellers.

Table 6
Benefits of E-Commerce (eBook selling) to Booksellers in Nairobi, Kenya

	Strongly disagree	Disagree	Agree	Strongly Agree	Valid %
Reduced logistics and inventory management (n)	3	4	7	5	19
%	11.1	14.8	25.9	18.5	70.4
Cheaper to produce and sell (n)	2	2	13	4	20
%	3.7	7.4	48.1	14.8	74.1
Provide up-to-date current content (n)	1	3	10	5	19
%	3.7	11.1	37.0	18.5	70.4
Expand the range of books available (n)	4	7	7	18	18
%	14.8	25.9	25.9	66.7	66.7
Provide new revenue streams (n)	3	1	8	7	19
%	11.1	3.7	29.6	25.9	70.4
Enhance the store’s online presence and visibility (n)	4	5	0	11	20
%	14.8	18.5	0	40.7	74.1
Open worldwide and regional accessibility (n)	1	4	7	8	20
%	3.7	14.8	25.9	29.6	74.1
High customer feedback and loyalty (n)	2	9	6	0	17
%	7.4	33.3	22.2	0	63.0



4.7 Readiness of Nairobi Booksellers to Adopt eBook Selling

The study investigated the readiness of booksellers to adopt eBook selling. Only 1(3.7%) of the booksellers was ready to a great extent, while 8(29.6%) were not ready. The majority, 9(33.3%), were somewhat ready or ready to a little extent to adopt eBook selling. Table 7 shows the level of readiness for adopting eBook selling by booksellers.

Table 7
Readiness of Nairobi Booksellers to adopt eBook Selling

Readiness	Frequency	Per cent
Not at all	8	29.6
Very Little	9	33.3
Somewhat	9	33.3
To a great extent	1	3.7
Total	27	100.0

The study also sought to determine the likelihood of bookshops adopting eBook selling in the future. The majority, 13(48.1%) of the booksellers, said they would most likely adopt eBook selling in the future, while 1(3.7%) bookseller had already adopted and was selling eBooks. There were 3(11.1%) who said they were extremely likely to adopt e-bookselling in the future indicated that they had plans to adopt eBook selling soon. However, a similar number, 3(11%), said they were unlikely to adopt eBook selling in the future, indicating that they had no intention of adopting bookselling shortly. There were 6(22.2%) booksellers who indicated that they would be extremely unlikely to adopt eBooks in the future, which indicates that they were resistant to the idea of selling eBooks. Table 8 summarises the future of eBook selling among booksellers.

Table 8
Likelihood of Booksellers in Nairobi Adopting Ebook Selling in the Future

	Frequency	Per cent
Extremely Unlikely	6	22.2
Unlikely	3	11.1
Likely	13	48.1
Extremely likely	3	11.1
Already adopted	1	3.7
Total	26	96.3
Missing	1	3.7
Total	27	100.0

Further analysis of the booksellers' data showed a significant correlation (Pearson 0.417, P-value 0.034) between booksellers' likelihood of adoption of eBook selling and gender. Given that the majority of the booksellers are male, it is likely that male booksellers are more likely to adopt eBook selling than women. There was no significant correlation between the likelihood of adoption of eBook selling and the bookseller's age or level of education. Table 9 summarises the correlation between the adoption of e-publishing, age, gender, and level of education.

Table 9
Correlation between the Adoption of e-Publishing, Gender, Age, and Level of Education

		Likelihood of bookshops adopting eBook selling	Gender	Age	Level of Education
Likelihood of bookshops adopting eBook selling in the future	Pearson Correlation	1	.417*	-.220	.039
	Sig. (2-tailed)		.034	.280	.848
	N	26	26	26	26
Gender	Pearson Correlation	.417*	1	.064	.005
	Sig. (2-tailed)	.034		.752	.980
	N	26	27	27	27
Age	Pearson Correlation	-.220	.064	1	-.189
	Sig. (2-tailed)	.280	.752		.345
	N	26	27	27	27
Level of Education	Pearson Correlation	.039	.005	-.189	1
	Sig. (2-tailed)	.848	.980	.345	
	N	26	27	27	27

*. Correlation is significant at the 0.05 level (2-tailed).



On the correlation of the likelihood of the adoption of eBook selling and the benefits of publishing to booksellers, all the benefits indicated had positive correlations to the adoption of eBook selling. However, not all of them were statistically significant. The findings showed a significant positive correlation (Pearson 0.596, P-value 0.015) between the adoption of eBook selling and higher customer loyalty and feedback. There was also a significant positive correlation (Pearson 0.578, P-value 0.015) between higher customer loyalty and providing new revenue streams. New revenue streams positively correlated with enhanced stores' online presence and visibility (Pearson 0.476, P-value 0.046) and significantly correlated with cheaper eBooks to produce and sell (Pearson 0.558, P-value 0.016). There was also a significant correlation between the opening up of the bookstore worldwide and regional accessibility and reduced logistics and inventory management (Pearson 0.508, P-value 0.031). Table 10 summarises the correlations between the likelihood of adopting eBook selling and the benefits of eBook selling to booksellers.

Table 10:
Correlation between the Likelihood of e-Bookselling and the Benefits of e-Bookselling to Booksellers

		Likelihood of bookshops adopting e-book selling in the future	Reduced Logistics and inventory management	Cheaper to produce and sell	Provide up to date relevant content	Expanded range of books available	provide new revenue streams	Enhance the Store's online presence and visibility	Open up world-wide and regional accessibility	Higher customer feedback and loyalty
Likelihood of bookshops adopting e-book selling in the future	Pearson Correlation	1	.188	.196	.446	.033	.321	.007	.292	.596*
	Sig. (2-tailed)		.455	.420	.064	.900	.194	.978	.225	.015
	N	26	18	19	18	17	18	19	19	16

*. Correlation is significant at the 0.05 level (2-tailed).

It further emerged that there was no significant correlation between the likelihood of adoption of eBook selling and the challenges of e-commerce. However, there was a significant correlation between the lack of data protection and the high delivery cost (P-value <0.001). There was also a significant correlation between inadequate funding and poor online marketing systems (P-value 0.017). There also was a significant correlation between poor online marketing systems and poor customer management relations (P-value 0.029). Although not statistically significant, it was notable that there was a negative correlation between inadequate financial structures and the likelihood of the adoption of eBook selling. Table 11 summarises the correlations between the likelihood of adoption of eBook selling and the challenges e-commerce booksellers face.

Table 11
Correlation between the Likelihood of Adoption of e-Bookselling and Challenges of e-Commerce to Booksellers

		Likelihood of bookshops adopting eBook selling in the future	High delivery costs	Lack of data protections	inadequate financial structures	Poor online marketing systems	Lack of skilled personnel in publishing	Inadequate funding	High level of competition	Poor customer management relations	Resistance from customers who prefer a physical store
Likelihood of bookshops adopting eBook selling in the future	Pearson Correlation	1	.307	.290	-.418	-.109	-.136	.014	.309	.072	-.010
	Sig. (2-tailed)		.201	.294	.121	.724	.657	.957	.227	.799	.971
	N	26	19	15	15	13	13	18	17	15	15

*. Correlation is significant at the 0.05 level (2-tailed).

4.7 Discussion

The research findings showed that a majority (73.1%) of the booksellers in Nairobi, Kenya, sold stationery and art supplies, while 69.2% sold school textbooks. Given that the publishing industry in Kenya is biased towards educational publishing, it is not surprising that most bookshops sell mainly school textbooks and related school supplies (Zell, 2020). Only 3% of the booksellers in the study sold digital publications either directly online or in compact disks. This depicts a low level of adoption of eBook selling in Kenya. Ifeduba (2020) indicated that compact disks are a format of eBooks sold in bookshops by booksellers in Nigeria. The main customers of booksellers in



Kenya were parents (55.6%) rather than schools (25.0%). The study found that the leading distribution channel for booksellers was their physical bookstores. However, 55.6% of the booksellers used websites to sell their books, and 40% used social media, specifically Facebook, as a channel to market and sell their books. Amornkitvikai and Lee (2020), in their study on barriers hindering e-commerce adoption among SMEs in Thailand, acknowledged that the use of websites and social media is a significant indicator of the adoption of e-commerce.

Some of the barriers to adopting e-commerce by booksellers that emerged from the study showed that 74% felt that high delivery costs were a major challenge when engaging in e-commerce. Mogire et al. (2022) agree that Kenya's e-commerce scape is plagued with logistical problems such as high costs of delivery as well as poor last-mile delivery service. This reduces consumers' trust in purchasing goods online and raises the cost of goods to prohibitively high (Chebichiy & Odhiambo, 2020). There was a significant correlation between the high cost of delivery charges and the lack of strong data protection frameworks. This could be because consumers are leery of spending large amounts of money online. This may necessitate using credit cards or other financial instruments that require them to share information with the seller, exposing them to hacking or privacy violations. This is a sensitive matter, especially concerning the leakage of consumers' financial information and their exposure to fraud. While Kenya has enacted data protection laws, enforcement has lagged, significantly reducing their effectiveness (Kogos & Kwanya, 2023; Wanekeya, 2023; Ziwa, 2021). Lack of adequate funding to set up e-commerce platforms was a challenge mentioned by 70.4% of booksellers as a challenge for e-commerce. This corroborates the findings of Mwendwa et al. (2024), which show that venture capital has a significant impact on the success of an e-commerce venture. They agreed that low venture costs would increase the entry and sustainability of e-commerce businesses in the country. Lack of adequate funding significantly impacts the quality of online marketing systems and consequently may lead to poor customer management, as indicated by the significant correlations. Chebichiy and Odhiambo (2020) and Muthee (2021) concur that strong customer service is critical to e-commerce business success. The challenges perceived by booksellers, when engaged in e-commerce, hinder the adoption of e-bookselling, thus limiting consumer options in the e-publishing industry.

The study's findings showed that 51.8% of booksellers in Nairobi, Kenya, were aware of e-publishing. This shows that nearly half of the booksellers knew how eBooks, eBook selling, or digital publishing worked. Lack of awareness is a barrier to small and medium enterprises adopting open innovations such as bookshops (Indrawati, 2020; Kumar et al., 2023). The lack of awareness delays the adoption of eBook selling because the booksellers cannot plan for the changes required to adopt new technology, which may include hiring or upskilling personnel and investing in hardware and software, among others. Hadi (2020) posits that a business can be reactive, adaptive, or proactive regarding changes in the business environment; a lack of awareness about changes in technology means that businesses will be reactive rather than proactive in their adoption. Booksellers who are unaware of eBook selling or digital publishing, in general, will not take active steps to adapt their business to the same but will rather only react to the technology when it becomes necessary for the survival of their business. They, therefore, run the risk of becoming obsolete. In the current business environment, technologies have shortened product lifecycles and dissolved industry barriers where customers have begun to compete with incumbent businesses, such as social media influencers competing against established media houses. Businesses have to identify the threats and strategise how to deal with them (Ogolla & Kwanya, 2024). In the publishing industry, digital publishing is a disruptive technology changing the role of publishers and booksellers. This can be seen in the rise of self-publishers who produce and sell their books without using bookshops and booksellers (Burch, 2017; Hviid et al., 2019). The lack of awareness of e-publishing and eBook selling displayed among booksellers in this study leaves them vulnerable to being a casualty of industry disruption. Already, publishers that produce digital books in Kenya prefer to work with digital booksellers rather than the bookshops. As the adoption rate rises, the bookshops will likely be locked out of the industry unless they adapt.

The research findings indicated that most (74.1%) booksellers felt that eBooks were cheaper and thus easier to sell. Additionally, a similar number of booksellers felt that e-bookselling enhances the stores' visibility online and opens up their business for global and regional markets. Taher (2021) stated that e-commerce technologies enhance the availability of business to customers not just geographically but also around the clock. Bookshops that sell eBooks could have consumers view and buy their publications even if their physical store is closed, thus increasing sales. Many (63.0%) booksellers also indicated that eBook selling could lead to higher customer loyalty and feedback to the bookstore. This corroborates the findings that e-commerce engenders customer trust. Once customers can successfully purchase products from a retailer online, they tend to trust the retailer and are likely to buy from them again; trustworthiness is a core element of customer loyalty. Therefore, booksellers will likely increase customer loyalty by selling eBooks and participating in e-commerce (Othman et al., 2020).

The research findings showed that the level of readiness among booksellers to adopt eBook selling was generally low, with only 33.3% of the booksellers somewhat ready to take up eBook selling. Additionally, only 7% of the booksellers were selling eBooks, while 48.1% said they would likely adopt eBook selling in the future. These findings corroborate Ifeduba (2020), who found that authors and consumers had a higher digital readiness than



libraries, schools, and bookshops. This shows that booksellers are lagging in adopting digital publishing and may find themselves disintermediated in the book chain.

This study's findings show a significant correlation (P-value, 0.034) between the adoption of eBook selling and the gender of booksellers. This indicates that the gender of the bookseller may influence their adoption of eBook selling. There was no significant correlation between age and the likelihood of adopting eBook selling. There were more men than women booksellers in the study. Therefore, it is plausible that male booksellers are more likely than women to adopt eBook selling. This corroborates the findings of Alam et al. (2022) that gender had an effect on digital transformation among small and medium enterprises. They found that women were more likely to use social media. However, they were less likely to be competent in other ICT skills than their male counterparts and thus needed help with technical strategies.

The study findings also showed a positive correlation between the likelihood of adopting eBook selling and the benefits of e-bookselling. There was a significant correlation between higher customer loyalty and feedback (P-value, 0.015) and the likelihood of adoption of eBook selling. Higher customer feedback was, in turn, significantly correlated with providing new revenue streams (P-value, 0.015). This indicates that adopting e-commerce will likely lead to increased revenue for bookshops. This is supported by the findings of Githui and Njuru (2024) that using e-commerce as a business tactic increased sales for small and medium enterprises in Nairobi. By adopting e-commerce, booksellers in Nairobi can generate more revenue. Although not directly correlated to the adoption of eBookselling, there were significant correlations between eBook selling providing new revenue streams to books and eBooks being cheaper to produce and sell (P-Value, 0.016); there was also significant correlation between eBook selling increasing worldwide and regional accessibility and reduced logistics and inventory management (P-value 0. 031). These findings show how e-commerce increases a firm's profitability by reducing overhead costs and reduced productivity costs for books, increasing their profitability.

The adoption of e-bookselling among booksellers in Kenya is low, with only 3.7% of them adopting it. Only 33.3% of the booksellers were relatively ready to adopt eBookselling, and only 48.1% indicated that they were likely to adopt eBook selling in the future. These findings show that the adoption of eBook selling and e-commerce among booksellers in Kenya is low. This supports the findings by Ooko (2018), who conducted a study on the adoption of e-commerce among publishers in Kenya and concluded that booksellers were not e-commerce-ready. The low level of readiness for booksellers to adopt e-bookselling means that the publishers who adopt digital publishing will have to either sell the eBooks themselves or contract digital booksellers to do so on their behalf. Their current book chains are not set up to perform the role of distributors since most of them are still set up to sell printed books only.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusions

The level of readiness for e-commerce and eBook selling among booksellers in Kenya is low. This is especially concerning as the world continues to move online. Bookshops as a business need to adapt or perish. The main barriers to the adoption of e-commerce and ebook selling by booksellers in Kenya were a lack of awareness of eBooks and ebook selling and a lack of adequate funding, affecting booksellers' ability to set up proper online marketing systems and adequately manage customer relations. The main benefits of booksellers adopting eBook selling and e-commerce were higher customer loyalty, increased revenue streams, and enhanced online visibility of the bookshops. The gender of the bookseller influenced the adoption of e-commerce but was not affected by the bookseller's age or level of education.

5.2 Recommendations

The study recommends creating awareness among booksellers about the changing landscape of publishing and the need to adopt eBook selling. Without a booksellers' association in Kenya, the Kenya Publishers Association can sensitise booksellers about adapting to digital publishing. Additionally, booksellers should be encouraged to seek funding for their businesses to expand into e-commerce and eBook selling. They can do this by taking advantage of government initiatives to fund small and medium enterprises in the country.

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Assessment of learning environment and its impact on teaching and learning process of students in secondary schools in Mpigi District, Uganda

Raymond Kibirige¹
Bernard Lutalo^{2*}

¹kibirige.raymond@stud.umu.ac.ug

^{2*}blutalo@umu.ac.ug

¹<https://orcid.org/0009-0007-6347-5782>

²<https://orcid.org/0000-0002-8136-9007>

^{1,2}Uganda Martyrs University, Uganda

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ABSTRACT

The purpose of the study was to examine the assessment of the learning environment and its impact on the teaching and learning process of students in secondary schools in the Mpigi district of central Uganda. Based on systems theory, the study adopted a cross-sectional survey research design. The study involved 15 secondary schools in the Mpigi district, whereby 5 secondary schools were purposively sampled to participate in the study because the schools had a better learning environment; however, stakeholders complain about their teaching and learning process. The study used a purposive sampling technique to choose 5 headteachers, 5 directors of studies, 44 teachers, and 64 students to participate in the study. Interviews, focused group discussions, and observation guides were used for data collection. Qualitative data was analyzed thematically. The study concluded that learning environment resources are inadequate in Mpigi secondary schools; however, the few available resources are effectively used by teachers and students. The teaching and learning process of students in secondary schools of the Mpigi district is below the expectations of the stakeholders. Learning environments positively impact the teaching and learning process of students in Mpigi district secondary schools. The study recommended that the government of Uganda should aid secondary schools with adequate learning environment resources to improve on the teaching and learning process of students. School administrators should organize training sessions and workshops for the teachers to equip them with skills and knowledge required to use the available learning environment resources in order to elevate the teaching and learning process of students in schools.

Keywords: Central Uganda, Learning Environment, Mpigi District, Secondary Schools, Students, Teaching and Learning Process

I. INTRODUCTION

Globally, education is looked at as the key for unlocking the countries' development in areas such as cultural, social, economic and political affairs around the universe (Chazan, 2022). This has empowered developing countries to rebuild, redesign, reformulate and amend the learning systems to come up with Up-to-date skilled human resources needed for sustainable development of each state. It has provided opportunities to the developing countries to attain technical and professional work force which has enabled them to advance steadily in economy through skilling and training its work base. Furthermore, countries worldwide have positively improved on its learning environment including physical space such as classrooms, libraries, laboratories, computer labs, dormitories and playground, students' behavior and positive classroom interactions which has enabled them to regain a holistic individuals with knowledge, skills, values and attitudes that are instrumental for the national growth, India National Education Policy (NEP, 2023).

Education all over the universe is perceived as a right for humanity including the unprivileged, disabled, indigenous and individuals in vulnerable conditions around the world. It has been able to adjust and promote individual's character, talents, physical and psychological abilities which are significant in achieving the national success, European Union Agency for Fundamental Rights, FRA (2023). It is a landmark in attaining global targets for sustainable development goal number four of 2030 that stresses the training of all persons with required skills desired for the development of all countries worldwide (United Nations, 2023). Excellence education for all peoples on earth can only be realized by providing quality learning environment in secondary schools which favor the smooth teaching and learning process such as planning, implementation and controlling of students in on going lessons (Omoniyi, 2013).



African countries have appreciated the significance role of education towards elevating black continent from poverty through adopting free secondary education policy in which a lot of funds has been injected in the education system with the mega aim of achieving skilled and trained human resources that are responsible for national development (Gruijters *et al.*, 2024). For instance, South African government introduced two policies namely fee exemptions where learners are either partially or fully exempted from paying fees and in 2007, no-fee schools' policy were adopted with the aim of promoting the right to basic education and advancing the teaching and learning process of all students, Department of Basic Education South Africa (DoE, 2023). This was strengthened by Day of African Child, DAC (2023) on the education rights and welfare of children, emphasized the governments in Africa to adopt laws, policies, and other appropriate measures to ensure and encourage the development of secondary education in various forms including learning environment like libraries, laboratories, dormitories and playgrounds to progressively make it free and accessible to all persons. Musyoka (2018), also opined that students' excellent results in education system especially at the end of each assessment depends on the quality of learning environment applied in the teaching and learning process. Learners taught in a better learning environment scored higher than their counterparts with poor learning environment. Ngesu and Atieno (2019), opined that, well addressed learning environment greatly help learners in the teaching and learning process to achieve better grades. Administrators and all concerned stakeholders need to put in place quality learning environment that favors the teaching and learning process of schools to enable students attain good academic grades.

This has been experienced in the region of East Africa that inadequate learning environment resources such as classrooms, libraries, laboratories, playgrounds and dormitories negatively affect the teaching and learning process of secondary schools which in turn results in poor scores of students at the end of each assessment done. For example, in Tanzania, insufficient learning environment hinders students' creativity, innovativeness, think critically which deter students from expanding their knowledge, skills, and abilities that negatively affects the teaching and learning process of schools (Mgimba & Mwila, 2022). Similarly, in Kenya, mismanagement and scarce learning environment in secondary schools affects the teaching and learning process of institutions (Kamoet & Mbirithi, 2024). As a result, countries in East African region such as Kenya and Uganda have resorted on the introduction of free secondary education in which big chunks of money have been poured in the system to improve on the learning environment like libraries, laboratories, dormitories, latrines, bathrooms, playgrounds and ICT equipment with the aim of advancing the teaching and learning process of secondary schools, this amplified the registration of learners which enhanced and flourished the education system that empowered the states to obtain fully trained and skilled potential human resources desired for sustainable development (Brudevold-Newman, 2017).

Uganda like any other developing countries in the universe, perceived education as one of the key factors for transforming nationals' economy towards achieving sustainable development needed all over the world (Ministry of Education and Sports [MoES], 2017). As a result, Uganda set up the vision 2040 which was endorsed by the government's cabinet in 2007 to renovate the education system in Uganda by aiding secondary schools with the required learning environment such as libraries, laboratories, dormitories, playgrounds, ICT equipment, bathrooms and toilets which are crucial in attaining skilled and trained individuals with attitudes and knowledge desired for the country's development (Uganda National Planning Authority [NPA], 2020). The government of Uganda introduced Universal Secondary Education (USE) in 2007 with the aim of providing equal opportunities for all citizens to achieve quality education. This was intended to educate individuals with skills and knowledge required to establish small scale industries to combat unemployment and poverty in the country (Lauterbach, 2024).

Secondary schools in Uganda are administered by Education policy (Pre-primary, Primary and Post-Primary Act, 2008) which enshrines the procedures governing schools including effective use of learning environment like libraries, classrooms, laboratories and dormitories with the major purpose of elevating the education system in the country, (The Education Pre-primary, Primary and Post primary Act, 2008). Learning environment plays a significant rule in streamlining the teaching and learning process of students in schools (Kassab *et al.*, 2024). On the same view, Bassey *et al.* (2023) contents that, quality teaching and learning process of students is determined by effective use of learning environment. The constitution of Uganda chapter 11, article 176 provides for a decentralization of local government which is further consolidated in the local government act 1997 chapter 243, authorizes education service commission in Mpigi district to finance secondary education with learning environment favorable for teaching and learning process of students to enable institutions output holistic individuals capable for advancing national development yearned for around the world (Nakayi, 2018). Munna and Kalma, (2021) states that, effective teaching and learning process of students in schools enhances learners academic scores. Therefore, administrators, parents, teachers and other relevant stakeholders should ensure effective utilization of teaching and learning process of students to enable them attain good grades academically.

This research is unique and looks forward to advance the body of knowledge in different ways for example, it bridges a gap in literature by examining the relationship between learning environment, teaching and learning process of students in secondary schools in Mpigi district. This study gives a pragmatic analysis of the relationship between learning environment and the teaching and learning process of students. It also generates significant data towards



attaining the Ugandan vision of 2040 goals for quality education. Unlike the former academic paper that examined the influence of learning materials and teaching and learning process, this study assessed the relationship between learning environment and its impact on the teaching and learning process of students.

1.1 Statement of the Problem

The government of Uganda support secondary schools with better learning environment equipment such as classrooms, libraries, laboratories, dormitories, playgrounds, students' behavior and positive classroom interactions in order to improve the teaching and learning process of students including teacher plans, implementations, controls the students' learning. However, the teaching and learning process of learners is below the prospects of the stake holders like managers, teachers, parents and students (MoES, 2017). This encouraged the researcher to save the situation because its perseverance negatively affects the government targets and expectations of other stake holders. If this study was not carried out, secondary schools would continue to ineffectively use the learning environment hence consistence of poor teaching and learning process in institutions. The study conducted on students' academic performance in Mpigi secondary schools by Kibirige *et al.* (2025) focused on effective use of learning materials which is significant in teaching and learning process of students. However, there is a significant aspect that was skipped and this is the assessment of learning environment for improved teaching and learning process of students. Therefore, it is against this background that, the study was set purposely to assess learning environment for improved teaching and learning process of students

1.2 Research objectives

- i. To assess the learning environment and its impact on teaching and learning process of students in secondary schools of Mpigi district.
- ii. To assess how learning environment impact the teaching and learning process of the students' learning in secondary schools of Mpigi district.

II. LITERATURE REVIEW

2.1 Theoretical Review

The learning environment such as classrooms, libraries, laboratories, dormitories, playgrounds, students' behavior and positive classroom interactions impact the teaching and learning process of students like teacher plans, Implementations, controls the students' learning (MoES, 2017). Therefore, if learning environment is effectively utilized can elevate the teaching and learning process of students.

Though, it is not only learning environment which influence the teaching and learning process of students. Other factors, such as extraneous can also be determinant. The extraneous variable is learning materials. Learning materials affect the teaching and learning process because learning materials have a direct effect on teaching and learning process of students, Kibirige *et al.* (2025). Learning materials plays avital role in promoting teaching and learning process of students. However, the researcher did not address these extraneous variables. Other studies, such as Kibirige *et al.* (2025) have addressed them. Even future studies can address them from different perspectives.

2.1.1 Systems Theory

The study was guided by the Systems Theory. This study was proposed in 1956 by Ludwig Von Bertalanffy (Bertalanffy, 1956). The principle of system theory emphases on the relationships between the subsystems which join them as a whole. Thus, the same concepts and principles of secondary schools present the different learning environment elements to elevate the teaching and learning process of students. Learning environment equipment includes physical space like classroom, library, laboratories, computer labs, bathrooms, latrines, dormitories and play grounds. Students' behavior such as set up rules and procedures and Positive classroom interactions like encourage learner-learner and learner-teacher interactions.

Systems Theory was suite for this study because from its principle, it conducts a school as a system whereby all elements are branded by a combination of units whose purposes as a part are connected for specific goal (Bertalanffy, 1956). Therefore, the system units of schools' learning environment should be arranged to enable leaners achieve quality teaching and learning process such as teacher plans, Implementations, controls the students' learning. These subsystems in secondary schools are supposed to be effectively used by stakeholders to advance on the teaching and learning process of students.

2.2 Empirical Review

According to Ngina (2013), Learning environment is the social, physical, psychological and pedagogical context in which learning and teaching process occurs. He adds on that, learning environments are those factors that affect the academic performance of leaners within schools. Learning environment in schools includes, libraries and classes (Nyambura, 2015). In addition (Kapur 2018), emphasized that learning environment within the school that affects the

teaching and learning process contains, provision of library and laboratories. Also, Dhanapola (2021), indicated that learning environment influences teaching and learning process of students. Similarly, Nambuya (2013), stated that, learning environment like, play grounds, dormitories, toilets, latrines and classrooms influence teaching and learning process. Njuguna (2021) also stated that, inadequate classes and latrines affect teaching and learning process of learners. Learning environment like availability of classrooms, library, laboratory, washrooms and playgrounds if fully addressed will impact positively on the teaching and learning process of students (Ngesu & Atieno (2019)

Furthermore, Chemiat (2020), revealed that inadequate learning environment like libraries, laboratories, dormitories, classrooms, instructional materials affect the teaching and learning process of schools. Ojuok *et al.* (2020) showed that, lack of essential learning environment buildings like laboratory, library, computer rooms, classrooms and offices affect teaching and learning process in institutions. Okwisa *et al.* (2021) adds on that, supportive learning environment has an influence on students' learning process. In addition, Korir and Kipkemboi (2014) emphasized that, learning environment if improved by parents, guardians and government this will enables schools attain quality teaching and learning process which will yield in better students' academic performance. Also, Tuiteok *et al.* (2015) corroborated that, board of governors (BOGs) should build quality learning environment such as laboratories, libraries and stock them properly for meaningful and purposeful teaching and learning process of students. This implies that, stakeholders should put in place adequate learning environment resources to support and promote positive teaching and learning process of students. Therefore, inadequate learning environment negatively affects the teaching and learning process of schools which results in poor grads of students.

Teaching and learning are the two processes that cannot exist without the other and bound together permanently in which the teacher plans, implements, and controls the students' learning in schools (Hernandez, 2023). Teaching and learning process are created concurrently by physical, social and psychological organization of the learning environment (Bobadilla, 2018). Good teachers who manage the instructional time and students' behavior effectively, promote classroom interactions and use physical space appropriately always create attractive learning environment for students which easy the teaching and learning process of leaners in institutions (MoES, 2012). There are numerous factors that affects the teaching and learning process of students within and outside schools (Mathew & Poehner, 2014). Therefore, head of schools should concentrate on the issues within and outside schools that affects the teaching and learning process of leaners. For instance, Przybysz-Zaremba and Polok (2023) indicated that, different ways of assessing learners affects the teaching and learning process of schools. Friends who commonly associate with learners can affect the teaching and learning process of students in schools (Metekohy *et al.*, 2022). In the same vein, Reyes (2019) emphasized that, inadequate classrooms affect the teaching and learning process of learners in schools. Therefore, it is vital for secondary schools to have information about the learning environment such as ways of assessing students, friends for the learners and classrooms since it affects the teaching and learning process of students.

III. METHODOLOGY

3.1 Research Design

The study adopted cross-sectional survey research design in which information was gathered from many different persons at a single point in time (Thomas, 2020). It helped the researcher to collect detailed data from a small sample at the same time (Wang & Cheng, 2020). This design was used together with qualitative approach. This approach enabled the gathering of thorough non-numeric information on the topic. Data for the study was collected from secondary schools found in Mpigi district, one school from each of the 5 parishes found in Kiringente sub-counties Mpigi district. The inclusion of a school in each parish was crucial in order to generate a detailed knowledge of assessing the learning environment and its impact on the teaching and learning process of students in Mpigi district. For each parish, one school was selected purposively. Hence, making a total of 5 schools sampled to participate in this study.

3.2 Study Area

This study was carried out in Kiringente sub-county in Mpigi district central Uganda, Kiringente sub-county is made up of 5 parishes like Kavule, Ssekiwunga, Kikondo, Luvumbula and Kololo. Mpigi district Mpigi District covers a total land area of 1524Km² which accounts for 0.06% of the total land area of Uganda which is 241,000 km² (Lutalo, 2023). The district is boarded by Butambala district to the west, Kalungu district to the southwest, Wakiso district to the north and east, Mityana district to the northwest and Kalangala district to the south. The district has a total area of 1,207.8 km² (466.3 sq mi). The latitude of Mpigi, Uganda is 0.227353 and the longitude is 32.324924. The town of Mpigi, lies approximately 37 kilometers (23 mi) west of Kampala in the largest capital city of Uganda. The coordinates of the district are 00° 14N, 32° 20 E (Uganda Bureau of Statistics [UBOS], 2017). Mpigi district education service commission empowers the 15 secondary schools found in Kiringente sub-county with financial support in order to improve the quality education according to Mpigi District Education Department report of 2020. These schools are also aided by the government of Uganda with the aim of improving the quality of teaching and learning process of students (MoES, 2017)

3.3 The Scope of the Study

The study was carried out in secondary schools found in Kiringente sub-county Mpigi district central Uganda. These schools were selected basing on their suitable learning environment that favors quality teaching and learning progress of students. However, stakeholders are dissatisfied with the teaching and learning process of learners in these secondary schools. The study also focused on the learning environment, teaching and learning process of students in secondary.

3.4 Population and Sample

The targeted population were 200 including headteachers, director of studies, teachers and learners. However, only 118 of the total population partook in the study including 5 headteachers, 5 directors of studies, 44 teachers and 64 learners. The headteachers and directors of studies were purposively sampled; teachers and students were selected basing on the judgement of a researcher. The heads of schools helped to organize teachers and students in their corresponding schools. These participants were also chosen because they gave consistent, trustworthy and reliable data necessary for the study.

3.5 Data Collection

The study employed observations, interviews and focused group discussion techniques to collect data. Interviews were employed on 5 headteachers and 5 directors of studies. Focused group discussions were conducted on 44 teachers and 64 students. The study also carried out observation analysis, teachers and students were observed in the teaching and learning process.

3.6 Data Analysis

Qualitative data was scrutinized by thematic approaches. Interviews and focused group discussions were examined, summarized and recorded on the sheet of paper. The analysis was managed in three stages such as, preparing and organizing information, creating themes, and coding. The preparation and organization of data for analysis begun in the field with reading each recorded summarized interview and focused group session. This enabled the researcher to familiar with the data. This step was followed by a detailed transcription of the interview and focus group discussion reports which helped the scholar to create themes. After generating themes, the data were prof-read for coding, which included linking the data with the themes created.

IV. FINDINGS & DISCUSSION

4.1 Findings

In the interview with headteachers, all the 5 headteachers stressed that learning environment like physical space such as classrooms, libraries, laboratories, computer labs, dormitories and playground, students' behavior and positive classroom interactions are insufficient in secondary schools of Mpigi district though, teachers do their best to appropriately use the available learning environment in the teaching and learning process. This was confirmed in an interview with one of the headteachers, respondent number 1 who said:

" Learning environment in my school such as physical space like classrooms, library, laboratory, computer lab, dormitories, bathrooms, latrines and play grounds, students' behavior and interactions are inadequate to enhance the teaching and learning process of students. For example, library, laboratory, classrooms and computer lab have limited space which is not enough for all students in school. In the same view, dormitories for instance that of boys and girls are too congested, bathrooms and latrines are few compared to the number of students we have in the school, the playground is not in the good shape to support effective co-curricular activities. This affects the academic performance of learners in the school. Again, teachers do not promote positive students' behavior and interactions in classrooms which affects teaching and learning process of students."

On the same issue, headteacher 5's response was in agreement with all the 4 head teachers when she said:

" Learning environment resources are not favoring the teaching and learning process of students."

This was confirmed in the interview with the directors of studies who said that, however much teachers suitably utilize the available infrastructures, the learning environment resources including classrooms, libraries and laboratories in schools are inadequate compared to the number of learners.

In the same line, these views were emphasized by the directors of studies respondent 1 and 2 who revealed that, *" ... Learning environment is not favoring the teaching and learning process of students in schools."*

This was reechoed in an interview by the directors of studies, respondent number 3, 4 and 5 who said that:

" Learning environment like physical space such as classrooms, libraries, laboratories, dormitories, computer labs, playgrounds, bathrooms and latrines in my school are in critical conditions which is not favoring"

teaching and learning process of schools. In the same view, teachers do not create positive classroom interactions and students' behavior which affects teaching and learning process of students in institutions."

This was supported by teachers and students in the focused group discussion who emphasized that learning environment resources like dormitories and playgrounds are few in secondary schools however the little available is used well by teachers during the teaching and learning process. It was also noticed in the observation analysis that learning environment inform of students' behavior and positive classroom interactions are inadequate in secondary schools of Mpigi district, this negatively affect the teaching and learning process of students which results in poor grades of leaners in secondary schools of Mpigi district.

The interview held with headteachers revealed that, the teaching and learning process of students is under the expectation of schools. This was emphasized in the interview by one of the headteachers respondent 1 who said:

"... The teaching and learning process of our students like teacher plans, Implementations, controls the students' learning do not meet the expectations of stakeholders like administrators, teachers, parents and students themselves."

Related to above, another head teacher respondent 2 in the interview confirmed that:

"... The teaching and learning process of students in school is not yet to the level of meeting the expectations of our stakeholders."

This was confirmed by the directors of study in their interview, when they stated that, the teaching and learning process of students like teacher plans, implements, and controls the students' learning in secondary is below the set targets of the stakeholders in schools. On the same issue, director of studies respondent 1 confirmed that:

"... Teaching and learning process of students does not meet the expectations of their stakeholders."

In addition, director of studies respondent 3 also agreed that;

"... Teaching and learning process of learners such as teacher plans, Implementations, controls the students' learning do not meet the expectations of our stake holders."

This was reemphasized by teachers and students who narrated in the focused group discussions that, teaching and learning process of learners including planning and implementation of lessons by teachers is not meeting the set goals of stakeholders in schools. It was also confirmed in the observations analysis carried out that, teaching and learning process of students such as teacher plans, Implementations and controlling of students during conduction of lessons is below the standards of schools. This greatly affect leaners' academic progress in secondary schools of Mpigi district.

Headteachers emphasized in their interviews that, the sufficient learning environment including physical space such as classrooms, libraries, laboratories, computer labs, dormitories and playground, students' behavior and positive classroom interactions positively impacts the teaching and learning process of learners.

This was confirmed in an interview with one of the headteachers, respondent number 4 who said:

"..... Learning environment affect students' teaching and learning process, for instance, if physical spaces are arranged well, teachers effectively manage students' behavior and promote positive classroom interactions, this positively promotes students' teaching and learning process."

This was supported by the directors of study in their interviews that learning environment influences the teaching and learning process of students. For example, on the same issue, director of study respondent 3 was in agreement with director of studies respondent 1 and 2 he said:

"... Effective use of learning environment positively affects the teaching and learning process of students."

Similarly, respondent director of studies 4 and 5 respondent as follow:

"... Learning environment if effectively used impact positively on the teaching and learning process of students."

It was also reemphasized in the group focused discussions by teachers and students that, adequate leaning environment positively enables teacher to plan, implement, and controls the students' learning effectively which easy the teaching and learning process of students. The study also portrayed in the observation analysis that, schools with adequate learning environment have quality teaching and learning process of students than their counterparts with insufficient and inadequate learning environment. Therefore, adequate learning environment positively affects the teaching and learning process of learners in secondary schools of Mpigi district

4.2 Discussion

From the results of the study, secondary schools in Mpigi district have inadequate learning environment resources. This was emphasized by the headteachers, directors of studies, teachers and students partook in the study. Therefore, Inadequate learning environment negatively affects the teaching and learning process of students in schools. This was confirmed in the research conducted by Nyambura (2015), Kibirige *et al.* (2025), Dhanapola (2021) and Njuguna (2021) who emphasized that, inadequate learning environment resources influences the teaching and learning process of students in schools. In the same line, the study indicated that teachers in Mpigi secondary schools effectively utilizes the available learning environment resources which improve on the teaching and learning process of students.

Ngesu and Atieno (2019) also confirmed that, effective use of the existing learning environment positively affects the teaching and learning process of students in schools. Therefore, stakeholders in secondary schools should ensure the provision of adequate and effective use of the accessible learning environment resources to help schools acquire better teaching and learning process resulting in good grades of students.

The study revealed that, teaching and learning process of students in secondary schools is below the prospects of stakeholders like headteachers, director of studies, teachers and students which affect the set targets of meeting the vision 2040 of attaining skilled and trained individuals necessary for country development. This was confirmed by the headteacher, director of studies, teachers and students participated in the study who emphasized that, teaching and learning process such as teachers' planning, implementation and controlling of students in on going lessons is below the set goals of administrators. In the same vein, Hernandez (2023). Reeched that, poor teaching and learning process of students affects the sustainable development of the nation. Therefore, stakeholders should work collaboratively to improve on the teaching and learning process of learners as a way of attaining trained and skilled students necessary for sustainable development of a country.

The study also indicated that, effective use of adequate learning environment like physical space including classrooms, libraries, laboratories, computer labs, dormitories and playground, students' behavior and positive classroom interactions positively impacts the teaching and learning process of students. This was reemphasized by the head teachers, directors of studies and teachers participated the study who narrated that, sufficient learning environment positively easy the teaching and learning process of students. This was confirmed by Reyes (2019) and Kibirige *et al.* (2025) who revealed that, better utilization of available learning environment resources positively influences the teaching and learning process such as teachers' plans, implementation and controlling of students which improves on the good grades of learners. Therefore, concerned stakeholders should effectively use the available learning environment resources in secondary schools to improve on the teaching and learning process of students to attain quality academic progress of schools.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study examined the assessment of learning environment and its impact on the teaching and learning process of students in secondary schools in Mpigi district central Uganda. From the findings of this research, the study concluded that learning environment resources are inadequate in secondary schools in Mpigi district however, the few available are effectively used by teachers and students during the teaching and learning process. Further the research revealed that, teaching and learning process of students is below the expectations of the stake holders. It also stressed that, learning environment positively impact the teaching and learning process of students in Mpigi secondary schools.

5.2 Recommendation

The study recommended that; the government of Uganda should aid secondary schools with adequate learning environment resources to uplift the standards of teaching and learning process of students in secondary schools. School administrators should also organize training sessions and workshops for the teachers to equip them with necessary skills and knowledge required to use the available learning environment resources in order to elevate the teaching and learning process of students in schools.

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Data sharing statement: All the information supporting the findings and conclusions of the study are available upon requesting the concerned author.

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Knowledge and innovation co-creation initiatives between Sokoine University of Agriculture and neighboring farming communities in Tanzania

Jackline M. Martine¹
Camilius A. Sanga²
Philbert S. Nyinondi³

¹martinejackline12@gmail.com

²sanga@sua.ac.tz

³pnynondi@sua.ac.tz

^{1,2,3}Sokoine University of Agriculture, Tanzania

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ABSTRACT

Participatory approaches can serve as a bridge between science and farm practices for sharing experience and testing new innovation through farmer field schools and training. The study sought to explore the co-creation of agricultural knowledge and innovations between Sokoine University of Agriculture (SUA) and neighboring farming communities in Morogoro, Tanzania. Co-creation theory emphasizes the collaborative process where farmers and researchers work together to develop and refine agricultural innovations. In addition, the theory focuses on examining how smallholder farmers actively participate in the innovation process, ensuring that the technologies and practices developed are relevant and applicable to their specific needs and conditions. The study employed a cross-section research design in this mixed-methods study, using data from questionnaires, surveys, interviews, and focus group discussions with 402 smallholder farmers from nine (9) wards in three districts in Morogoro and respondents selected purposively to identify the types, benefits, and challenges of farmer participation in co-creation initiatives. Moreover, to identify types, benefits, and challenges, descriptive statistical analysis and multiple response were applied. The findings indicate that smallholder farmers contribute traditional knowledge and actively participate in testing and refining innovation or technologies in joint training sessions. Farmer field schools and on-farm demonstrations are the most engaging platforms that increase farmers' skills, productivity, and profitability. Limited engagement opportunities, inadequate access to information, financial constraints, and logistical challenges hinder co-creation participation. The study recommended distributing training centers, leveraging digital platforms, and introducing financial support mechanisms to enhance access and sustainability in driving locally adapted and sustainable agricultural innovations.

Keywords: Co-Creation, Knowledge and Innovation, Participatory Research, Smallholder Farmers, Sokoine University of Agriculture

I. INTRODUCTION

In agriculture, the term "co-creation" refers to the cooperative development of knowledge and inventions by a variety of stakeholders, including farmers, researchers, academics, and the commercial sector. This strategy recognizes the complexity of agricultural problems and the need for teamwork to create long-term solutions (Voorberg et al., 2015). Co-creation has gained international recognition as a crucial tactic for tackling challenging agricultural issues, encouraging reciprocal learning, and guaranteeing that innovations satisfy the demands of farmers and local communities.

The application of co-creation to assist agricultural research and innovation is shown by the European Union's Horizon 2020 initiative. Diverse stakeholders collaborate on this project to create workable ideas for improving agricultural sustainability (Klerkx, 2020). In international agricultural research, the usage of innovation platforms has accelerated significantly, allowing stakeholders to cooperate, exchange knowledge, and jointly develop solutions to agricultural problems (Kenney et al., 2020).

In East Africa, in order to solve the region's problems with agricultural production, co-creation projects have grown in significance. Farmers, academics, and other stakeholders may work together on agricultural innovations that are suited to regional requirements through platforms such as the African Green Revolution Forum. By encouraging the sharing of scientific research and indigenous knowledge, these programs make sure that advancements are pertinent to the



particular needs of farmers. (Nandeesha et al., 2023; Schut et al., 2016). In addition, a more inclusive approach to agricultural growth is promoted by using Participatory Rural Appraisal (PRA) techniques, which make sure that farmers' opinions are heard during the innovation process.

In Tanzania, Various programs that aim to improve agricultural practices and increase production are implementing co-creation approaches. The Feed the Future Innovation Lab for Collaborative Research on Sustainable Intensification is one such project that collaborates closely with Tanzanian researchers to create agricultural techniques that are tailored to the local environment (Stewart et al., 2020). In order to guarantee that innovations are both practical and pertinent to the setting, these programs highlight how crucial it is to include farmers in the research process. Additionally, the government has encouraged co-creation through policy frameworks like the National Agricultural Policy, which promotes cooperation between farmers and scientific organizations (Wambura et al., 2015).

Sokoine University of Agriculture (SUA) has led the way in co-creation efforts at the local level in Morogoro. SUA closely collaborates with nearby farming communities to pinpoint agricultural problems and jointly create solutions using collaborative techniques. Msuya et al. (2017) observed that farmer field school, farmer-managed experiments, and knowledge-sharing platforms are some of the activities that guarantee innovations are useful and provide to the unique requirements of regional farmers. For example, SUA has worked with Morogoro farmer organizations to create better seed types and pest management techniques that are suited to the region's agricultural circumstances. These initiatives demonstrate the value of community-driven innovation and the necessity of doing research based on smallholder agricultural reality.

Therefore the study of Knowledge and innovation co-creation initiatives between Sokoine University of Agriculture and neighboring farming communities in Morogoro, Tanzania, is very important to assess types, benefit and challenges in relating to participation of smallholder farmers in co-creation initiatives. The contribution of this study is beneficial to the growing body of knowledge on co-creation initiatives in agricultural sector, and to recommendation on how to strength co-creation initiatives among universities and smallholder farmers.

1.1 Statement of the Problem

Despite the university proximity and potential to drive positive change in the Tanzania economy, the farming communities mainly depend on traditional farming techniques, which struggle with low productivity, limited capacity building and weak linkage between the university and farming communities (de Janvry & Sadoulet, 2022; Giller et al., 2021). The existing agriculture universities and research institutions produce knowledge and innovations co-creation initiatives, which hardly reach the needy farmers (Mtega, 2018; Mtega & Ngoepe, 2020) there is significant disconnect between universities and smallholder farmers in Tanzania.

Consequently, to bridge agriculture research with farming practices, participatory approaches such as knowledge and innovation co-creation are promoted to provide agriculture solutions (Chowdhury et al., 2021; Jafari et al., 2024). However, there is low information regarding their implication in the local environment. Thus, assessment of knowledge and innovation co-creation initiatives to bridge agriculture research with farming practices between leading agricultural universities that is SUA and neighbouring farming community in Morogoro, Tanzania is important. This study aims to fill this gap.

1.2 Research Objective

- i. Identify the types of agriculture knowledge and innovation co-creation initiative provided by SUA to smallholder farmers;
- ii. Benefit farmers participating in this agriculture knowledge and innovation co-creation initiative;
- iii. Determine the challenges encountered farmers in participating in the agriculture knowledge and innovation co-creation initiatives.

II. LITERATURE REVIEW

2.1 Theoretical Frameworks Guiding Knowledge and Innovation Co-Creation Initiatives

This study adopts the Agricultural Knowledge and Information Systems (AKIS) framework and Co-creation theory to understand the existing knowledge and innovation co-creation.



2.1.1 Agricultural Knowledge and Information Systems (AKIS) Framework

The AKIS framework emphasizes the interactive and systemic nature of knowledge and innovation co-creation among various agricultural stakeholders, including researchers, extension agents, farmers, and policymakers (Leeuwis & Aarts, 2021). It peaks the importance of integrating multiple actors in the knowledge-co-creation process to ensure effective dissemination and application of agricultural knowledge and innovations. The framework is particularly relevant to this study as it aligns with the participatory approaches currently being promoted in Tanzania's agricultural sector.

In the context of SUA and farmers in Morogoro Tanzania, the AKIS framework underscores the need for strengthened linkages among universities, extension services, and farming communities. The framework supports the use of digital platforms, joint training sessions, and other participatory methods to enhance knowledge co-creation and innovation adoption. This aligns with the study's focus on evaluating the effectiveness of knowledge and innovation co-creation and participatory approaches in agricultural innovation.

2.1.2 Co-Creation Theory

Co-Creation Theory of (Prahalad & Ramaswamy, 2004) emphasizes the collaborative process where farmers and researchers work together to develop and refine agricultural innovations. In the Morogoro setting, this framework is used to examine how smallholder farmers actively participate in the innovation process, ensuring that the technologies and practices developed are relevant and applicable to their specific needs and conditions. The theory supports the idea that innovations are more likely to be adopted and sustained when they are co-created with the end-users.

2.2 Empirical Review

Several empirical studies have explored the agriculture knowledge and innovation co-creation initiatives, benefit and challenges different sectors or partnerships. These studies provide insights into how university, private sector and smallholder farmers collaborate to support adoption of innovation and use to improve agricultural productivity.

2.2.1 Types of Agriculture Knowledge and Innovation Co-Creation Initiative and Participation

In conducting the study of the types and participation of agriculture knowledge and innovation co-creation initiatives between SUA and neighboring smallholder farmers in Morogoro Tanzania, several studies was reviewed. For example Dutrénit et al. (2016) who examined multidirectional relationships, such training initiatives and farmers' associations, help farmers and universities share agricultural information through the facilitation of knowledge transmission, these exchanges assist farmers in acquiring the necessary skills to adopt new technologies and increase productivity. This knowledge flow encourages innovation in agricultural practices by making sure farmers are active participants in the co-creation process rather than only passive consumers.

The study by Mgenzi et al. (2021) review that the capacity development through training initiatives is a crucial strategy for empowering smallholder farmers to actively participate in knowledge co-creation processes. Well-designed training programs help smallholder farmers develop technical and managerial skills that improve their ability to innovate. Such programs ensure that farmers possess the necessary skills to adapt to evolving agricultural technologies and practices.

Likewise Gava et al. (2018), the result indicate that knowledge and innovation co-creation initiatives have been established to facilitate project collaboration between farmers and academics. Collaboration with extension service are essential to bridging the gap between academic research and practical farming applications.

Additionally, Utter et al. (2021), their result show that participatory approaches enhance the flow of agricultural knowledge and innovation by promoting collaborative learning and development. These tactics go from the passive dissemination of knowledge to active involvement in the creation of new concepts and problem-solving techniques by promoting an interactive exchange of knowledge. These techniques enable farmers to convert their traditional knowledge, which, when combined with research findings, leads to more practical and sustainable agricultural approaches to university and other farmers.

Additionally, according to Franco et al. (2019), advances in technology have changed the way farmers and institutions share knowledge innovation co-creation, Farmers and universities may now connect more easily to video conferencing and other technology for communication, which promote efficient knowledge transfer and capacity building.

Fieldsend et al. (2021), in their study found that farmers ability to hold the new agriculture practices has increased due to the technology, knowledge and innovation intervention which has made agricultural knowledge and extension services more accessible. However, despite these advancements, challenges remain in developing workable strategies to enhance the dissemination of agricultural innovation and information.



Traditional linear models of information transfer are unable to handle the complexity of modern agriculture. Rather, a systematic approach to science, technology, and innovation policy is required to provide a more integrated and inclusive framework for information sharing. Farmers, lawmakers, technology firms, and academic institutions, would need to work together to develop and implement sustainable agriculture solutions.

2.2.2 Benefits Experienced from Participating Agriculture Knowledge and Innovation Co-Creation Initiatives

Several studies done on benefit of farmer's participation on agriculture knowledge and innovation co-creation with University. Ateka et al. (2019) found that farmers participation in different approaches in co-creation initiatives such as farmer field school in demonstration the best practices and allowing farmers to learn by doing and share experience or local agriculture knowledge to other farmers this increase agriculture knowledge among farmers to improve farming practices.

According to Laurens et al.(2023a) who suggest that farmer readiness of new agriculture practices improved by farmer-university co-creation collaboration in research project, joint training to test, adopt and share experiences. Local and scientific practical knowledge gained through interactions with stakeholders has allowed scientific to learn about local and farmers needs expectations, perceived and challenges. Furthermore, the interlinkages between cross-sectoral stakeholders also increase their willingness to cooperate, awareness and acceptance of new technologies, innovations for sustainable agricultural practices.

Additionally result from Sarkar et al. (2023), indicate that innovation driven agricultural interventions or initiatives it improve agribusiness sustainability and profitability to smallholder farmers to increase living standards. The existing knowledge and innovation co-creation among university and farmers ensure access of new technologies or innovation regularly joint participatory either in research project, testing new technology through farm demonstration, innovation hub and technology development.

2.2.3 Challenges in Participation Knowledge and Innovation Co-Creation Initiatives from SUA

Research done by Yang et al. (2022), a found that the major issue among research, education and farmers weaknesses and lack of some strategic connections in agriculture system , missing links to the relevant stakeholders or ineffective knowledge co-creation which causes a lack of farmers ability their knowledge . Also highlighting the value of financial support systems in raising farmer involvement in co-creation projects to provide agriculture knowledge to smallholder and availability of research project this help farmer involvement.

Similar to Monavvarifard et al. (2019) who found that involvement in agricultural innovation is hampered by a lack of contact between farmers and institutions and Mirra et al. (2020), who propose restructuring forms of engagement to ensure equitable participation and make them more inclusive. Strong link between university, sectors and farmers help to solve agriculture challenges and bring the solution. Also this initiatives should not distance with community house which help farmers to participate without using much money on transport.

III. METHODOLOGY

3.1 Study Area

Nine wards from three councils in the Morogoro Region Morogoro Rural, Mvomero, and Morogoro Municipality were the sites of the research. The chosen wards were Kiroka, Kinole, Nyandira (Morogoro Rural Council); Mzinga, Kingolwila, Mikese (Morogoro Municipality); and Mlimani, Mlali, Dakawa (Mvomero Council). They were specifically picked because of their close proximity to SUA and their participation in a number of agricultural projects supported by the university. These wards offer an appropriate framework for accomplishing the research goals since they reflect a range of farming systems and agro-ecological zones.

3.2 Research Design

The study adopted a cross sectional design, the design is suitable to collect data in a single point of time, also the design is effectively and cost efficiency (Cummings, 2021). Often, cross sectional designs are used to examine and compare single variable across multiple subgroups that are similar in other characteristics. For the study these types of design are commonly used to identify types and activities farmers are participated agricultural knowledge and innovation co-creation



3.3 Sampling Techniques and Sample Size

Non-probability sampling was used to select smallholder farmers, researchers and extension officers. Purposive sampling techniques was used to select 9 wards includes being close to SUA and actively participating in university-sponsored agriculture initiatives and all 402 smallholder farmers from each wards. In addition, 15 SUA researchers and extension officers were also selected purposively as key informants.

3.4 Data Collection and Analysis Methods

Both qualitative and quantitative data were collected from primary and secondary sources. Three primary methods structured questionnaire surveys, key informant interviews, and focus groups were used to gather primary data. 402 farmers were given a well-structured questionnaire were administered for guiding interview methods and a checklist was used for focus group discussion and documentary review. Descriptive statistical analysis was used to summarize demographics characteristics of small holder farmers. Multiple response was used and allowed participant to select more than one answer when responding to certain question particularly those involving types of co-creation initiatives, benefit and challenges experienced in agriculture and innovation co-creation initiatives.

In to identify benefit of farmers participated in SUA agriculture knowledge and innovation co-creation initiative was analyzed which were to answered on five- point rating scale from 1=Very high benefit, 2=High benefit, 3=benefit, 4=Low benefit, 5= None On examine the challenges experienced smallholder farmers from participating in agriculture knowledge and innovation co-creation initiative a scale from 5= Major challenge, 4= Challenge, 3= slightly challenge, 2= low challenge 1= No challenge at all

Table 1

Distribution of the Study Participants

Council and Ward	Frequency	Percentage
Morogoro Municipal		
Mzinga	46	11.4
Kingolwila	29	7.2
Mlimani	18	4.5
Mzinga	46	11.4
Mvomero		
Nyandira	101	25.1
Mlali	86	21.4
Dakawa	37	9.2
Morogoro Rural		
Kinole	38	9.5
Kiroka	32	8.0
Mikese	15	3.7
Total	402	100

IV. FINDINGS & DISCUSSION

4.1 Demographic Characteristics of Respondent

Table 2 delineates the demographic attributes of the study participants, encompassing gender, age, educational attainment, family size, and marital status. The distribution presents an overview of the sample's diversity concerning these key variables, elucidating the composition of the respondents. The demographic analysis is crucial for comprehending the study's findings and guaranteeing the sample's representativeness.



Table 2
Respondent's Demographic Characteristics

Characteristics of respondents			Information related to agriculture farming		
Variables	Frequency	Percentage	Variables	Frequency	Percentage
Gender			Farming experience		
Male	242	60.2	1-10	150	37.4
Female	159	39.6	11-20	108	26.9
Total	400	100	21-30	66	16.5
Age			31-40	48	12.0
18-26	31	7.7	41-50	21	5.2
27-35	63	15.7	51+	8	2.0
36-45	102	25.4	Total	400	100
46-55	107	26.6	Farm size		
56-65	68	16.9	0.01-3	256	66.1
66+	31	7.7	4-6	88	22.7
Total	400	100	7-9	18	4.7
Education level			10-12	11	2.8
Primary	309	76.9	12-100	14	3.6
Secondary	64	15.9	Total	400	100
Tertiary	16	4.0	Economic income		
No formal	13	3.2	1-199999	118	29.4
Total	400	100	100000-199999	128	31.9
Family size			200000-299999	67	16.7
1-4	166	41.4	300000-399999	31	7.7
5-8	213	53.1	400000-499999	18	4.5
9-12	20	5.0	500000+	39	9.7
13-16	2	0.5	Total	400	100
Total	400	100			
Marital status					
Single	61	15.2			
Married	281	69.9			
Divorced	17	4.2			
Widow	29	7.2			
Cohabitate	14	3.4			
Total	400	100			

The findings in Table 2 further revealed that, the majority respondent were male (60.2%) and the rest were female, indicating male are more likely to participate in SUA agriculture co-creation initiatives. This is consistent with more general gender variations in agricultural involvement, which are frequently brought about by cultural norms and inequities in resource accessibility. Women's lower involvement, despite men's higher engagement, highlights the need for more inclusive outreach tactics to provide fair access to agricultural knowledge and innovation co-creation initiatives.

Table 2 present sample of characteristics in term of characteristics of respondent and information related to types of agriculture knowledge and innovation co-creation initiatives which smallholder farmers participated. Understanding of this information is crucial because they influence farmers to participate in agriculture knowledge and innovation co-creation initiatives so as to obtain to improve livelihood. The results indicates that most of the respondents (26.6%) were aged between 46-55 years, which means that the participation of agriculture knowledge and innovation co-creation initiatives from SUA to smallholder farmers is done by middle ages farmers, this due to capacity and their active participation implies that are more open to embracing new innovation. Younger farmers' very low participation, however, might point to possible obstacles including restricted access to land or conflicting financial prospects and limited opportunities to participate.

Regarding to marital status results indicate that, the majority of respondents (69.9%) were married, which can be indicative of the importance of labor availability and shared home duties in farming operations. therefore it can be argued that married farmers is highly secured with family responsibility that requires enough time to deal with activities of generating income. The majority respondents (76.9%) had primary education which is the minimum required to complete



basic school, 15.9% having completed secondary school, 4.0% having completed university education, and 3.2% having no formal education, in other words, it does not need special skills or high education to participate in agriculture co-creation initiatives, it rather requires experience or learning by doing. These numbers point to possible obstacles in implementing sophisticated agricultural advances, highlighting the necessity for SUA to use straightforward, useful, and approachable information transfer strategies designed for farmers with less formal education.

On households it is indicated that (53.1%) had between 5 and 8 people, which served as a source of labor for farming. Larger families may provide labor benefits, but they can also result in resource limits, therefore measures that balance household dynamics and productivity optimization are required. The region's smallholder agricultural system was further supported by the fact that the majority of farmers (66.1%) held tiny plots that ranged in size from 0.01 to 3 acres. This demonstrates the need for scalable, reasonably priced solutions that take into account smallholder farmers' financial reality.

Respondents' levels of farming experience varied, with 26.9% having 11–20 years and 37.4% having 1–10 years. Therefore it reveals that most of smallholder farmers have much experience in farming and therefore they can easily participate in agriculture knowledge and innovation co-creation initiatives and deal with farm management. This is supported by (Amara & Bakli, 2022), who found that farming experience enables a farmer to understand the opportunities and enhance productivity. The majority of respondents made between 100,000 and 199,999 Tanzanian shillings per month, which is a low amount. Agro-pastoralism was practiced by 41.6% of respondents, indicating a variety of livelihoods, while farming was the main economic activity for 57.7% of respondents. The cost of new agricultural technology continues to be a major determinant of adoption, given the low earnings.

These results highlight how crucial it is to create agriculture knowledge and innovation co-creation initiatives that are accessible, inclusive, and context-specific in order to increase smallholder farmers' involvement in and adoption of agricultural innovations. To guarantee that technology and training programs are suitably tailored to farmers' requirements and circumstances, SUA's activities should take into account the socioeconomic variety of farmers.

4.2 Types of Agriculture Knowledge and Innovation Co-Creation Initiative and Participation

The results from Table 3 indicate that the majority of smallholder farmers (97.8%) participating in joint training sessions to share experience with other farmers, also providing feedback on innovation, testing and adapting new technologies and farmers participating in joint sessions to contribute local knowledge or practices with other farmers and researchers (Khademi et al., 2024). A key informant noted

“Neighbouring farmers prefer to learn through training and practical demonstrations, which is why we prioritize joint training sessions to help farmers to compare traditional and improved farming practices and share experience with other farmers.” (Key informant 1)

Respondents also point out that they also collaborate in research projects with SUA researchers to share experience with other farmers, to provide feedback on innovation, also to test and adapt new technologies and other contributing local knowledge or practices. This implies that the majority of smallholder farmers participate and collaborate in research projects to share experience and provide feedback and testing on new innovations with other farmers and researchers to improve productivity.

However, several respondents report that they also participate in farmer field schools, on-farm demonstrations and innovation hubs for sharing experience with other farmers, providing feedback on innovation and testing and adopting new technologies but with low involvement or participation in participatory technology development (Charatsari et al., 2022). These indicate that farmers think it's critical to learn and share information by actively engaging in research and training. Moreover, similar results were revealed by a participant in a focus group discussion (FGD). One participant explained:

The researcher will establish a professional farmer field school reflecting their expertise, simultaneously we will participate by implementing or sharing our traditional methods or skills. This approach allows us to observe firsthand where the best outcomes emerge, guiding us to adopt the more effective technology. (Participant 1)

The findings demonstrate that farmer involvement in SUA's co-creation projects has significantly improved economic gains, technology adoption, and knowledge development. Interestingly, model farms and combined training sessions had the greatest participation rates, indicating that farmers gain the most from practical instruction and real-world examples. This is in line with (Fao, 2018), which highlights that in order to ensure practical implementation, successful agricultural extension programs should combine farmer knowledge with scientific competence. FGD participants said that



I attended training from SUA for cultivation of pineapple. In which many farmers in our ward received, knowledge sharing was done through model farms for farmer groups the training was so effective and successful to the extent that the majority of farmers were able to produce pineapples (yields) at higher rates than before (Participant 2)

The high levels of engagement in technology adaptation and information sharing also show that farmers value direct involvement in innovation processes, which is consistent with (Laurens et al., 2023b), who show that co-creation initiatives where farmers actively participate in research and technology development result in farm-ready innovations that are easier to adopt and sustain. Additionally, the data's strong feedback loop supports (Triste et al., 2018), who supporter for increased farmer-researcher-advisor interactions to enhance agricultural innovation. FGD discussion participated said that

Now we can say that we benefit from many thing. First of all, for example I could cultivate ten acres but the harvest was small, but I could use a small amount of land and benefit from many crops. Now by collaborate in research project, attending in joint training to Sharing experiences with other farmers and provide feedback on innovation we have gone from there to the better use of land. Because now if you go to cultivate a lot of acres then what little you get is just destruction.so now we are professional farmers. (Participant 3)

Table 3
Types of Co-Creation Initiatives and Participation

Knowledge and innovation co-creation initiatives	Activities			
	Contributing local knowledge or practices	Testing and adapting new technologies	Providing feedback on innovation	Sharing experiences with other farmers
	%	%	%	%
Collaborate in research project	69.4	86.0	93.4	96.7
Innovation hub	70.4	69.4	76.5	85.7
Participatory technology development	20.2	25.8	27.8	26.3
On -farmer demonstration	67.6	88.8	92.7	93.1
Famer field school	74.1	86.3	94.4	97.4
Joint training sessions	70.2	86.4	92.6	97.8

4.3 Benefits Experienced from Participating Agriculture Knowledge and Innovation Co-Creation Initiatives

Among the benefits that were reported, improved knowledge and skills were the most important, with (86.8%) of participants reported that though agriculture knowledge and innovation co-creation initiatives between SUA researchers it improve agriculture knowledge and skills to improve productivity. This is consistent with Ateka et al., (2019), who point out that co-creation initiatives play a significant role in the dissemination of agricultural knowledge. Additionally, improved farming practices were widely recognized, with (69.4%) sharing experience with other farmers. These findings support, who suggest that farmer-university collaborations improve farm readiness for new agricultural practices. FGD discussion participated said that

“Due to knowledge and innovation co-creation from SUA we get benefits, the first benefit is skills and knowledge have increased due to watching and exchange knowledge with other farmers, visiting fields and testing the technology in our own farms.” (Participant 6)

Respondent also indicating that due to perception of knowledge and innovation co-creation initiatives, (74.7%) of respondent increased turnover and enhanced profitability were the main economic benefits indicating a high benefit and reporting a very high advantage, increased turnover and enhanced profitability were the main economic benefits. This is consistent with the findings of (Sarkar et al., 2023), who discovered that agribusiness sustainability and profitability are increased by innovation-driven agricultural interventions or initiatives.

The findings of Table 4 reveal that (43.5%) were not benefit in term of building community networks though agriculture knowledge and innovation co-creation initiatives between SUA and neighboring. This implies that although there is a great diffusion of knowledge, community-building initiatives would require further support. FGD discussion participated said that

I gain a lot from participating in SUA projects. Firstly, I was able to build a new standard house (local standard) which is good and I still live in today. I was able to travel to different places and learn different



farming practices and techniques across various regions of Tanzania. I became financial good and I gain exceptional agricultural knowledge which I have been using for many years and I still use today. (Participant 7)

Other participate comment that

Right now, as you see us here food production and income increases compared to the previous this because a large percentage of the new agriculture practices. We used to have in the past is different from what it is now. Because when someone changes their agriculture practices and takes various trainings and sharing experience with other farmers their increases turnover and profitability. (Participant 8)

Table 4
Benefits Experienced from Co-Creation Initiatives

Benefits	Very high benefit		High benefit		Benefit		Low benefit		None benefit	
	N	%	N	%	N	%	N	%	N	%
Enhanced access to new technologies	94	23.4	90	22.4	94	23.4	47	11.7	77	19.2
Improved farming practices	173	43.0	110	27.4	46	11.4	28	7.0	45	11.2
Stronger community networks	66	16.4	79	19.7	49	12.2	33	8.2	175	43.5
Enhanced knowledge and skills	293	72.9	56	13.9	24	6.0	10	2.5	19	4.7
New partnerships and relationships	159	39.7	137	34.2	49	12.2	24	6.0	32	8.0
Increased turnover and improved profitability	177	44.5	120	30.2	43	10.8	20	5.0	38	9.5

4.4 Challenges in Participation Knowledge and Innovation Co-Creation Initiatives from SUA

Many respondent about (73.1%) cited limited engagement are the major challenged facing when smallholder farmers participating agriculture knowledge and innovation co-creation initiatives with SUA researchers. This result is consistent with Mirra et al., (2020) who observe that farmer engagement in co-creation processes is frequently restricted by institutional impediments. This is consistent with research by Yang et al. (2022), which highlights the value of financial support systems in raising farmer involvement in co-creation projects. Creating financial choices for farmers, such government subsidies or microloans, might lessen this difficulty and increase participation.

To encouraging outcomes, the study suggests that access to co-creation initiatives has to be expanded. This outcome is consistent with Mirra et al. (2020) who propose restructuring forms of engagement to ensure equitable participation and make them more inclusive. The poll highlights the issue of insufficient communication between SUA and the agricultural communities, since many farmers express ignorance about such efforts. To bridge this gap and foster more collaboration, universities and farmers should employ organized communication strategies like extension agents and digital platforms (Monavvarifard et al., 2019). The result of Table 5 indicate that about (40.0%) of respondent report challenge on the availability of information about initiatives. FGD discussion participated said that

Sometimes, today if mother gets the chance to come here when she returns home then she is beaten, she is told not to go there again there is the face of that person I really don't like. Those are challenge exits there some interrupt the training if they want to come and attend the training they are afraid of her husband. (Participant 9)

This confirms research by Monavvarifard et al. (2019), who found that involvement in agricultural innovation is hampered by a lack of contact between farmers and institutions. Also respondents (33.8%) cited that there is a distance from where the participation of co-creation initiatives are conducted , This is in line with Fao (2018) which emphasizes that logistical limitations are a prevalent problem in extension, Another important issue identified by the survey is the distance to participation places, which many farmers have cited as a major obstacle.

This difficulty is consistent with the findings of Sarkar et al. (2023) who note that effective knowledge and innovation co-creation initiatives impeded by logistical challenges in rural agriculture systems. To solve this issue, creative solutions are required, including decentralized training facilities or mobile agricultural extension services, which would facilitate knowledge sharing among farmers. 91.3% of respondents said that language limitations were not a difficulty at all, making them a low challenge. This implies that SUA and farmers are able to communicate well during



participation of these initiatives to help to understand and improve their agriculture knowledge and skills. .FGD discussion participated said that

Researcher their used a lot of time that the other one has not planned well, but he will tell you tomorrow we will meet but the time does not come until he finishes, another time that he would use for other work and we don't get feedback or result from researcher. (Participant 9)

Another participated said

We still harvest using knives, let's say we use the same old methods, our colleague's areas have various modern machines, even rice Trans planters, they have threshing machines, we do not have because of the destruction of rice scheming infrastructure.(Participant 5)

One Participants noted

There are challenges even when we talk about distance, example, a farmer field school could be in Bamba, but not in Kizia. For farmers from Kizia, being able to reach Bamba a little bit can be a challenge due to the transport infrastructure and the issue of transport cost. (Participant 4)

Table 5
Challenges in Participating in the Knowledge and Innovation Co-Creation Initiatives

Challenges	No challenge at all		Low challenge		Slightly challenge		Challenge		Major challenge	
	N	%	N	%	N	%	N	%	N	%
Limited involvement opportunities	53	13.2	16	4.0	39	9.7	172	42.8	122	30.3
Language barriers	367	91.3	15	3.7	6	1.5	12	3.0	2	0.5
Lack of link between SUA and farmers	101	25.1	91	22.6	74	18.4	89	22.1	47	11.7
Time constrains	244	60.7	61	15.2	47	11.7	41	10.2	9	2.2
Distance to participation venue	204	50.7	80	19.9	36	9.0	70	17.4	12	3.0
Lack of information about initiatives	142	35.3	67	16.7	36	9.0	101	25.1	56	14.9

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The results from a study indicate that SUA's knowledge and innovation co-creation initiatives programs it improve agricultural communities, especially in terms of knowledge and skills expansion, better farming methods, and higher profitability. Farmers have shown a significant preference for experiential learning and real-world demonstrations by actively participating in cooperative joint training sessions, farmer field school, and collaborate in research project. Farmers are essential to the development and use of agricultural technologies, as evidenced by the high levels of feedback and engagement in technological adaption.

To ensure the longevity of co-creation initiatives, should increase large number of involvement participation and enhance communication strategies to optimize impact and ensure long-term sustainability. Future interventions should focus on increasing outreach efforts, expanding opportunities for engagement, and using farmer-led participatory models to promote more effective information dissemination.

5.2 Recommendations

The study recommends that, the government of Tanzania through Ministry of Agriculture should capacitate management of the institutes to provide availability and accessibility agriculture knowledge and innovation co-creation initiatives project to provide knowledge and skills of agriculture production to smallholder farmers.

SUA researcher should facilities training and learning by doing to improve their efficient and participation by align with socio-economic characteristics of smallholder farmers particularly with those have limited land and income. Furthermore, knowledge-sharing may be improved while circumventing geographic limitations by utilizing digital technologies like virtual collaboration platforms and online learning materials. A more resilient and successful farming community will result from SUA's implementation of these tactics, which will also strengthen cooperation, increase the acceptance of agricultural innovations, and guarantee the long-term viability of its co-creation efforts.



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Evaluating the connection between customer satisfaction and strategic integrated marketing communication in Africa: The mediating role of customer expectation in Ghanaian banks

Vivian Teiko Azor^{1*}
Godfrey Adda²
Michael Yipake Banseh³
Esther Asiedu⁴
Emelia Amoako Asiedu⁵
Ebenezer Malcalm⁶

^{1*}vazor@gctu.edu.gh
²gadda@bolgatu.edu.gh
³mbanseh20@yahoo.com
⁴easaiedu011@gctu.edu.gh
⁵easiedu@gctu.edu.gh
⁶emalcalm@gctu.edu.gh

¹<https://orcid.org/0000-0002-2680-1389>

²<https://orcid.org/0000-0002-9118-0750>

³<https://orcid.org/0000-0003-0993-0725>

⁴<https://orcid.org/0000-0002-4352-1282>

⁵<https://orcid.org/0000-0002-4621-8086>

⁶<https://orcid.org/0000-0001-6442-5188>

^{1,4,5,6}Ghana Communication Technology University, ²Bolgatanga Technical University, ³CK Tedam University of Technology, ^{1,2,3,4,5,6}Ghana

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ABSTRACT

In Ghana's competitive banking sector, Strategic Integrated Marketing Communication (SIMC) is becoming increasingly popular as a way to improve customer relationships and satisfaction. Nonetheless, its influence within the African context, especially regarding customer expectations, is still insufficiently examined. This study investigates the correlation between SIMC and customer expectation and satisfaction in Ghanaian banks, emphasising the mediating influence of customer expectation. The research was directed by the Integrated Marketing Communications (IMC) Theory, Expectancy Disconfirmation Theory, and Relationship Marketing Theory. A quantitative approach and a cross-sectional design were employed. The target population consisted of bank customers in the Greater Accra Region of Ghana, from whom a sample of 468 was obtained through convenience sampling. The data were gathered through Google Forms and analysed using partial least squares structural equation modelling (PLS-SEM). The results indicate that SIMC has significant effects on both customer expectation ($\beta = 0.605$, $p < 0.001$) and satisfaction ($\beta = 0.542$, $p < 0.001$). Customer expectation has a significant direct effect on satisfaction ($\beta = 0.634$, $p < 0.001$) and is a partial mediator in the relationship between SIMC and satisfaction, accounting for 70.85% of the total effect. The study concludes that SIMC primarily enhances customer satisfaction through the management of expectations. It suggests that Ghanaian banks use SIMC frameworks that are in line with their business goals and to ensure that communication is clear and consistent to effectively set expectations, increase satisfaction, and build customer loyalty.

Keywords: Africa, Customer Expectation, Customer Satisfaction, Ghanaian Banks, Strategic Integrated Marketing Communication, Structural Equation Modelling

I. INTRODUCTION

Organisations in today's competitive business world, especially those in the banking and service sectors, need effective customer communication to achieve success (Chirwa & Boikanyo, 2022). Strategic Integrated Marketing Communication (SIMC) serves as a fundamental managerial instrument that unifies communication channels to achieve message consistency while building enduring customer relationships (Niemann, 2006). The approach of Strategic Integrated Marketing Communication (SIMC) brings together different promotional tools and messaging strategies to create a single customer-focused brand experience (Mudzanani, 2015). The integration of communication strategies



through SIMC leads to improved brand equity while simultaneously boosting customer satisfaction because it matches promotional messages to what customers want and how they perceive the brand (Barker, 2013).

Customer satisfaction is the degree to which a product or service fulfils the desires of its customers or goes beyond them; it is commonly acknowledged as a driver of customer loyalty, retention, and long-term profitability (Moraru & Duhnea, 2018). As differentiation of banks by their products is not palpable, establishing trust and strength of relationship, alongside with some incidental layers about sustainable competitive advantage, is contingent on securing high levels of satisfaction (Famiyeh et al., 2018). Communication plays a relevant role in conveying what the organisation offers about its service and benefits anchored on value to make real its brand promise (Li et al., 2021). Indeed, service delivery does not provide total satisfaction but rather is based on the expectations that are set by customers onto providers (Hosen et al., 2021). Through the integration of advertising, public relations, direct marketing, and sales promotion efforts with digital marketing efforts, firms can send coherent messages to customers that will help reduce ambiguity, build trust, and improve satisfaction (Ozatac et al., 2016). Consistency gives clear expectations to customers about what the product or service can offer when their needs are met – consistency translates into higher satisfaction – consistency brings higher satisfaction (Danijela et al., 2015). IMC helps in personalisation by utilising customer data across channels for content relevant at the right time, which creates a feeling among customers that they are valued and understood (Chiguvu & Guruwo, 2017).

According to Geissler and Rucks (2011), customer expectations are the preconceived notions and standards that clients have about how a service will be performed and delivered. Hassanein and Yeşiltaş (2021) contend that customer expectation has prior aetiology-based experiences, word-of-mouth, marketing communications, and socio-cultural factors. Solomon and Englis (2013) assert that expectations serve as filters within the SIMC's structure that evaluate communication efforts. According to earlier research by Holm (2006), value perception increases among customers when banks deliver perfectly coherent messages across multiple channels that satisfy the extremely high expectations set for their services. This is followed by the development of trust and, finally, a high level of expressed satisfaction. Regardless of the level of service quality, any communication that falls short of these extremely high standards leads to discontent (Zhu et al., 2021).

Integrated marketing communication builds up customer expectations as it delivers cohesive experiences through every interaction (Hsu et al., 2010). Businesses utilise public relations, direct marketing, social media, and personal selling in addition to the mainstream media to consistently convey messages that customers may perceive as enhancing brand recognition and elucidating value propositions (Egwuonwu et al., 2017). Customers have higher expectations for a brand's overall dependability and a smooth experience across all of its channels when it is consistent. More precisely, increased consistency raises the need for tailored, pertinent communication even more (Thaichon & Quach, 2016). Consumers want messages that are specifically tailored to their needs (Ekhlassi et al., 2012). Additionally, integrated campaigns are increasing brand credibility and trustworthiness (Keikha et al., 2020). This is because when all businesses consistently repeat the same message across all of their channels, it builds brand trust and raises expectations for overall performance, service delivery, and product quality (Kehinde, 2010).

Although SIMC has demonstrated effects that differ across industries and geographical locations worldwide, it is acknowledged as a significant factor in determining customer experience, or more accurately, as a perception enhancer wherever one may be (Peltier et al., 2013). Better customer relationships and competitive positioning have resulted from integrated communication in developed economies; however, in emerging markets, adoption has been slow (Khizar et al., 2016) because most businesses have fragmented communication strategies (Mapheto et al., 2014). In Africa, where customers are very demanding and technological change is occurring at a rapid pace, an integrated communication strategy helps banks and their clients maintain trust and close the service gap (Arou & Deyganto, 2024).

The banking industry in Ghana is now more competitive as a result of liberalisation, technological advancements, and growing customer sophistication. Strategic communication is therefore essential (Duncan, 2020). Customers want more regular and open communication, especially when it comes to digital banking, loan services, and customer support (Patrianti et al., 2022). Satisfaction and trust are undermined when unambiguous, reliable messaging is not conveyed. Communication strategies that satisfy customers' expectations are crucial for shaping perception and cultivating loyalty because banking services do not differ all that much.

Despite its high relevance, there are currently few studies within the African banking context that have been conducted on the connection between customer satisfaction and strategic integrated marketing communication. This raises questions regarding the existing findings' applicability because most IMC research is based primarily on developed western contexts, whereas the African market operates in very different cultural, technological, and regulatory environments. Amidst market consolidation and regulatory reforms, Ghanaian banks are under a lot of pressure to increase customer satisfaction. The impact of SIMC on satisfaction outcomes when expectations mediate the relationship has not been sufficiently documented. Meanwhile, customer expectations in Ghana are rapidly changing due to factors like demographic trends, international banking regulations, and digital transformation (Frimpong et al., 2023). Due to a lack of empirical data on the relationship between SIMC strategies and expectations, these pose

theoretical and practical issues. For example, banks lack empirically sound guidelines for communication optimisation, and Western frameworks might not be directly applicable in an African setting.

This study significantly closes these gaps by empirically examining the relationship among SIMC, customer expectations, and satisfaction in Ghana's banking sector. This paper makes three contributions: first, it advances theory by examining expectations as the mediating mechanism that links SIMC to satisfaction; second, it pushes IMC research into an understudied African context using data from a developing market; and third, it provides Ghanaian banks with invaluable information for developing culturally appropriate SIMC strategies that adhere to local standards while maintaining consistency across touchpoints. These results would also be more broadly applicable to African banks dealing with growing customer expectations and digital transformation. Therefore, the study provides insights for regulators and policymakers who are interested in customer satisfaction, financial inclusion, and sector development.

1.1 Research Objectives

- i. To investigate the effect of SIMC on customer expectation in Ghanaian banks.
- ii. To assess the influence of SIMC on customer satisfaction in Ghanaian banks.
- iii. To examine the impact of customer expectation on customer satisfaction in Ghanaian banks.
- iv. To evaluate the mediating influence of customer expectation on the relationship between SIMC and customer satisfaction in Ghanaian banks.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Expectancy Disconfirmation Theory (EDT)

The Expectancy Disconfirmation Theory was developed by Richard L. Oliver in the late 1970s and early 1980s as a major framework broadly used in studies of consumer behaviour and research into service quality (Elkhani & Bakri, 2012). This theory contends that customer satisfaction is a function of comparison between pre-consumption expectations and actual performance of the product or service by its provider (Van Ryzin, 2013). The basic premise around which the entire theory revolves is that consumers develop certain assumptions based on past experiences, marketing communications, and word-of-mouth before interacting with any product or service. After consumption, they assess actual performance relative to those assumptions (Choi et al., 2019). The major elements in EDT are expectations, perceived performance, and disconfirmation (Lankton & McKnight, 2012). In this context, positive or negative disconfirmation simply means whether the performance has met or not met the set expectation; that is to say if it falls short or exceeds it (Lee et al., 2022). Positive disconfirmation happens when performance exceeds expectations and leads to higher satisfaction. Negative disconfirmation happens when performance does not meet expectations and results in dissatisfaction (Sinha et al., 2020). The performance that meets the expectation is referred to as confirmation and usually results in moderate satisfaction (Filtenborg et al., 2017). EDT posits that in the determination of satisfaction; objective performance is less relevant. Rather, it is the subjective assessment of whether expectations have been met or exceeded (Morgan & Dong, 2008).

2.1.2 Integrated Marketing Communication (IMC) Theory

Integrated Marketing Communication (IMC), evolved in the late 20th century as academics and practitioners, encouraged by Don E. Schultz in the early 1990s, called for better coordination of promotional tools to create a more effective brand message. This theory presupposes that consumers interact with brands through various touchpoints and disjoint messages decrease the effectiveness of marketing. Therefore, integrated advertising, public relations, sales promotion, direct marketing, personal selling and digital channels all working together under one unified strategy will create stronger brand equity and better return on investment (Schultz et al., 2007). IMC also presumes that firms can and should be customer-centric by using information about audiences to customize and synchronize messages so that they are relevant. Core components are a clear, central brand message; strategic coordination of media and promotional mix; audience segmentation and targeting; consistent creative and tonal identity; measurement and feedback systems to assess the impact of the message getting through; internal organizational alignment such that marketing, sales, and customer service act in concert (Moriarty & Schultz, 2012). IMC tries to create synergistic communications by combining tactical channels with strategic planning and measurement so that they reinforce each other to remove any possibility of confusing the customer and thereby build a long-term relationship as well as loyalty (Schultz et al., 2011).

2.1.3 Relationship Marketing Theory

The Relationship Marketing theory has its roots in the 1980s and early 1990s when scholars, such as Leonard Berry and Christian Grönroos, shifted their perspectives from the importance of discrete transactions to long-term exchange. Sustainable competitive advantage is derived from ongoing customer relationships rather not from one-off sales (Hunt et al., 2006). The model prescribes that firms initiate personalized interactions with customers because most



customers prefer continuity and develop trust. A mutual commitment through two-way communication between the firm and the customer will also lead to a relationship where the retained customer will more likely yield better benefits than acquiring new customers repeatedly (Möller & Halinen, 2000). Service quality, information systems, and organizational alignment are also prescribed by this theory as areas for investment in order to build such relationships (Zinkhan, 2002). The major elements of the theory include trust, commitment, communication, satisfaction, reciprocity—that determine relationship quality; segmentation and personalized relationship strategies; value co-creation mechanisms like dialogue and feedback; metrics that emphasize customer lifetime value and retention rates (Harker & Egan, 2006; Lages et al., 2008). The theory also realizes networks and stakeholder relationships apart from just single customers, falling within both B2B and B2C contexts. Its needs inside harmonization between marketing, sales, and service to give steady, ongoing relational advantages.

2.2 Empirical Review and Hypothesis Development

2.2.1 Strategic Integrated Marketing Communication and Customer Expectation

IMC unifies all communications activities; for example, customers obtain a consistent brand experience across many platforms; this helps to establish and shape customers' perceptions by decreasing confusion and boosting brand familiarity (Ahmed et al., 2024). Because communication can improve the overall experience for customers, consistent IMC greatly increases customer satisfaction with regard to retail service (Butkouskaya et al., 2023). This provides a clear foundation for research showing that effective IMC tactics typically foster engagement and preparedness, which in turn favourably influence how customers perceive their expectations (Payne et al., 2017). Diversification in the communication mix—public relations, direct marketing, and word-of-mouth—creates synergy that enhances brand equity, which in turn increases creating favourable effects on customer expectations because it improves customer contact, claim Gabrielli and Baghi (2016). Each of these channels improves communication with consumers, increasing their interest in a brand's goods or services. Through the use of many touchpoints and an increase in two-way communication, an IMC will allow customers to correctly respond to their feedback and align their strategies with the expectations of their consumers (Wu et al., 2022). Multi-channel IMC also offers the advantage of delivering the appropriate information at the appropriate point in the customer journey, increasing the likelihood that the actual product experience will match the expectations of the consumer (Cvetkov-Čikošev et al., 2021). According to Umbreen and Ali (2013), customers' expectations are raised when their preferences for customer-oriented, interactive, and personalised IMC activities are met. IMC ensures that the target audience receives a consistent message, according to Blazheska et al. (2021). This eliminates confusion and aligns the firm's brand promise with the aspirations of its clients. Based on the above empirical findings, we hypothesize that:

H1: Strategic Integrated Marketing Communication has a significant positive effect on Customer Expectation.

2.2.2 Strategic Integrated Marketing Communication and Customer Satisfaction

Abimbola et al. (2020) discovered that in a few private institutions in South-West Nigeria, the many aspects of IMCs—public relations, online marketing, advertising, and service promotion—all considerably and favourably improve customer satisfaction. According to Adnan et al. (2021), IMC methods assist businesses in better satisfying the demands and expectations of their clients, which ultimately results in increased client satisfaction. According to Astri et al. (2024), IMC enables banks to better manage customer expectations through timely and clear communication. Customers also gain a better understanding of the bank's product advantages when IMC is implemented through a variety of communication channels, which fosters a sense of value and care that improves their overall satisfaction. According to Yeboah and Atakora (2013), businesses that can integrate their communication to satisfy customers can thrive even in highly competitive markets. Once a customer's perception aligns with their consumption experience, they are satisfied and stay loyal to the business. While customers' expressions of loyalty through repeat purchases and identification with network providers exhibited lower response levels, Egwuonwu et al. (2017) revealed that IMC techniques were more effective in creating voluntary awareness and good word-of-mouth among customers. According to Fard and Farahani (2015), companies require an effective communication system to deliver critical messages at the appropriate moment in order to develop integrated marketing communications and a strong brand image in the minds of their customers. Advertising, personal selling, sales promotions, and direct marketing are examples of IMC strategies that should be chosen and coordinated to improve particular customer relational benefits (confidence/trust, social/identification, and special treatment/price incentives), according to Hsu et al. (2010). Improving these relational benefits results in increased customer satisfaction. Despite the fact that implementing IMC components raises a company's activity costs, Burgers et al. (2000) claimed that in the long run, customers are more satisfied and drawn to the products and services offered by the business. We thus propose the hypothesis below:

H2: Strategic Integrated Marketing Communication positively influences Customer Satisfaction.



2.2.3 Customer Expectation and Customer Satisfaction

According to Almsalam (2014), customer expectations are preconceived notions about a good or service that will affect the consumer's choice before making a purchase, their attitudes while using it, and the foundation for assessing their level of satisfaction after making a purchase. Siagian (2020) demonstrates that discrepancies between client expectations and perceived service delivery have a direct impact on overall satisfaction levels; as a result, proactive gap-filling is necessary. Customer expectations are a major determinant of service quality and satisfaction, according to Rahman et al. (2017). During the service experience, service providers should determine and meet the needs and expectations of their clients in order to achieve high customer satisfaction. According to Hamza and Zakkariya (2014), expectancy-disconfirmation is the outcome of consumer happiness. Thus, a customer's level of satisfaction or discontent is ultimately determined by whether the product or service meets, surpasses, or falls short of their expectations. This disconfirmation might be positive, zero, or negative. According to Omo-Diagi and Medina (2015), expectations play a significant role in evaluating the service and determining whether or not one is satisfied. They went on to say that managing expectations results in satisfied customers. According to Van Thai (2015), this is a process of comparing perception and expectation; when perception and expectation are equal, people are happy with the service they received; when perception and expectation are different, people are delighted; and when perception and expectation are different, people are unhappy. We thus hypothesize that:

H3: Customer expectation has a significant positive impact on customer satisfaction.

2.2.4 Mediating Role of Customer Expectation

Wong and Dioko (2013) argue that customer expectations do not just precede satisfaction but rather moderate it: high expectations increase the perceived performance to satisfaction relationship, in the same way strengthening the perceived value to satisfaction relationship. Biswas et al. (2019) noted that expectation confirmation significantly mediates the relationship between website service quality and customer satisfaction. They further posited that website service quality positively influences expectation confirmation which consequently has a positive effect on customer satisfaction toward online shopping (Biswal et al., 2019). Liana et al. (2024) posited that customer experience significantly mediates the effect of service quality on both word-of-mouth recommendations and repurchase behaviours in mobile payment services. Kaguma et al. (2023) observed that customer expectations partially mediate the effect of social data on relationship quality in some selected hotels in Nairobi, Kenya. They go on to state that customer expectations largely help in cementing the nexus between data and information and relationship quality. Yi and La (2004) discovered in their study that adjusted customer expectations mediate the relationship between CS and RPI. However, they argue that the mediating process is more pronounced when the customers are of a lower degree of loyalty. Gerou's (2022) study established that customer experience mediates the effect of customers' emotions on customers' behavioural intentions. When customer experience was introduced as a mediator, both emotions and customer experience significantly predicted behavioural intentions, thereby indicating that customer experience has a very important intermediary role when emotions are translated into an effect on behaviour. Based on the above empirical evidence we propose the hypothesis below:

H4: Customer expectation mediates the relationship between strategic integrated marketing communication and customer satisfaction.

III. METHODOLOGY

3.1 Research design, sample and data collection

The study adopted a cross-sectional survey design. A cross-sectional survey design is defined as a quantitative approach whereby data is collected from a representative sample at one point in time for the purpose of studying variable relationships, attitudes, behaviours, or characteristics within a certain population (Connelly, 2016). Cummings (2018) indicated that cross-sectional designs are very cost-effective and time-efficient as compared to any longitudinal study because data is collected at just one time point rather than at several intervals. Thus, it reduces considerably not only the financial resources but also the time investment required to carry out the study. Spector (2019) further noted that cross-sectional types of designs enable relatively quick studies with large sample sizes, hence facilitating a broader generalization of findings to the target populations and increasing the statistical power of analyses conducted. The population of interest was in the Greater Accra Region bank customers. Participants were recruited using a convenience sampling method. Data was collected via a structured online survey questionnaire created through Google Forms, and the link to the survey was shared with potential respondents over social media and email. The questionnaire used validated measurement scales of three main constructs, strategic integrated marketing communication, customer expectations, and customer satisfaction. These instruments were adapted from the already established scales used in previous research studies such that reliability and validity would be taken into consideration. A total of 468 responses



were obtained successfully from bank customers operating accounts within the study area. Participation was absolutely voluntary during data collection with strict confidentiality to keep participants' identities private; data collection ran from February 17th, 2024 up to May 30th, 2024.

3.2 Measures

The study questionnaire thus falls into four major sections. Demographic information constitutes section A with four questions on gender, age, educational qualification, and occupation of respondents. Strategic Integrated Marketing Communication (SIMC) Scale is introduced in Section B. Strategic Integrated Marketing Communication was measured using a full 25-item scale originally developed and validated by Porcu et al. (2017). This multidimensional tool captures the strategic nature of IMC through four different but related sub-dimensions: Message Consistency comprised four items. This dimension appraises the degree to which banks have coherent and unified message content across all communication channels and touchpoints to ensure that customers receive consistent brand messages irrespective of medium or platform used for communication. The interactivity sub-dimension comprises seven items. This part evaluates the bank's ability to hold meaningful and responsive two-way communication with customers, leading to better customer experience and relation building. The Stakeholder-Centred Strategic Focus dimension had seven items. This component rates how much banks match their communication plans with the requirements, tastes, and hopes of all types of stakeholders but more specifically customers so that all efforts in communication are planned strategically for creating value for stakeholders. There were seven items under the Organizational Alignment sub-dimension. This sub-dimension checks internal coordination and integration of marketing communication activities across different departments and organizational levels within the bank, hence ensuring seamless execution of communication strategies. Respondents rated their agreement with each SIMC item on a scale that runs from 1 to 7 where 1 means "Strongly Disagree" and 5 means "Strongly Agree," thus providing room for a fine distinction of perception concerning practices of strategic integrated marketing communication by banks.

Section C was the Customer Satisfaction Scale, an 8-item scale measured customer satisfaction and synthesized validated instruments from several recent studies conducted within the contexts of banking and service marketing. The items were carefully adapted from Zouari and Abdelhedi (2021), Kaur et al. (2021), and Haruna and Osa-Afiana (2022) to ensure topicality about cultural appropriateness for the Ghanaian banking environment. This composite approach, therefore, covered a wide aspect through which customer satisfaction could be viewed both functionally and emotionally with respect to a banking service experience. Those scales were formatted as five-point Likert scales where 1 meant "Strongly Disagree" and 5 meant "Strongly Agree." There is adequate differentiation for statistical analysis that remains easy for the respondent to understand.

Section D was the Customer Expectation Scale. A 16-item scale adapted from the work of Burgers et al. (2000) measured customer expectations. This study by Burgers et al. has been quite popular for its wide dimensional coverage regarding customer expectations in service contexts, which has made it one of the recommended works. These scales cover four important sub-dimensions that depict various aspects related to customer expectations regarding banking services. The adaptiveness sub-dimension consists of six items. In this dimension, customer expectation is about a bank's abilities to customize their services, adjust its offerings in response to changing needs, and provide flexible solutions as well as fulfil individual requirements from customers. The assurance dimension consisted of five items. This dimension evaluates expectation levels pertaining to competence, reliability, and trustworthiness of banks as well as related aspects concerning professional service delivery and risk mitigation on the part of banks. The empathy dimension was made up of three items. This dimension evaluates the customer's expectation about the bank's ability to know their individual needs, provide personalized attention, and show concern interest in the welfare of customers. This was composed of two items. This sub-dimension evaluates the expectation of customers about the expertise, credibility, and authoritative position of a bank in financial services and guidance.

3.3 Data analysis

The study used Partial Least Squares-Structural Equation Modelling (PLS-SEM) in WarpPLS version 7.0 software. The choice of PLS-SEM was also made very strategically, keeping a view of several methodological advantages related to the objective of this research and the characteristics of data. Firstly, PLS-SEM has demonstrated an excellent capacity for managing complex theoretical models with multiple interrelated constructs and thus highly appropriate for studying multifaceted relationships considered in the present study. Secondly, it is more robust with small sample sizes than any alternative Covariance-Based Structural Equation Modelling and ensures reliable parameter estimation in the presence of inadequate data as well. Third, one other area wherein PLS-SEM fits extremely well is when data do not adhere strictly to assumptions pertaining to multivariate normality since real-world research contexts seldom respect such distributional requirements. The analytical framework had turned out to be very useful for this study, which aimed not only to explore the direct linkages between constructs but also the rather complicated indirect paths through which relationships are manifested (Henseler et al., 2015).



The data analysis utilized a careful two-stage process and matched the most recommended practices for PLS-SEM methodology. This detailed framework involved a Measurement Model Assessment, then a Structural Model Assessment. It began with an evaluation of the psychometric properties of the measurement model by an intensive reliability and validity check. Internal consistency reliability has also been strictly appraised through indicators such as Composite Reliability (CR) and Cronbach's alpha (CA), both set against 0.7 as minimum thresholds to indicate acceptable levels of reliability (Fornell & Larcker, 1981; Nunnally & Bernstein, 1994). Therefore, this would support that items under each construct are indeed measuring the intended theoretical concept. The convergent validity was assessed based on average variance extracted (AVE) in which a minimum threshold value of 0.5 was set for acceptable convergent validity (Fornell & Larcker, 1981). This threshold means that more than half of the variance for its indicators has been explained and therefore there is better association between the items with their intended construct rather than with measurement error. Two complementary approaches were used toward establishing discriminant validity and testing whether every construct was empirically different from the other constructs in the model. The traditional Fornell-Larcker was applied in addition to a more stringent criterion, Heterotrait-Monotrait ratio (HTMT) suggested by Henseler et al. (2015) as providing enhanced capabilities in assessing discriminant validity. More particularly, individual indicator loadings are above 0.5 which indicates strong item reliability (Memon & Rahman, 2014) so that each indicator meaningfully contributes to its construct.

Comprehensive testing of the hypothesized relationships between constructs in the structural model was carried out. Path coefficients together with their respective t-values and p-values were used to determine if the relationships proposed in the model were statistically significant, as well as how strong they might be in practical terms. This provided valuable information on what magnitude and direction effects might flow between various theoretical constructs. Also included was an evaluation of R² values for all endogenous constructs to describe how much variance could be explained by predictor variables in this particular model (Cohen, 1988) as another indicator of the utility of this model structure. Another test of this utility was predictive relevance or Q² of Stone-Geisser that checks availability for prediction about indicator values on endogenous constructs outside sample data (Geisser, 1974; Stone, 1974).

A particular focus in this study involved the examination of customer expectations as a mediator within the conceptual framework. Just as described by Hair et al. (2017), mediation relationships were tested using the VAF-Variance Accounted For approach, thus making a strong provision for testing any indirect effect hypothesis. It therefore allows an understanding of detailed routes through which sustainability integration influences organization decision-making processes and performance outcomes, hence offering a good overview of some important underlying mechanisms that drive such relationships.

3.4 Ethical Considerations

Ethical considerations were taken into account to protect the rights, dignity, and well-being of all individuals who were involved, or rather participated, in the research study process. Their participation was subject to a clear consent statement that was appended at the beginning of the online questionnaire describing the purpose and objectives of the study as well as the procedures involved and any potential risks or benefits accruable from it. Explicit information regarding their right to withdraw at any point without any negative consequences was communicated to them. Net banking on whether or not they participate in this study will have no effect whatsoever on their relationship with their bank. All information obtained relating to individuals shall remain strictly confidential and anonymous in every circumstance. No names, account details, or contact number will be taken; all responses are analysed together so there is no way traceability can ever be connected with any particular individual respondent. Access is secured for only one researcher when a questionnaire is online and therefore, access by anyone else for viewing or analysing data. In keeping with the provisions of the Data Protection Act 2012 (Act 843) of Ghana and general rules on data protection, all electronic and physical records were securely stored with access limited only to the researcher and some authorized personnel. In addition, the respondents were assured that the information they provided would be used strictly for academic purposes and would never find its way to a third party.

IV. FINDINGS & DISCUSSION

4.1 Descriptive Results

The demographic profile of the study participants is displayed in Table 1 below. The gender distribution of the sample was nearly equal, with women taking a slightly larger percentage at 52.4% (n = 245) than men did at 47.6% (n = 223). More precisely, the majority of respondents fall into middle-aged categories, with the largest segment being those between the ages of 41 and 50 (26.9%; n = 126), followed by those between the ages of 31 and 40 (23.9%; n = 112), and those between the ages of 51 and 60 (20.7%; n = 97). Young respondents between the ages of 18 and 30 made up around sixteen percent of the sample as a whole, while those over sixty made up just about twelve percent. The sample's high level of education was indicated by tertiary qualifications. First-degree holders made up the greatest percentage of respondents (34.6%; n = 162), although postgraduate degree holders came in second (31.2%; n = 146).



15.2% (n = 71) of the sample had a senior high school, vocational, or technical school education, whereas 19.0% (n = 89) had a Higher National Diploma or Diploma qualifications. According to the occupational profile, the largest group was entrepreneurs (30.6%; n = 143), followed by employees of the government sector (26.3%; n = 123) and those of the private sector (23.3%; n = 109). Students made up the smallest occupational category with only over 6% of the respondents, while pensioners made up nearly 14%. Banks that are privately held are preferred by the majority of respondents over those that are government owned.

Table 1*Demographic Characteristics of Respondent.*

Variable	Category	Frequency	Percentage
Gender	Male	223	47.6
	Female	245	52.4
Age group	18-30 years	76	16.2
	31-40 years	112	23.9
	41-50 years	126	26.9
	51-60 years	97	20.7
	Above 60 years	57	12.2
Educational level	SHS/Vocational/Technical School	71	15.2
	Higher National Diploma/Diploma	89	19.0
	First Degree	162	34.6
	Postgraduate Degree	146	31.2
Occupation	Student	28	6.0
	Private Sector Employee	109	23.3
	Government Sector Employee	123	26.3
	Entrepreneur	143	30.6
	Pensioner	65	13.9
Type of Bank	Private Owned Bank	291	62.2
	Government Owned Bank	177	37.8

4.1.1 Measurement Model Assessment

Table 2 below presents the results of the reliability, variance inflation factor (VIF), factor loadings, and convergent validity for the constructs of Strategic Integrated Marketing Communication (SIMC), Customer Expectation (CEXP), and Customer Satisfaction (CSAT). The VIF values for all constructs were below the threshold of 5, indicating the absence of multicollinearity concerns. The outer loadings for SIMC ranged from 0.618 to 0.808, for CEXP from 0.617 to 0.804, and for CSAT from 0.618 to 0.808, demonstrating adequate indicator reliability. Cronbach's alpha (CA) values were above the acceptable threshold of 0.70 for all constructs, with SIMC at 0.786, CEXP at 0.857, and CSAT at 0.828, suggesting internal consistency. Similarly, the composite reliability (CR) values for SIMC (0.804), CEXP (0.883), and CSAT (0.870) exceeded the recommended threshold of 0.70, further confirming reliability. The Dijkstra's PLSc reliability (DPR) values were also satisfactory, ranging from 0.839 to 0.879. Moreover, the average variance extracted (AVE) for all constructs was above the 0.50 benchmark, with SIMC at 0.582, CEXP at 0.571, and CSAT at 0.659, thereby establishing convergent validity. Note: VIF = Variance Inflation Factor; CA = Cronbach's Alpha; CR = Convergent Reliability; DPR = Dijkstra's PLSc reliability; AVE = Average Variance Extracted

Table 2*Reliability, VIF, Loadings and Convergent Validity*

Construct	No. of items	Outer VIF	Outer loadings range	CA	CR	DPR	AVE
SIMC	25	1.607	0.618–0.808	0.786	0.804	0.879	0.582
CEXP	16	2.434	0.617–0.804	0.857	0.883	0.869	0.571
CSAT	8	2.191	0.618–0.808	0.828	0.870	0.839	0.659

Table 3 below presents the correlations between latent variables based on the Fornell–Larcker criterion. The results show that the square root of the average variance extracted (AVE), which is represented by the diagonal values, was higher than the corresponding inter-construct correlations. Specifically, the square root of AVE for Customer Satisfaction (CSAT) was 0.812, for Customer Expectation (CEXP) was 0.756, and for Strategic Integrated Marketing Communication (SIMC) was 0.763. These values were greater than the off-diagonal correlations between constructs, such as the correlation between CSAT and CEXP (0.727), CSAT and SIMC (0.534), and CEXP and SIMC (0.597). This



indicates that the constructs demonstrated discriminant validity, as each construct shared more variance with its indicators than with other constructs.

Table 3
Correlations between Latent Variables (Fornell-Larcker Criterion).

	CSAT	CEXP	SIMC
CSAT	0.812		
CEXP	0.727	0.756	
SIMC	0.534	0.597	0.763

Table 4 below presents the Heterotrait–Monotrait (HTMT) ratio of correlations among the latent constructs. The results indicate that all HTMT values were below the conservative threshold of 0.85 and the more lenient threshold of 0.90, confirming discriminant validity. The HTMT ratio between Customer Satisfaction (CSAT) and Customer Expectation (CEXP) was 0.862, between CSAT and Strategic Integrated Marketing Communication (SIMC) was 0.641, and between CEXP and SIMC was 0.735. These findings demonstrate that the constructs are empirically distinct and meet the required criteria for discriminant validity.

Table 4
Heterotrait-Monotrait (HTMT) Ratio

	CSAT	CEXP	SIMC
CSAT			
CEXP	0.862		
SIMC	0.641	0.735	

4.1.2 Structural Model Path Coefficient

Table 5 below presents the results of the path analysis for the hypothesized relationships among the constructs. The findings show that all proposed hypotheses were statistically significant and accepted at $p < 0.001$. Specifically, Strategic Integrated Marketing Communication (SIMC) had a strong positive effect on Customer Expectation (CEXP) ($\beta = 0.605$, $t = 14.070$, $SE = 0.043$), supporting H1. Similarly, SIMC significantly influenced Customer Satisfaction (CSAT) ($\beta = 0.542$, $t = 12.605$, $SE = 0.043$), confirming H2. Customer Expectation also demonstrated a significant positive relationship with Customer Satisfaction ($\beta = 0.634$, $t = 14.744$, $SE = 0.043$), supporting H3. Furthermore, the mediating effect of Customer Expectation in the relationship between SIMC and CSAT was significant ($\beta = 0.384$, $t = 12.387$, $SE = 0.031$), confirming H4. Collectively, these results suggest that both direct and indirect effects of SIMC are critical in enhancing Customer Expectation and ultimately improving Customer Satisfaction.

Table 5
Path Analysis

Hypothesis	Hypothesized Path	Path Coefficient	t-value	SE	Decision
H1	SIMC → CEXP	0.605***	14.070	0.043	Accepted
H2	SIMC → CSAT	0.542***	12.605	0.043	Accepted
H3	CEXP → CSAT	0.634***	14.744	0.043	Accepted
H4	SIMC → CEXP → CSAT	0.384***	12.387	0.031	Accepted

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; SE = Standard Error

4.1.3 Mediating Effects

Table 6 below presents the results of the mediation analysis. The findings indicate that Customer Expectation (CEXP) partially mediates the relationship between Strategic Integrated Marketing Communication (SIMC) and Customer Satisfaction (CSAT). The indirect effect of SIMC on CSAT through CEXP was 0.384, while the total effect was 0.542. The variance accounted for (VAF) was 70.849%, which falls between 0.20 and 0.80, thereby confirming partial mediation according to the guidelines of Hair et al. (2017). This suggests that SIMC not only directly influences CSAT but also exerts a substantial indirect effect through CEXP, highlighting the crucial role of customer expectations in explaining the pathway between integrated marketing communication and satisfaction outcomes.

Table 6
Mediating Effect

Path	Indirect Effect	Total Effect	VAF (%)	Mediation type
SIMC → CEXP → CSAT	0.384	0.542	70.849	Partial



Table 7 below presents the coefficient of determination (R^2), adjusted R^2 , and predictive relevance (Q^2) for the endogenous constructs. The results indicate that Strategic Integrated Marketing Communication (SIMC) explained 36.6% of the variance in Customer Expectation (CEXP) ($R^2 = 0.366$; Adj. $R^2 = 0.365$), while SIMC and CEXP together explained 54.8% of the variance in Customer Satisfaction (CSAT) ($R^2 = 0.548$; Adj. $R^2 = 0.546$). Both R^2 values exceed the threshold of 0.25 recommended for moderate explanatory power in social sciences, suggesting that the model has substantial predictive capability. Additionally, the Q^2 values for CEXP (0.366) and CSAT (0.547) were greater than zero, demonstrating predictive relevance of the model (Hair et al., 2017). Collectively, these results indicate that the structural model demonstrates adequate explanatory and predictive power for the endogenous constructs.

Table 7*Coefficient of Determination and Predictive Relevance*

Construct	R^2	Adj. R^2	Q^2 predict
CEXP	0.366	0.365	0.366
CSAT	0.548	0.546	0.547

Table 8 below presents the model fit indices for the structural model. The results demonstrate that the model achieved acceptable and robust levels of fit across multiple indices. The average path coefficient (APC = 0.466, $p < .001$), average R-squared (ARS = 0.457, $p < .001$), and average adjusted R-squared (AARS = 0.455, $p < .001$) were all statistically significant, indicating strong explanatory power. Multicollinearity was not a concern, as the average block VIF (AVIF = 1.563) and the average full collinearity VIF (AFVIF = 2.077) were below the threshold of 5 and within the ideal benchmark of 3.3. The Tenenhaus goodness-of-fit index (GoF = 0.394) exceeded the recommended cut-off for large effect sizes (≥ 0.36), suggesting a strong global model fit. Additionally, the Simpson's paradox ratio (SPR = 1.000), R-squared contribution ratio (RSCR = 1.000), statistical suppression ratio (SSR = 1.000), and nonlinear bivariate causality direction ratio (NLBCDR = 1.000) all met or exceeded their recommended thresholds, further supporting the robustness of the model. Collectively, these indices confirm that the structural model demonstrates strong explanatory, predictive, and overall fit quality.

Table 8*Model Fit Indices*

Model Fit Index	Test Statistic	p-value	Criterion
Average path coefficient (APC)	0.466	$p < .001$	Acceptable if < 0.05
Average R-squared (ARS)	0.457	$p < .001$	Acceptable if < 0.05
Average adjusted R-squared (AARS)	0.455	$p < .001$	Acceptable if < 0.05
Average block VIF (AVIF)	1.563	–	Acceptable if ≤ 5 , ideally ≤ 3.3
Average full collinearity VIF (AFVIF)	2.077	–	Acceptable if ≤ 5 , ideally ≤ 3.3
Tenenhaus GoF (GoF)	0.394	–	Small ≥ 0.1 , Medium ≥ 0.25 , Large ≥ 0.36
Simpson's paradox ratio (SPR)	1	–	Acceptable if ≥ 0.7 , ideally = 1
R-squared contribution ratio (RSCR)	1	–	Acceptable if ≥ 0.9 , ideally = 1
Statistical suppression ratio (SSR)	1	–	Acceptable if ≥ 0.7
Nonlinear bivariate causality direction ratio (NLBCDR)	1	–	Acceptable if ≥ 0.7

4.2 Discussion

The findings validated that strategic integrated marketing communication can greatly raise customer expectations. The results revealed that banks could directly raise the patient's expectations for their products and services through the successful implementation of SIMC. This may be done by ensuring consistent messaging, coordinated cross-channel communication, and aligned brand positioning. In simple terms, a bank that communicates to its clients that it is trustworthy and competent in delivering to meet their demands on high quality and prompt response—and overall positive experience—will set clienteles who have such high standards for its offerings. The more expertly a bank manages and integrates its communication to match exactly what type of offerings those clients are looking for, the offerings they will be expecting. This finding also validates what was argued before by Mihart (2012) that customer expectation becomes an ultimate crucial standard against which product performance is measured in the final stage of the consumer's decision-making process. It is these expectations that can shape buying behaviour going forward and guide IMC strategies. The findings of this study also corroborate the argument advanced by Mihaela (2015) that for communication efforts to be more effective and efficient, IMC strategies and messaging should pay great attention to existing consumer expectations—in addition to new ones that need to be fulfilled.

Strategic integrated marketing communication positively influences customer satisfaction. This means that banks practicing strategic IMC are not just good at marketing but also build gratifying relationships with their customers,



which is essential in sustaining profitability in the long run amidst a highly competitive market. The results of this study hence corroborated the findings of Wantara and Prasetyo (2023), who indicated that integrated marketing communications significantly influenced the satisfaction of tourists visiting natural tourism sites at Sampang Regency, Indonesia. This was strongly supported statistically via a path coefficient of 0.812, t-value 89.927, and p-value <0.001. More accurate marketing messages create consumer responses that boost visitor satisfaction as well. The clearer and more precise any marketing communications are, then favourably will the client respond with heightened satisfaction. It is, therefore, most useful to maintain coherence and uniformity of communications across various channels.

The findings of the study also validated significant effects of customer expectations on customer satisfaction. The results indicate that a customer's performance, goods, or quality of services delivered by his bank play a significant part in deciding whether he will be happy with his actual banking experience or not. These results support the findings made by Almsalam in 2014, that consumer expectations positively influence customer satisfaction. This is because failure to meet or overtake the expectations of consumers leads to dissatisfaction as well as loss of clients; therefore, marketers need to know these expectations in advance. For instance, adequate information on what customers expect will help the bank fill effectively the gaps between the service performance and customer expectation (Almsalam, 2014). The study findings also align with those of Ofosu-Boateng and Agyei (2020), who found out that consumer expectations have a very strong influence on customer satisfaction. They posit that managing expectations is key to achieving a high level of customer satisfaction, and that expectations of customers are an important factor in the satisfaction

The study findings also indicated that the relationship between customer happiness and strategic integrated marketing communication is partially and strongly mediated by customer expectations. This finding agrees with Fu et al. (2020) who noted that pre-usage expectations have an indirect effect on customer satisfaction through confirmation. They argue that in this case, confirmation is influenced by the customer's original expectation as well as perceived performance after usage. This finding also supports Habel et al., (2016) who noted that service expectations have an indirect positive effect on perceived performance (via a placebo effect) as well as a direct negative effect on satisfaction (via disconfirmation). The indirect effect is less salient when consumers process information systematically. The findings of this study corroborate the assertions made by Yi and La (2004) that it is adjusted expectations which mediate the relationship between customer satisfaction and repurchase intention. Since future intentions are more influenced by episodic events and recent transactional experiences in the minds of non-loyal customers, this mediation will most probably be more significant for them.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study implemented a careful probing of the complex links between SIMC and customer satisfaction in the Ghanaian banking sector, giving particular attention to the mediating effect of customer expectation. Results compellingly prove that strategic integrated marketing communication plays an important role in driving both customer expectations and satisfaction within the African banking environment. The research clearly indicates that strategic integrated marketing communication positively influences customer expectation, showing that banks using coordinated consistent messaging through different channels raise customer expectation about service quality as well as the overall bank experience. This finding brings to light how powerful well-planned communication strategies are in forming perceptions and setting performance benchmarks against which relationships with banks will be judged. It also verified the direct positive relationship between strategic integrated marketing communication and customer satisfaction which underscores that banks who deploy broad IMC strategies are essentially better at delivering satisfying experiences to customers. This goes beyond just being more effective at marketing to the development of meaningful long-term relationships with customers which is very important for competitive advantage in the banking sector. The results, therefore, bring out strongly the role that customer expectations play in determining satisfaction. The finding above sits well with what has been offered regarding the importance of managing customer expectations as a part of overall holistic management of customer relationships in banking. Perhaps more importantly, it confirmed customer expectation as a partial yet significant mediator between strategic integrated marketing communication and customer satisfaction. These findings shed light on the mechanism of SIMC's influence on satisfaction, not only by its direct effect but more importantly by an intervening variable that first affects customer expectations and then their resultant satisfaction.

5.2 Recommendations

Strategic Integrated Marketing Communication (SIMC) frameworks should be tailored so that message consistency is well articulated at the level of customer touchpoints, harmonizing digital platform alignments, branch communications, and advertising campaigns as well as interactions through unified brand experiences for all banks in Ghana and other financial institutions in Africa. The program incorporates expectation management programs with standards setting compelling but realistic by establishing transparent communication of service, product, and delivery time to the customers about what they will be receiving. Such a relationship monitoring system that would measure

respondent feedback sessions as well as focus groups can further enhance the strengthening of customer relationships in the application of improved Strategic Integrated Marketing Communication (SIMC) strategies with its results used for fine-tuning the present systems. Training integrated communication strategy for customer-facing staff has to be trained throughout an institution on how to maintain consistency. Also, using new customer relationship management (CRM) systems and marketing automation tools will join channel talk and give clues about what customers are thinking. In the end, groups should check their talk plans often to make sure message steadiness and fit across different stages. When done in a set way, these tips can help Ghana banks and other African money groups make the best use of planned joined marketing talk, boost customer happiness, and finally build trust and long-term profit.

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The influence of social media platforms in promoting self-employment opportunities among university graduates in Tanzania

Wiljames Daniel Mmari¹

¹jamesdaniel0755@gmail.com

¹Institute of Accountancy Arusha (IAA), Tanzania

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ABSTRACT

Graduate unemployment in Tanzania remains a persistent challenge, with many degree holders facing limited formal job opportunities and underemployment. In response, university graduates are increasingly turning to social media platforms as accessible avenues for generating income, marketing products, and building entrepreneurial networks. This study investigates the influence of social media platforms, specifically Facebook, Instagram, TikTok, and WhatsApp, on promoting self-employment opportunities among university graduates in Tanzania. Based on the Social Capital Theory, a quantitative research design was employed, targeting a population of 300 self-employed bachelor graduates, from which a sample of 171 respondents was selected using convenience sampling. Data were collected through structured questionnaires and analysed using descriptive statistics and linear regression in SPSS version 26. Linear regression analysis ($n=171$) showed that social media platforms had a significant positive impact on self-employment among university graduates ($B=0.331$, $t=7.465$, $p<0.001$). The standardised coefficient ($Beta=0.498$) indicated a moderate to strong relationship, suggesting that increased use of social media platforms enhances self-employment opportunities. The study concluded that social media is a key tool for graduate entrepreneurship, reducing entry barriers and enhancing innovation and networking. Based on these results, it is recommended that universities provide practical digital marketing and social media training, government agencies support online business initiatives, and graduates actively engage with digital platforms to strengthen their entrepreneurial outcomes.

Key words: Social Media Platforms, Self-Employment, Tanzania, University Graduates

I. INTRODUCTION

University graduates gradually turn to social media platforms as a practical avenue for creating livelihoods and testing business ideas, because these platforms lower entry costs, widen market reach and enable rapid skills-learning, personal branding and direct customer engagement (Obimgbo, *et al.*, 2022; Ajjola, 2025). The problem of graduate unemployment persists and a growing creator and gig economy in which platforms (Instagram, Facebook, TikTok and LinkedIn) act as both market places and infrastructure for monetisation, networking and visibility (Obimgbo, *et al.*, 2022). At the same time, higher-education efforts to embed digital-entrepreneurship training show social media can mediate students' entrepreneurial intention and practical uptake of self-employment pathways, but outcomes depend on digital skills, platform algorithms and access to data/finance (Vincent & Ralston, 2024).

In many high-income economies the graduate problem is less a simple lack of jobs than mismatch and unwarranted entry into the labour market (Syzdykova *et al.*, 2022). For example, recent-graduate unemployment in the United States rose above historical lows during 2024, around 4.8% for recent graduates in some analyses, even as degree-holders continue to earn considerably more on average than non-graduates (Xia, 2024). The United Kingdom likewise reports a gradual rise in graduate unemployment whereby, graduate unemployment rose around 6% in the latest Universities UK figures (Vincent & Ralston, 2024; Xia, 2024), and Germany's wider unemployment picture for adults remains low of around 3% - 4% (Xia, 2024). These figures show that even in developed economies a not-insignificant share of graduates face delayed, under- or unwarranted employment; a problem that has driven many graduates to consider self-employment as alternative route.

Across Africa the situation is severe and more varied whereby in Nigeria's labour surveys have reported 8% of unemployment among those with post-secondary, while Kenya's youth unemployment indicators have hung around double-digit levels whereby reports in 2023 - 24 put youth unemployment near 11 - 12%. South Africa recorded elevated graduate unemployment in recent quarterly surveys, with graduate unemployment estimates in the high single digits in late 2024 (Bako, 2022; Ezaki & Ogawa, 2024). However, Tanzanian graduates the focus users of this study face comparable challenges, with increasing numbers of educated youth struggling to transition from higher education into sustainable self-employment or formal work opportunities. This continental trend highlights the urgency of examining



how ICT and social media platforms can help Tanzanian graduates overcome unemployment barriers and engage in meaningful self-employment. At the same time, a growing body of research and policy observation argues that social and digital platforms are already creating alternative livelihoods whereby, social-media marketing, digital content and platform-based sales have become practical channels for young Africans to start micro-enterprises, reach customers beyond local markets, and monetize skills without formal hiring (Ezaki & Ogawa, 2024; Okoli & Obasi, 2025). Thus, high unemployment coexists with rapid digital opportunities. In Tanzania the problem is worse as official series show relatively low aggregate unemployment whereby, annual series around 2.6 - 3.3% in 2023 - 24, but those headline numbers mask widespread informal work, under-employment and a 14% individuals are not in education, employment or training, share reported in recent labour-market profiles (Wambura, 2024). Research on Tanzanian graduates repeatedly flags skills-mismatch and the tendency for many degree-holders to end up in informal or low-paid self-employment rather than quality formal jobs (Kiswaga, 2021). At the same time, uptake of WhatsApp, Facebook, Tiktok and Instagram for business is high in Tanzania and few studies of local SMEs and youth programmes show that digital marketing such as online shops and digital-skills initiatives have helped some graduates generate income and scale micro-businesses, even as regulatory controls and limited digital business training remain constraints in places (Swallehe, 2021; Almasi *et al.*, 2023).

1.1 Statement of the Problem

Despite global evidence that social media platforms can expand entrepreneurial opportunities and act as low-cost path for business start-ups, there remains limited empirical knowledge of how these platforms specifically shape self-employment pathways for university graduates in Tanzania. While studies highlight the growing use of social popular social media such as Instagram, Facebook, TikTok and WhatsApp for small business promotion and customer engagement (Swallehe, 2021; Almasi *et al.*, 2023), most research has concentrated on SMEs in general rather than graduate livelihoods. Yet, Tanzanian labour-market data consistently reveal high levels of under-employment and skills mismatch among graduates, with many pushed into informal or low-paid self-employment due to limited access to formal jobs (Kiswaga, 2021; Wambura, 2024).

Although policy commentaries emphasise digital-skills training and the rise of the creator economy as potential remedies (Obimbo *et al.*, 2022; Vincent & Ralston, 2024), there is limited systematic analysis of whether and how social media platforms effectively promote sustainable graduate self-employment within the Tanzanian context, particularly given obstacles such as digital literacy gaps and limited access to finance. This study therefore sought to fill that gap by assessing the influence of social media platforms namely Facebook, TikTok, Instagram and WhatsApp in promoting self-employment opportunities among university graduates in Tanzania.

1.2 Research Hypothesis

H_{01} : Social media platforms have no significant influence on promoting self-employment opportunities among university graduates in Tanzania.

II. LITERATURE REVIEW

2.1 Theoretical Review

Social Capital Theory was used in the study. Social capital was initially introduced by Pierre Bourdieu in 1986 as a unique type of capital, which was later explained by James Coleman in 1988 in relation to educational success and popularized in the context of the civic sphere by Robert Putnam in 1993 (Thomas & Gupta, 2021). The theory puts forward that long-term web of social connections and norms of reciprocity and mutual trust forms the kind of resource that individuals and groups can utilize to gain benefits (Kreuter & Lezin, 2002). Some of the key assumptions include that social ties are purposive and convertible; that joint norms and trust reduce the cost of co-operation and allow collective action; that the quality and quantity of social capital may be observed in terms of network density and reciprocity; and that social capital is uncertain, since it helps to include and benefit insiders but may also hinder outsiders (Claridge, 2018).

The Social Capital Theory was very applicable in this study because it is influential in how relationships, networks and trust developed in the course of social interactions brings about economic and social progress. In this study, social media networks are contemporary forms of building and enhancing the social capital among university graduates. By the virtue of online networks, graduates can exchange information, business prospects, and market knowledge that ensure the growth of their self-employment opportunities. The theory encourages people to believe that through the stronger relations that they have with others online communities, they can utilize their social ties to build and develop their entrepreneurial projects. Therefore, the application of social media applications is a demonstration of how online networks help as a beneficial social capital that graduates can use to attain self-reliance and business sustainability in the changing economy in the Republic of Tanzania.



2.2 Empirical Review

Plotnikov *et al.* (2022) examined factors influencing the digitalization development of self-employment as an integral indicator that can affect the sustainability of self-employment. The study employed topological method based on the polymerase chain reaction method, as well as the model based on fuzzy sets theory. The data were collected through a survey posted on Google Forms. The respondents were experts in the self-employment sector. The findings indicated that digital competencies, access to digital infrastructure, and government support programs were the most significant drivers of digitalization among self-employed individuals. The study concluded that while digitalization in self-employment is progressing steadily, enhancing digital literacy and expanding technological access are essential to achieving higher levels of sustainability and competitiveness in this sector.

Conversely, Emmanuel *et al.* (2022) surveyed 241 female university students in China through technology acceptance model (TAM) framework and structural equation modelling. Their findings indicated that social-influence, perceived ease-of-use, enjoyment and perceived-usefulness of social-media all had a significant relation to entrepreneurial intentions, which gives high potential to social-media-based ventures in women. They however warned that the findings might not be generalizable as their data was obtained in one country and in one gender. This leaves a gap because little has been done to understand the role of social media platforms in attracting entrepreneurial opportunities to a more diverse group of graduates, particularly in the African setting. This is a loophole since the role of social media platforms in facilitating entrepreneurial opportunities among a more diversified pool of graduates, particularly in the African setting, has not been explored fully.

Adjotor and Dadzie (2025) conducted the study on the dynamic transformation ignited by social media within Ghana's business landscape of Small and Medium Enterprises (SMEs). A mixed-methods approach was employed, combining quantitative data from 127 youth-owned online enterprises and qualitative insights from 15 in-depth interviews with purposively selected entrepreneurs. Quantitative data was analyzed using descriptive statistics, correlation, and regression analysis via STATA 17, while qualitative data underwent thematic analysis. Findings from the quantitative analysis revealed that financial limitations, difficulty accessing credit, and regulatory restrictions significantly influence youth participation in social media businesses. While the qualitative analyses also evident that content marketing and audience engagement were the most utilized communication strategies. This study advocates for a comprehensive re-evaluation of business regulations that seamlessly accommodates both online and hybrid social media models.

Raphael (2022) conducted a study in Tanzania surveying graduates of technical higher education institutions to assess how their digital skills relate to self-employment. Using a stratified random sample of 500 graduates and chi-square analysis, he ranked the digital skills (basic, intermediate, advanced) that students acquired and found which were most useful for self-employment. The study showed that while most graduates had basic digital competencies, they lacked advanced skills (e.g. digital marketing and entrepreneurship), although all categories of digital skills were positively and significantly associated with self-employment status. Raphael concludes that universities should emphatically inculcate all levels of digital skills because they matter for graduates' self-employment. Nevertheless, Raphael did not focus specifically on how social media platforms themselves contribute to graduate self-employment, leaving a gap that the present study addresses.

Moreover, Manyerere (2021) in Tanzania qualitatively explored social media's role in facilitating income-generating activities for youth in Dar es Salaam. He conducted 46 in-depth interviews with youth entrepreneurs, community members, local officials, and analysed them with NVivo. His findings revealed that youth who effectively leverage social media in their daily businesses indeed strengthen their economic undertakings and feel more empowered, because social media accelerates the flow of information between them and customers. At the same time, he noted downsides whereby, some youths misused social media or simply could not afford access to smartphones and or internet, limiting the benefits. Based on these results, Manyerere recommends mobilizing and training connected youth to emulate successful social-media entrepreneurs. However, this study included youth in general rather than specifically university graduates, hence overlooking how higher education graduates in Tanzania uniquely leverage social media for self-employment.

III. METHODOLOGY

3.1 Description of Study Area

Tanzania was an appropriate study area because it combines a very large youth population with rapidly expanding internet access, making digital platforms highly relevant to graduate livelihoods. Selecting an appropriate study area is essential to ensure that the research context aligns with the objectives of examining digital and youth employment dynamics. Tanzania was therefore chosen because it combines a very large youth population with rapidly expanding internet access, making digital platforms highly relevant to graduate livelihoods. The country's age structure remains youthful with a large share of the population is under 25 and the median age is roughly 17–18 years, which

concentrates the research focus on young adults and recent graduates who are the main users of social media, *National Bureau of Statistics* [NBS], 2022). From a digital-access perspective, Tanzania has seen fast growth in both internet and social-media adoption in recent years as there were about 20.2 million internet users and internet penetration was reported at roughly 21.9% in early 2025, while reports estimate roughly 6.75 million active social-media user identities in January 2025 (Manyerere, 2025). These figures, showing that higher-education students routinely use social platforms for information exchange and informal business activity provided a scientific justification for studying how social media may promote self-employment among university graduates in Tanzania.

3.2 Targeted Population

The targeted population for this study comprises 300 youth self-employed bachelor graduates in Tanzania. This group is suitable because bachelor graduates represent the segment most affected by limited formal job opportunities, with graduate unemployment estimated at over 30% in recent years. At the same time, Tanzanian youth are among the most active users of social media, with more than 6.7 million social media accounts recorded in 2025, indicating that online platforms are increasingly integrated into their daily and economic activities. Focusing on self-employed graduates therefore provides a scientifically justified lens to understand how social media is being utilised to generate livelihoods in the face of constrained labour markets.

3.3 Sample Size and Sampling Techniques

The sample size was determined using the formula below, which is adopted from Slovin (1960).

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{300}{1 + 300(0.05)^2}$$

$$n = 171$$

Where:

n = sample size

N = Population of study

e = Error estimate (5%)

This formula above was used to calculate a representative sample from the total population of respondents to ensure the reliability and validity of the findings. Therefore, the study employed a total of 171 self-employed graduates from different universities in Tanzania.

This study employed convenience sampling to select respondents, as it allowed easy access to youth university graduates who are already engaged in self-employment activities. The method was scientifically justified because the target group is scattered and not formally registered, making it difficult to obtain a complete sampling frame; thus, convenience sampling provided a practical means of reaching participants who were readily available and willing to participate. In practice, respondents were identified through youth business groups and online platforms where self-employed graduates promote their products or services, ensuring that the sample reflected the study's focus while remaining manageable within the available time and resources.

3.4 Data Collection Instruments

The study utilized a questionnaire method for data collection, employing a closed-ended questionnaire format. The questions were designed with predetermined response options, specifically using a 5-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree." This format streamlined data collection by offering respondent's clear specific choices, making it easier to respond and enhancing the efficiency of data analysis. The use of closed-ended questions with a standardized response scale ensures consistency across participants and facilitated straightforward quantitative analysis.

3.5 Measurement of the Variables

To ensure clarity and consistency in data collection, the study measured both the independent and dependent variables using specific indicators. Each variable was operationalised through observable items that capture its key aspects. The variables measurements and its indicators are summarized in Table 1.



Table 1

Measurement of the Variables

Variable	Measurements	Measurement Scale	Source
Independent Variable			
Social Media Platforms (SM)	SM1: Platforms access SM2: Platforms usage SM3: Marketing reach SM4: Networking support SM5: Digital skills	5-point Likert scale	Khalili <i>et al.</i> (2023); Raphael (2022)
Dependent Variable			
Self-Employment Among University Graduates (SE)	SE1: Income growth SE2: Business sustainability SE3: Customer engagement SE4: Entrepreneurial intention SE5: Job creation	5-point Likert scale	Khalili <i>et al.</i> (2023);

3.6 Data Analysis

The study utilized descriptive statistics and linear regression analysis through Statistical Package for the Social Sciences (SPSS) version 26 to analyse the quantitative data. Descriptive statistics was used to provide an overview of key variables. This helped to identify patterns and trends in the data. Linear regression analysis then employed to assess the strength and nature of the relationships between the independent variable and the dependent variable. The following Linear regression model was used in determination of coefficients of the independent variables in relation to the dependent variable:

$$SE = \beta_0 + \beta_1 SM + \varepsilon$$

Whereby:

SE = Self Employment Among University Graduates

SM = Social Media Platforms

β_0 = Constant factor

β_1 = Respective coefficients

ε = Random variable.

3.7 Validity and Reliability

3.7.1 Validity Test

Validity test was conducted using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett’s Test of Sphericity on the questionnaires administered to youth self-employed graduates. The KMO value of 0.895 indicates excellent sampling adequacy, suggesting that the data were highly suitable for analysis. Similarly, Bartlett’s Test of Sphericity was significant ($\chi^2 = 1945.517$, $df = 91$, $p < 0.001$), confirming that the correlation matrix was not an identity matrix and that the variables were sufficiently interrelated to justify further analysis as shown in the Table 2. These results imply that the questionnaire items were valid and appropriately structured for assessing the influence of social media platforms on promoting self-employment opportunities among university graduates in Tanzania.

Table 2

KMO and Bartlett's Test Results (n = 171)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.895
Bartlett's Test of Sphericity	Approx. Chi-Square	1945.517
	df	91
	Sig.	.000

3.7.2 Reliability Test

A scale tests for reliability analysis was used to generate Cronbach’s alpha from each of the construct’s measurement scale. A scale was judged to be reliably measuring its underlying construct if its Cronbach’s alpha is equal or higher than 0.7. The results as shown in the Table 3 show that all measurements scales exhibited acceptable reliability.

**Table 3***Reliability Test Results (n = 171)*

Variable	No. of Items	Cronbach's Alpha	Remarks
1. Social Media Platforms	8	.960	Excellent
2. Self-Employment Among University Graduates	6	.767	Reliable

IV. FINDINGS & DISCUSSION

4.1 Descriptive Statistics

This section presents the descriptive statistics of the study variables, focusing on the independent variable which is social media platforms as presented in Table 4, and the dependent variable as presented in Table 5 which is self-employment among university graduates. The analysis provides an overview of respondents' perceptions by examining the mean and standard deviation for each indicator, which helps to understand the general trends and consistency of responses.

Table 4*Descriptive Statistics Results on Independent Variable (Social Media Platforms) (n = 171)*

Indicators	Mean	Std. Dev.
I have easy access to social media platforms (Facebook, TikTok, WhatsApp)	3.65	1.150
I regularly use social media platforms to support my self-employment activities.	3.66	1.064
I actively post content about my business on social media platforms.	3.68	1.033
I frequently interact with potential customers via social media platforms.	3.72	1.123
Social media platforms help me reach more customers for my business.	3.79	1.069
Social media platforms help me connect with other entrepreneurs for advice or collaboration.	3.60	1.124
I have established useful business contacts through social media platforms.	3.57	1.106
I have the necessary skills to effectively use social media platforms for business purposes.	3.57	1.143

Results from Table 4 indicate that the respondents tended to agree that they can easily access social media platforms with the mean of 3.65 showing that their business is not significantly hindered by the accessibility of social media. This implies that the few internet service providers and smartphone usage have allowed graduates to venture into online businesses with increased ease. The findings also demonstrate that graduates have used social media networks frequently to aid in their self-employment with an average score of 3.66 which demonstrates regular involvement in business activities on online platforms. At the same time, posting business content means an average of 3.68 giving a positive indication that graduates are utilizing such platforms to market their products or services, and this increases their chances of being seen by their target customers.

The interaction with the potential customers also generally had a high mean of 3.72 showing that social media has been used as a good communication and feedback channel by graduates. Moreover, the average 3.79 to reach more people means that social media is a ready marketing strategy, and the graduates will increase the reach of their business beyond local scopes. On the other hand, the results show that graduates rely on social media to network with fellow entrepreneurs ($M = 3.60$) and to make helpful business contacts ($M = 3.57$), and thus, the sites are useful in building valuable network of people. Nevertheless, the average value of 3.57 in sufficient skills indicates that people have moderate competence in digital technology, which presupposes the necessity of training in order to extract the maximum business gains on the social media utilization.

Table 5*Descriptive Statistics Results on Dependent Variable (Self-Employment among University Graduates) (n = 171)*

Indicators	Mean	Std. Dev.
Social media has contributed positively to my business revenue.	4.02	1.037
My business operations are more sustainable due to social media engagement.	4.16	.938
Social media allows me to respond quickly to customer inquiries and feedback.	3.55	1.075
I receive regular customer interaction and support through social media.	3.82	.838
Social media encourages me to expand my entrepreneurial activities.	3.99	.815
My business has created employment opportunities for others because of social media promotion.	3.73	.999

The findings from Table 5 have shown that the graduates were in strong agreement that social media has a positive implication on their business revenue with a mean of 4.02 and it is evident that online engagement directly



affects the financial performance. Equally, the mean of 4.16 of business sustainability is high implying that constant use of social media assists graduates to sustain their operations and keep up with fluctuating market needs. The findings also indicate that the option of social media facilitates a rapid reply to customer responses as indicated by a mean of 3.55, which means that the graduates are utilizing the media to improve customer service and satisfaction. Besides, the average of 3.82 in terms of regular customer interaction shows that social media assist businesses in sustaining good relations with their clients, which is crucial in the retention and establishment of trust with the clients.

Further, the results indicate that social media promotes entrepreneurial activities among the graduates as the mean of 3.99 indicates that the platform acts as a business growth and innovation inspiration. The average of 3.73 on job creation shows that some of the businesses owned by the graduates have expanded to a level of hiring other people implying that social media is not only good at helping to create self-employment, but also at promoting the creation of jobs in the economy at large.

4.2 Hypothesis Testing

This section presents the results of hypothesis testing using linear regression analysis to examine the relationship between social media platforms and self-employment among university graduates. The analysis tests whether social media platforms significantly influence the promotion of self-employment opportunities, thereby providing evidence to accept or reject the stated hypothesis. The results are summarized in the table 6.

Table 6

Linear Regression Analysis Results (n = 171)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.667	.168		15.880	.000
	Social media platforms	.331	.044	.498	7.465	.000

a. Dependent Variable: Self-employment among university graduates

The results of the linear regression analysis in the Table 6 indicate that there is a positive and statistically significant impact of social media sites on self-employment of university graduates ($B = 0.331$, $t = 7.465$, $p = 0.001$). The standardised coefficient ($Beta = 0.498$) points to a moderate to strong correlation which implies the existence of higher degree of self-employment engagement with the increased usage of social media platforms. Such findings suggest that social media is a critical facilitator of graduates in the process of generating and increasing entrepreneurial opportunities and this aspect explains the rejection of the null hypothesis and acceptance of the significant impact of digital platforms in encouraging self-employment in Tanzania.

4.3 Discussion

The results of this research are similar to those of Plotnikov *et al.* (2022), who developed the idea that digital competencies and access to digital infrastructure were significant contributors to sustainable self-employment. On the same note, the current findings indicate that graduates use social media tools well to boost business performance and sustainability as indicated by descriptive statistics. The regression findings further confirm the finding of Plotnikov *et al.* that digitalisation, especially social media, is important in stimulating self-employment. This agreement supports the need to enhance the use of digital skills and access to technology to maintain graduate entrepreneurship.

These results are also similar to the findings of Emmanuel *et al.* (2022) who discovered that the social influence, perceived usefulness and ease of use of social media are significant factors contributing to entrepreneurial intentions. The descriptive findings of the present research show that graduates regularly use and perceive the social media as an important tool for businesses and communication with customers, which means that the positive attitude towards social media are converted into positive use of social media in business. Similarly, the result of regression supports the fact that social media use has a significant relationship with self-employment and thus the findings of Emmanuel *et al.* can be induced into the real business performance of Tanzanian graduates as opposed to entrepreneurial intention.

The findings are also in line with the findings of Adjotor and Dadzie (2025) and Manyerere (2021) who both emphasized the fact that social media has the potential to get more business connections and care about more customers. The results of this study, which indicate that the graduates utilize social media to network and communicate with customers have confirmed the previous findings, that these platforms contribute to connectivity and interaction that is important in business development. Likewise, the findings affirm the claim by Raphael (2022) that digital abilities are important in self-employment as it indicates that even the moderately digital competent graduates can gain advantages of using social media, albeit with additional training.



V. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study confirms that social networking networks is a major facilitator in self-employment among higher education graduates in Tanzania. These platforms have also been vital in providing graduates with viable means to survive on sustainable livelihoods through providing cheap marketing avenues, customer interaction and access to business information at the time when formal jobs are scarce. They have made them quite essential and a part of entrepreneurial success by increasing visibility, expanding networks, and promoting innovation. This points to the necessity of providing more assistance in the area of digital literacy and online business skills so that more graduates can be empowered to work towards personal sustainability and economic empowerment by way of social media.

5.2 Recommendations

Based on the drawn conclusions, it is recommended that the of higher learning institutions consider having real world training in digital marketing and social media entrepreneurship training in their curriculum so that the students can be equipped to use the online media for their benefit. The government agencies and policy makers are required to work towards the efforts of providing grants or incentives to the online businesses. The graduates themselves also needs to play an active role in the work with different platforms, continuously enhancing the quality of work with digital devices, and utilize the best examples of managing business online to achieve maximum benefits of social media to self-employment.

Declaration of AI use

Artificial intelligence tool was used solely for editing and refining the language of this work. Whereby, Quillbot was used to improve clarity and grammatical accuracy.

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Assessment of the frequency of disaster emergencies in Kenya's lake region economic bloc

Mourine K. Lidava^{1*}
Ferdinand Nabiswa²
Josephine Ochiel³

^{1*}mourinelidava@gmail.com

^{1,2,3}Masinde Muliro University of Science and Technology (MMUST), Kenya

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ABSTRACT

The United Nations Office for Disaster Risk Reduction noted that the world faces almost twice as many disasters as in the 1980s. While authorities in the Lake Region Economic Bloc [LREB] have introduced disaster response measures, the persistence of these disasters points to gaps in understanding disaster trends for stronger emergency management. The purpose of the study was to assess the frequency of disaster emergencies in Kenya's Lake Region Economic Bloc. This study was guided by disaster risk theory. The study utilized an explanatory research design. The target population was derived from 3 Lake Region counties (Busai, Kisumu, and Nandi), from which a study sample of 384 respondents was picked. The sampling strategy included multi-stage, proportionate, simple random, and purposive. Primary data was collected using questionnaires, key informant interviews, and focus group discussion guides, while secondary sources consisted of annual reports, books, and policy briefs. Data analysis was through descriptive statistics using SPSS version 20 and Excel. Results are presented in tables. Findings revealed 92%, 86%, 85%, 78%, 77%, and 60% were in agreement that floods, disease outbreaks, road traffic accidents, drought, fire outbreaks, and landslides, respectively, were frequent in the study area. This study concluded that a wide range of disasters were frequent in the study area, with floods leading. The study recommends that there is a need to take a more people-centered approach to disaster risk reduction by putting stronger systems in place to manage the most frequent disasters. The findings are intended to sensitize the community and inform policy strengthening on community emergency in the study area.

Key words: Disasters, Emergencies, Frequency, Lake Region Economic Bloc

I. INTRODUCTION

In the past decades, disasters occurrence and recurrences have increased in temporal and spatial scales in the world. What were once rare in occurrence and frequency have now become familiar part of daily experiences. These are mostly triggered by a complex mix of natural forces, technological risks, human choices and behaviors. According to the United Nations Office for Disaster Risk Reduction (UNDRR, 2023), the world is now experiencing nearly twice as many disasters as it did in the 1980s. This increase is no accident and is largely the result of climate change, rapid urbanization, bulging populations in high-risk and vulnerable areas, and weak disaster preparedness and response systems. Weather-related disasters floods, droughts, cyclones, wildfires and heat waves have dominated the scene, accounting for more than 90 percent of the calamities recorded each year in the world (Gould *et al.*, 2016). Across Africa, the patterns have become more evident and clearer on temporal and special scales. For instance, the Horn of Africa continues to battle persistent droughts while Southern Africa have continued to experience destructive cyclones almost on annual basis. West and Central Africa have not been spared too and are struggling to recover from recurring floods and diseases exacerbated by climate change such as malaria and cholera occurrences (UNDRR, 2019).

According to Intergovernmental Authority on Development (IGAD, 2022), droughts in East Africa have become three times more frequent over the last thirty years. This is evident with droughts in Kenya, Ethiopia, and Somalia recurring every three to five years, while floods are expected nearly every rainy season such as the March April May [MAM] in the countries within the East Africa. From such occurrence and recurrences, the consequences have become more devastating to communities that have continued to bear losses of crops and livestock in their farms (World Bank, 2021). In addition, families have continuously been displaced, lives have been lost, infrastructure, and other properties have been destroyed while extending to overall loss of the economies in the majority of East African Countries which form part of the Lake Victoria basin.

Kenya's case is no mean different as evidenced through data from the National Disaster Operations Centre (NDOC, 2021) that identified floods and droughts as the country's most frequent hazards leading to disaster emergencies, often occurring within the same calendar year. According to NDOC (2021), presently droughts affect at



least 23 Arid and Semi-Arid Lands [ASAL] counties annually, while flash floods in the flood prone areas such as Nyando, Budalangi, Tana River, Samburu routinely destroy homes, roads, and farmlands. Layered onto this are wildfires, disease outbreaks, and resource-based conflicts all amplifying the nation's exposure to risk. In addition, there have been also an increasing occurrence of technological disasters such as building collapse and road traffic accidents. These are also closely related to climate changes that have increased the vulnerabilities on such infrastructures leading to loss of lives and destruction of properties in Kenya. Similarly, fire outbreaks and conflicts have also characterized the Kenya mainly in boarding schools and along the borders such as between Kisumu - Nandi, Kakamega – Nandi respectively.

1.1 Statement of the problem

The Lake Region Economic Bloc (LREB) of Kenya, which brings together fourteen counties around Lake Victoria, is increasingly facing repeated disasters ranging from floods, landslides, and droughts to epidemics and human-induced crises. These shocks do more than claim lives they disrupt people's daily livelihoods, destroy infrastructure, force families from their homes, and slow down socio-economic progress in an area heavily reliant on agriculture, fishing, and trade. Recurring floods along rivers such as Nyando and Nzoia, outbreaks of waterborne diseases like cholera, and the growing threat of climate-related hazards have deepened the vulnerability of communities already struggling with poverty and marginalization (World Bank, 2020). While county governments within the LREB have introduced disaster response measures, the persistence and even increase of these disasters point to gaps in current approaches and make clear the urgent need to better understand disaster trends and patterns as a basis for stronger policies and resilience strategies.

Over the years, studies in Kenya have grown, but much of it has focused on single hazards such as droughts or floods or on national-level policies, leaving little attention to specific regional blocs like the LREB (Munene, 2022; UNDRR, 2019). Many studies also take a generalized view, overlooking the differences in how disasters play out across regions and over time (Zhou & Zhai 2023). Research on the Lake Victoria Basin has mostly emphasized issues such as environmental degradation and climate variability, but has rarely combined these with a broader multi-hazard perspective that captures how natural and human-induced disasters intersect (Masese *et al.*, 2025). This gap makes it important to undertake a focused study on the frequency of Disasters in the Lake Region Economic Bloc of Kenya. Such research would provide much-needed localized evidence and help strengthen regional cooperation in building preparedness, mitigation, and effective response systems.

1.2 Research Objective

The objective of the study was to assess the frequency of disasters frequencies in the counties within the Lake region bloc of Kenya

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Disaster Risk Theory

In efforts to enhance better understanding of the occurrence and recurrence of potentially harmful hazards within the Lake region economic bloc of Kenya, the theory of disaster risk was employed. According to this theory, there exists a nexus between hazards, vulnerabilities with considerations of the capacities that exist in a given community that is susceptible to the risks of losses and damages. These three factors are well illustrated using Pressure and release model. According to Blaikie *et al.* (1994) using Pressure and Release (PAR) model, disasters are not natural rather, disasters occur when natural hazards exist in an environment with increased degree of susceptibility of social, physical, economic, institutionally and environmental nature. In this regard, the higher the susceptibility, the higher the chances of occurrence and recurrence leading to high frequency of a given disasters emergencies in a given location and time. For example, Burton *et al.* (1993) through the Risk-Hazard framework highlighted that locations with repeated flooding, landslides, fire, technological accidents and disease outbreaks such as the LREB are subjected to increased risks because environmental hazards keep colliding with ongoing socio-economic pressures.

2.2 Empirical Review

Focusing on the year 2023, the EM-DAT database indicated that approximately 399 natural-hazard related disasters occurred on the global scale hence leading to 86,473 deaths, destabilizing 93.1 million people, and causing US\$202.7 billion in losses economically. This pointed out that there have been a year-to-year totals rise and fall, and some long-term increase reflects better reporting. In addition, UNDRR assessments indicated that environments becoming more dangerous especially from heat, drought, and coastal hazards that have increased risks on the growth

and development for years by governments (UNDRR, 2024). Fatalities have also increased in single bad years as with the 2023 Türkiye–Syria earthquakes even if the overall number of events is not at a peak (UNDRR, 2024).

In African region, studies show that disasters are mainly as associated to the changes in climate, with indicators such as floods and droughts setting the pace as climate variability. An Africa Risk Capacity analysis using EM-DAT (2000–2023) found that climate related such as intensive rains, heat stress and dry spell events make up the majority of disasters in 29 countries, and multi-country flood years have become more common since the mid-2000s; drought remains an often occurrence in the Sahel and the Horn (ARC, 2024). UNDRR’s 2023/2024 reviews show these hazards have over the years exacerbated food insecurity, lack of jobs, and affected education hence amplifying their societal negative impact.

At the local scale, Kenya has also over the years experienced recurring and persistent drought and flood in subsequent seasons annually. These have equally triggered, destabilize social and economic systems and infrastructures hence increased risks of disasters occurrence and emergencies. World Bank estimated that about 70% of Kenya’s natural disasters are climate-related (World Bank, 2021). After a multi-season drought (2014–2023), intense 2023–2024/25 rains associated with El Niño–IOD brought deadly floods, large-scale displacement, and sharp month-to-month volatility in impacts socially and economically. National Drought Management Authority County (NDMAC) bulletins confirms these shifts, while government and media reports in 2024 cited over 180 flood deaths during peak periods in MAM Seasons for floods and DJF for drought episodes (NDMA, 2024). These experiences of the climate related hazards occurrence coupled with the pre-existing conditions subjecting the country to increased susceptibility, frequent, climate-linked emergencies have also increased.

III. METHODOLOGY

3.1 Study Area

This study was conducted in the Lake Region Economic Bloc. This region is found within the Lake Victoria basin. The region lies between latitudes 10 16’ N and 10 54’ S and longitudes 330 55’ and 350 51’ E and the equator passes across the region.

3.2 Research Design

This study employed an explanatory sequential mixed method design whose thrust was to assess how often various hazards recur within lake-region economic bloc counties such as Kisumu, Busia and Nandi. According to Creswell and Plano (2018), this design is two phased where a researcher collects quantitative data and analyses then elaborate the results with qualitative information from the Key informants and group discussions. In this respect, the study design was used with respect to need of the study that was to first quantify how often the disasters occur in the study area then a follow up be made in relation to the opinion of other stakeholders and interested authorities in the study area based on their experiences and knowledge of occurrence and recurrence of the disasters. This design therefore ensured that the numerical findings are not isolated in the study but proper triangulation is done to exhaustively leverage conclusion and for better recommendation.

3.3 Target Population

The study target population consisted of responders from three Counties namely Kisumu, Busia and Nandi. The emergency responders were the main respondents in acquiring primary data as they were most involved in the disaster response and most of them were volunteers right from the communities with historical experiences of the disasters in those counties.

3.4 Sampling techniques and sample size

A sample size of 384 was sampled using multistage sampling techniques from the larger Lake region economic bloc and to the three Counties. Additionally, purposive sampling was used to sample sub counties such as Budalangi, Nyando and Tinderet based on the historical occurrence of various types of disasters those sub counties. Proportionate sampling was then used to sample emergency responders from the varying numbers in the sub counties in the study area and from one organization to the other.

3.5 Data Collection Methods

Primary quantitative data from the emergency responders was mainly collected using questionnaires, while qualitative primary information was collected using Key informant interview guide and Focus group Discussion guide. Secondary qualitative data was collected from journals, reports and magazines.

3.6 Methods of Data Analysis

All the quantitative data from the questionnaires were cleaned, coded and analyzed using the Statistical Package for Social Scientists (SPSS) version 20.0 for descriptive statistics and results are presented in a table. Secondary information from the KII and FGD guides were cleaned, organized and thematically analyzed.

IV. FINDINGS & DISCUSSION

This section presents and discusses results in relation to findings on the frequency of the disaster emergencies in the Lake region economic bloc of Kenya. This study focused on the most dominant hazards such as floods, disease outbreaks, fire outbreaks, road traffic accidents, droughts and floods.

4.1 Frequency of the disaster emergencies within the Counties in the Lake Region Economic Bloc of Kenya

The study sought to assess the frequency of various disaster types across counties within the Lake Region Bloc of Kenya. Results in Table 1 show that majority of the respondents 81% (243) strongly agreed that floods are frequent and intense, 65% (195) agreed that they often experience prolonged droughts, 55% (165) strongly agreed that landslides occur regularly in their counties, 67% (201) strongly agreed that disease outbreaks have become frequent, and 60% (180) strongly agreed that fire outbreaks are frequent and intense in occurrence in their counties within the LREB of Kenya.

Table 1

Frequency of Disaster Emergencies in Counties within the Lake Region Economic Bloc of Kenya

Frequency aspects of the disaster emergencies	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Flooding is a frequent and an intense disaster in this county.	6 (2%)	18 (6%)	0	33(11%)	243 (81%)
This county often experiences frequent and prolonged droughts.	12 (4%)	27 (9%)	27 (9%)	195 (65%)	39 (13%)
Landslides occur regularly and intense in this county.	42 (14%)	30 (10%)	48 (16%)	15 (5%)	165 (55%)
This county frequently experiences outbreaks of waterborne diseases (e.g., cholera, typhoid).	12 (4%)	21 (7%)	9 (3%)	57 (19%)	201 (67%)
Fire outbreaks are becoming more frequent.	18 (6%)	18 (6%)	33 (11%)	51 (17%)	180 (60%)
Frequency of Road Traffic Accidents has increased	9 (1%)	36 (12%)	6 (2%)	45 (15%)	210 (70%)

4.1.1 Frequency of floods within the Counties of Lake Region Economic Bloc in Kenya

Results in Table 1 shows that there was a consensus among respondents on the frequent occurrence of flooding in their counties, with an overwhelming 81% strongly agreeing and an additional 11% agreeing that flooding is a recurring hazard. This accounts for 92% of the sample size who affirmed the presence of frequent flood disasters. Only a small minority (6% disagreed and 2% strongly disagreed) dismissed the frequency of floods, and notably, no respondents were neutral. The absence of neutrality indicates that communities have directly experienced or witnessed repeated flood events, making flooding a widely recognized and deeply felt threat across the surveyed counties.

It was therefore evident with the majority assenting to the frequent occurrence and recurrence of floods in the study area. This study observed that this was mainly due to the region's geographical setting particularly its proximity to Lake Victoria, an area well-known for heavy rainfall and complex hydrological systems. This made flooding one of the most significant hazards affecting local communities in the region. These findings are consistent with earlier research carried out within the Lake Victoria Region Economic Bloc (LREB). For example, Oluchiri (2025) note that Kisumu County has for years struggled with recurring floods, largely driven by a mix of high precipitation, inadequate drainage infrastructure, and backflow from Lake Victoria. Similarly, Budalang'i in Busia County had a long history of devastating floods caused by the bursting of River Nzoia, which regularly displaces communities and disrupts livelihoods and other economic activities such as transportation and communications (Opilo et al., 2023).

These findings on the frequent flooding further resonate with Kundu and Olang (2011), who observed that El Niño events and expanding land-use changes have intensified both the severity and recurrence of floods in western Kenya. Recent data from the Kenya Meteorological Department (2023) reinforces this, while highlighting the Lake Victoria Basin as one of the most flood-prone regions in the country. This study found out that as there exists a surge on the flood's frequency and intensity, the situation is worsened by poor agricultural practices, weak urban planning, clogged waterways, and poor disaster preparedness, particularly in counties such as Homa Bay and Siaya. From an expert, a key informant as one of the staffs of the Kisumu County special programs point of view was in tandem with the high level of agreement among respondents,



“Frequency of floods underscores the urgent need for localized flood risk reduction strategies in the Lake Region Bloc. County governments must invest in early warning systems, improve drainage infrastructure, and promote community-based adaptation programs to build flood resilience”.

The findings served as a wake-up call for counties in the LREB, highlighting the urgent need to strengthen collaboration on watershed management and cross-border disaster response. Ogenga et al. (2025) also indicated that, without coordinated action, floods will continue to destroy communities and erode hard-won development gains in Western Kenya.

4.1.2 Frequency and persistence of droughts occurrence within the Counties of Lake Region Economic Bloc in Kenya

In relation to the persistence of droughts, 195 (65%) of respondents agreed and 39 (13%) strongly agreed that the counties often experience such prolonged dry spell at least in a year. Meanwhile, 27 (9%) remained neutral, another 27 (9%) disagreed, and 12 (4%) strongly disagreed of the occurrence of the frequent and persistent droughts in the study area. The results show a consensus among the respondents that persistent droughts are a frequent occurrence in their respective counties within the Lake region, with a cumulative 78% (65% agreeing and 13% strongly agreeing) attesting to the assertion.

The high number in agreement indicates a dire climate related concern, showing that droughts in the region are not isolated events but recurring with negative implications on populations, their livelihoods, and property. Just a small fraction of 13% showed disagreement, further reinforcing the broad recognition that drought is a persistent problem in their communities. Notably, this confirmation excluded the counties such as Nandi, Kericho, and Trans Nzoia, as counties that have over the years received high annual amount of rainfall and have experienced relatively low average temperatures.

This study observed that Counties such as Kisumu, Siaya, Homa Bay, Migori and Busia have historically been subjected to climate variability from prolonged dry spells to increased amount of rainfall leading to floods. This this observation resonated with the sentiments from one of the participants in an FGD comprising social workers, community volunteers and the Kenya Red cross officials in Kisumu County. She said,

“Ones in a year most of us and this county have had effects that are as a result of low amount of rainfall affecting mostly our crops leading to low crop failure or total failure hence food insecurity. This is mostly in the months of December to February and June to August”.

According to Opiyo et al. (2015) in a study in Turkana and Kisumu observed that communities mostly in the ASALs have viewed droughts as becoming more often and severe, with negative effects in both rural and peri-urban areas. Similarly, Ogenga et al (2025) on the trends of drought in Siaya County found out that droughts occur in Siaya County which is in the Lake region bloc at least ones a year and mainly in the season of MAM and with high probability in the short season of JJA. According to Ogenga (2025) on the probability of dry spells occurrence on rain dependent agriculture, the Lake Victoria Basin is has two main agricultural seasons and occurrence of prolonged dry spells implies a significant negative impact on the depended on livelihood to communities. Relatively, the Kenya Meteorological Department (2022) reported that Western Kenya have in the past decade experienced irregular rainfall, often marked by prolonged dry spells that interrupt seasons of farming. This was in particular to the rain-dependent agricultural zones. These two studies have hence reinforced the participants in this particular study asserted on the frequent and persistent occurrence of droughts in the Lake Region Economic Block (LREB) of Kenya.

Worth noting, 9% of respondents remained neutral. This in essence, has the potential to signal reduced awareness or reflect localized changes in drought experiences. For instance, counties such as Nandi that is naturally wetter due to their highland geography are less prone to prolonged dry spells experiences as compared to semi-arid areas in Kisumu or parts of Busia during peak dry seasons. This variation underscores the need for disaggregated climate impact data to design county-specific adaptation strategies within the LREB framework. Supporting this, the 2023 NDMA bulletin highlighted that even high-rainfall counties are increasingly facing localized droughts, largely driven by deforestation and land degradation. Overall, the study’s findings resonate with wider climate change projections for the Lake Victoria Basin. As the World Bank (2021) cautioned, rising temperatures and shifting rainfall patterns are expected to intensify both the frequency and severity of droughts across the region.

4.1.3 Frequency of Landslide occurrence within the Counties of Lake Region Economic Bloc of Kenya

Results in Table 1 show that 165 (55%) of the respondents strongly agreed and 15 (5%) agreed that landslides occur regularly in the Lake region economic bloc. Interestingly, 48 (16%) were neutral, while 30 (10%) disagreed and 42 (14%) strongly disagreed, showing a mixed perceptions of the respondents on landslide occurrence and recurrence in the Lake region economic bloc of Kenya. These findings therefore have indicated a significant concern over the frequency of landslides in the Lake Region Bloc Counties, with a cumulative 60% of respondents (165 strongly agreeing and 15 agreeing) affirming that landslides occur regularly.



Similar to other hazards in the study area, these findings indicate that landslides too are not isolated events but a recurring hazard in the region. The study observed that this is largely shaped by the topography of the regions based on the physically steep slopes, fragile soils exacerbated by heavy and increased rainfall. This study noted that sections of Nandi and Busia counties were particularly vulnerable because their poorly drained soils and sloping landscapes combine with seasonal downpours to create conditions ripe for land hold failure. As illustrated by the findings that over a half of the respondents strongly agreed with this view underscores that frequent landslides are part of the lived reality in these areas. These were identified as to have dire consequences historically leading to losses of lives, destruction on the crop lands, homesteads and infrastructure such as roads.

Relatively, perceptions of the respondents indicated a non-uniform experiences and knowledge of landslides occurrence and recurrences in the prone areas. It is evident from the results that 16% of respondents were neutral, while 24% (10% disagreed and 14% strongly disagreed) did not agree of landslides as a common occurrence in the Lake region economic bloc. This non-convergence points to localized differences in exposure and experience of the landslides in different counties of the study area. This was evident that lower-lying zones, such as parts of Kisumu and Busia, had not witnessed landslides firsthand, unlike those in hilly areas such as Chepterit in Nandi, or parts of Kisii and Nyamira counties. This study observed that levels of community awareness and collective memory also play a role. In this essence, in some cases, landslides were associated more with rare, extreme episodes than with regular hazards such as floods. This perception gap was especially evident in counties like Busia, where early warning and response systems for landslides are either not there or minimal.

These study findings have demonstrated resonance with findings of other studies in the past. According to Masese *et al.* (2025), Kisii and Nyamira which both form part of the Lake Region Bloc has faced heightened risk of landslides. This was mainly due to dense populations, deforestation, and farming on steep slopes. Relatively, Kericho County Climate Change Action Plan [KCCAP] (2023) asserted that Kericho County has in the past decades experienced an increased landslides event. The study learnt that all these due to erratic rainfall patterns linked to climate change acting as a trigger. Similarly, Opilo *et al.* (2023) further showed how land-use changes in Homa Bay destabilize slopes and accelerate erosion, contributing to landslide risks. In agreement, these studies reinforce the understanding of the respondents that both natural and human factors intertwine to shape the frequency and severity of landslides across regions leading to disaster emergencies such as loss of lives, property and livelihoods.

4.1.4 Frequency of Diseases outbreak within the Counties of the Lake Region Economic Bloc in Kenya

Results in Table 1 show that disease outbreaks of waterborne diseases such as cholera and typhoid, 201 (67%) strongly agreed and 57 (19%) of the respondents agreed that such outbreaks are frequent. A smaller proportion disagreed (21; 7%) or strongly disagreed (12; 4%), while 9 (3%) were remained neutral. The results therefore show that a significant majority of respondents 67% strongly agreed and 19% agreed that outbreaks of waterborne diseases such as cholera and typhoid are frequent within their communities hence causing a disaster emergency. This indicates that at least 86% of the respondents in the study area of the Lake Region Bloc Counties (LRBC) perceive waterborne disease outbreaks and other communicable diseases as a regular threat to public health. Additionally, pandemics such as Ebola and Monkey pox characterized the fatal diseases mainly in counties at the border such as Busia and Migori in the lake region economic bloc.

The study learnt from participants in a FGD comprising of Community volunteers and social workers in Nandi County that such a high level of agreement is indicative of persistent and widespread challenges related to access to clean water, poor sanitation, and inadequate waste management. One of the participants said,

“Our main challenge is lack of clean water and this is normally during rains that lead to the contamination of our only water sources remembering that most of our water sources are open springs. The contamination has sent so many to hospitals looking for help from the diseases. If there was a way the government could help protect these water sources then the people in this village can be safer”

This study’s findings found out that cholera and typhoid outbreaks were the main and have been a recurring across the Lake Region Economic Bloc (LREB). Most counties that have been affected over the years were Kisumu, Homa Bay, Migori, Siaya, Bomet, Kakamega, and Busia. According to the Kenya Ministry of Health (2022) documented repeated cholera outbreaks in Siaya and Kisumu, often triggered by flooding and poor drainage infrastructures that contaminate drinking potable water that are relied upon by majority of the populations in those counties. Similarly, Mbae *et al.* (2020) emphasized that typhoid fever in places such as informal and rural settlements was closely associated with the consumption of untreated water and weak sanitation systems, particularly in informal settlements and rural parts of the counties.

Additionally, the study observed that beyond these endemic waterborne diseases, COVID-19 pandemic exposed the region’s vulnerability to public health concerns. During such emergencies and crisis, counties such as Kisumu, Bungoma, Migori, and Busia were forced to establish emergency response centers in main medical facilities. However, according to (WHO, 2022), these efforts were hampered by inadequate resources. This indicated that while the Lake

region economic bloc continues to grapple with endemic diseases like cholera and typhoid, it also faced risks from global pandemics such as COVID, Ebola and Monkey pox that emergency response.

Relatively, Omwami *et al.* (2022) emphasized on the need to invest in water, sanitation, and hygiene (WASH) across the LREB as a proactive measure to such preventable diseases. Additionally, the study emphasized on the need to strengthen early warning systems, expand community health education, and develop reliable clean water infrastructure. The study observed such measures as essential in reducing recurring disease outbreaks and align with broader capacity-strengthening initiatives in health concerns risk reduction in the region.

4.1.5 Frequency of Fire outbreaks within the Counties of Lake Region Economic Bloc of Kenya

To understand the perception of the respondents in the study on fire outbreaks, results in Table 1 show that frequency of fire outbreaks, 180 (60%) of the respondents strongly agreed and 51 (17%) agreed that such events are becoming more frequent. In sequence, 33 (11%) chose neutral, and both disagreement and strong disagreement represented 18 respondents (6%) each. These findings established a strong perception among respondents that fire outbreaks are increasing in frequency across the Lake Region Economic Bloc as the study area. These results showed that (77%) shared this concern, underscoring a widespread sense of vulnerability of different systems both structurally and those that are not structural leading to fire-related emergencies. Interestingly, 11% remained neutral and this figure might have reflected respondents no or low magnitude experience of such fire disasters incidents. A small group disagreed or strongly disagreed (6% each) and are likely based in areas less exposed to fire hazards or where effective prevention measures have been put in place hence reduced level of losses and damages hence not perceived as a concern by a click of respondents in the study areas as Lake Region economic bloc.

This study established that Counties such as Kisumu, Kakamega, Homa Bay, Vihiga, Busia, and Nandi have all reported a rise in fire outbreaks, particularly in urban markets, expanding informal settlements, and educational institutions like secondary schools. This study learnt that Kisumu County, for instance, had repeatedly witnessed devastating fires in Kibuye Market, with investigations pointing to causes ranging from faulty electrical wiring and arson to poor infrastructure. Similarly, this study learnt that Busia County had over the years experienced multiple school fires at Sokoto Girls and Bukhalalire Boys, especially during student unrest, highlighting a mix of behavioral and infrastructural vulnerabilities in the schools. Apart from the schools and markets, fire accidents linked to petroleum tanker accidents have also over the years been reported along the Kisumu–Busia Road, particularly in Siaya (Sidindi) and Busia (Matayos), often resulting in fatal loss of lives. The evidence indicated a rising fire accidents in the Lake region economic bloc which were driven by rapid unregulated construction, limited awareness, and inadequate fire response capacity.

There exists a range of studies that are related to this on hazards occurrence and recurrence that have in support related. According to Hu *et al.*, (2022), poor urban planning and substandard materials and designs for housing in none formal settlements significantly increase fire risks in most informal settlements such as in Kisumu Obunga. This was evident mainly on urban areas and settlements where congestion of unplanned housings and structures blocked access for emergency responders such as fire fighters with wider firefighting machines. Similarly, Munene (2022) reported that frequent market fires in western Kenya counties such as in Kisumu were mainly attributed to illegal electricity connections and limited fire safety training and awareness among traders in the markets in various urban areas.

4.1.6 Frequency of Road Traffic Accidents (RTA) in the Lake Region Economic Bloc of Kenya

The study finally sought to investigate the prevalence of Road Traffic Accidents (RTA) in the Lake region economic bloc. Results in Table 5.1 indicated that 1% (9) strongly disagreed, 12% (36) disagreed, 2% (6) were neutral, 15% (45) agreed, while 70% (210) strongly agreed that road traffic accident incidences have been on the rise on the major roads in the Lake region economic bloc of Kenya.

Results show that 85% of respondents (70% strongly agreed and 15% agreed) felt that road traffic accidents (RTAs) are on the rise in the Lake Region Economic Bloc. This is study established that this was more than just statistic and it reflected the lived realities to the individuals who faced road crashes in Western part of Kenya. In relation to National data RTAs remain among the top causes of injury and death, especially in densely populated regions (NTSA, 2023). At a broader level, the World Health Organization (WHO, 2022) reported that Africa carries the heaviest burden of road traffic injuries globally, driven by rapid motorization, poor infrastructure, and weak traffic enforcement. For communities in the Lake Region, these realities are not abstract they point to an escalating crisis threatening both health and livelihoods.

Researchers and policy analysts have long linked this trend to structural and behavioral factors. Radan *et al.* (2022) identifies poor road design, limited pedestrian facilities, speeding, and lack enforcement of traffic laws as recurring causes. Within the Lake Region, studies reveal that major highways such as those linking Kisumu, Kakamega, and Kisii are notorious accident hotspots, plagued by reckless overtaking, inadequate signage, and the surge of motorcycles (boda-bodas) as a popular mode of transport. These challenges are intensified by the region's economic



dynamism: busy routes like the Kisumu–Busia Road not only support local traffic but also serve as vital corridors for cross-border trade with Uganda. The combination of structural weaknesses and risky human behavior makes RTAs a constant hazard for traders, commuters, and rural travelers alike.

The ripple effects of rising RTAs extend far beyond the immediate tragedies of crashes. Families often endure devastating medical costs, the loss of breadwinners, or long-term disability, all of which reduce productivity and strain household resilience (Terefe et al., 2025). From a policy standpoint, Kenya has endorsed global frameworks such as the UN Decade of Action for Road Safety and Vision Zero. Yet, turning these commitments into meaningful change at the county level has proven difficult. Without urgent interventions redesigning black-spot roads, enforcing helmet and seatbelt use, and improving emergency response systems accidents in the Lake Region are likely to keep increasing (WHO, 2022). Put simply, the findings emphasize the urgent need for locally grounded, multi-sectorial road safety strategies that respond to the lived experiences of Western Kenya’s communities.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

A wide range of disasters are frequent in the Lake Region Economic Bloc counties of Kenya with floods standing out as the most frequent, followed by outbreaks of disease, drought, Road traffic accidents, fire outbreak, while landslides tend to occur more sporadically depending on the location. From these, communities in the region continue to suffer serious consequences including displacement, crop losses, damaged infrastructure, and tragic loss of life making it clear just how exposed they are to these hazards.

5.2 Recommendation

The Lake Region Economic Bloc counties need to take a more people-centered approach to disaster risk reduction by putting stronger systems in place to manage floods, stepping up public health monitoring to prevent disease outbreaks, and improving early warnings for drought. At the same time, attention should be given to making roads safer, boosting fire preparedness, and closely monitoring landslide-prone areas. These measures will go a long way in reducing the risks communities face, protecting their livelihoods, and ultimately saving lives.

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Effect of the youth development fund on livelihood asset ownership among youth in Chalinze District and Dar es Salaam city councils, Tanzania

Laurent D. Ngoyo^{1*}
Gervas M. Machimu²
Cyril K. Komba³

^{1*}laurent.ngoyo@gmail.com

¹Local Government Training Institute (LGTI), ^{2,3}Moshi Co-operative University (MoCU), ^{1,2,3}Tanzania

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ABSTRACT

Asset ownership plays a crucial role in improving livelihoods and reducing poverty among beneficiaries of the Youth Development Fund (YDF). However, ownership of productive assets has remained a significant challenge among these beneficiaries. Guided by the Sustainable Livelihood Framework, this study examines the effect of the YDF on asset ownership among its beneficiaries. A cross-sectional research design involving multistage sampling targeted 10 wards in two Local Government Authorities. Data were collected from 200 YDF beneficiaries through semi-structured questionnaires and key informant interviews. Descriptive statistics and an asset ownership index were used to analyse the quantitative data, while the qualitative data was analysed through content analysis. The findings revealed that 50% of YDF beneficiaries are at a high level of asset ownership, 49% are at a low level, and 1% are at a moderate level. The results further show a more remarkable change in the ownership of non-productive assets than productive assets, which does not guarantee sustainable livelihoods. For example, ownership of economic assets like motorcycles increased from 3.5% to 33.5% after accessing the YDF. The findings also indicate ownership of new productive assets acquired after accessing the YDF, such as photocopiers, welding machines, sewing machines, tricycles, and milling machines. Despite these changes, 49% of the beneficiaries are still in low asset ownership, with limited ability to sustain their livelihoods. The study recommends that Local Government Authorities (LGAs) should increase funding for youth loans to enable beneficiaries to engage in income-generating activities (IGAs) for the acquisition of livelihood assets. Additionally, LGAs should collaborate with like-minded stakeholders in all youth empowerment interventions to provide mentorship and coaching. This would enable youth to gain the skills required for effectively using resources by investing in productive assets instead of non-productive household assets.

Keywords: Asset Ownership, Livelihood Assets, Local Government Authorities, Sustainable livelihood Approach, Youth Development Fund

I. INTRODUCTION

The Youth Development Fund (YDF) is an intervention established across the world to tackle socioeconomic challenges facing youth such as unemployment and poverty which impede the capacity to acquire livelihood assets for improving their wellbeing (Dogeje, 2023). The operationalisation and objectives of the YDF vary across countries based on policies, needs, and priorities but mainly to create friendly environments for the unemployed youth to access affordable loans for self-employment. For example, in the UK, the Princes Trust Enterprise was established to help unemployed people (youth) between the ages of 18 and 30 to access loans in order to develop their business and improve their livelihoods. In Canada the government gives collateral free loans to the unemployed young people to commence or develop their own businesses. In the same vein the government of Nova Scotia in 1995, introduced a centre for entrepreneurship and Development to promote the business start-up culture among the unemployed youth (Otiende *et al.*, 2020).

Youth development funds are common in most African countries as the intervention to reduce youth unemployment, poverty and economic empowerment. YDF are also initiated to support access to affordable loans for self-employment and access to livelihood assets. For instance in Kenya, the Youth Enterprise Development Fund (YEDF) was established in 2006 to promote youth employment, whereas in Botswana, the YDF was established to support the start-ups of business for unemployed and out-of-school youth (Otiende *et al.*, 2020; Mafoko, 2019). In Uganda, the Youth Venture Capital Fund aimed to facilitate access to financing for entrepreneurial ventures among unemployed youth (Bantu & Maliki, 2022). Furthermore, in Ethiopia, the YDF sought to furnish technical and

financial support to unemployed youth by promoting participation through group-based income-generating activities to alleviate economic and social challenges.

The Integrated Labour Force Survey (ILFS) report of 2021, indicate that the labour force for Tanzania is 25,861,023 people, out of which 14,219,191, equivalent to 55.6% were youth. The report indicated that, of the total youth labour force the employed were 12,486,683 equivalents to 87.8% (United Republic of Tanzania [URT], 2024). Despite government efforts to promote youth employment, the youth unemployment remains a challenge due to the large number of young people entering the labour market each year. In Tanzania, every year one million youth enter into the labour market while the labour market is able to absorb two hundred youth leaving eight hundred thousand unemployed and impoverished. The national statistics on youth unemployment rate including the study area stands at 12.2%, which is over and above the government's target of 8% (Tanzania National Bureau of Statistics [TNBS], 2022). Youth unemployment affects social and economic development of youth as individuals and their respective households. The unemployment results to lack of reliable income which in turn leads lowered self-esteem and social exclusion.

Therefore, the government of the United Republic of Tanzania (URT) like other countries established the YDF in 1993/1994 under the Exchequer and Audit Ordinance Act section 17(1) part 439(1) of 1961 (URT, 2024; Dogeje, 2023). YDF aimed to support the unemployed youth between the age of 18 and 45 years old to access affordable loans and build their economic capabilities. Through this loan youth are expected to have access and control to financial resources and make them participate actively in production in order to improve their lives and well-being. Under this Act, Local Government Authorities (LGAs) are obliged to allocate 10 percent of their internal revenue and apportion four percent for women, and four percent for youth, and two percent for people with disabilities (URT, 2024; Phillipou, 2022).

Over three-decade (30) years since its establishment YDF has been offering loans to the unemployed youth to commence or develop their income generating activities or self-employment for social and economic development by improving their incomes and other assets. However, Bilegeya and Rocky (2025) noted that of all YDF supported income generating activities only 42% continue to survive beyond two years of their commencement. This highlight significant question on whether youth supported by YDF are able to improve their livelihoods by acquiring different of livelihood assets to withstand shocks and stress. Additionally, it is not empirically known whether the youth supported by YDF have improved their lives through asset acquisition. Therefore, this study analysed the effect of the Youth Development Fund on the ownership of the livelihood assets in Chalinze District and Dar es Salaam City Councils, Tanzania.

1.1 Statement of the Problem

Assets ownership is vital for livelihood improvement because assets can be liquidated to acquire funds for managing livelihood risks and vulnerabilities. The beneficiaries of YDF who were vulnerable due to unemployment and poverty are expected to use the YDF loan for commencing IGAs to generate incomes and acquire livelihood assets which will enable them to withstand livelihood risks and vulnerabilities. The study by Nkelame (2024) revealed that youth's income generated from YDF supported IGAs in Kasulu town decreased due to increase in taxes. The decrease in net income affected the net income, purchasing power, saving and investment. The study further revealed the variability of income trends among the beneficiaries while about 50% earned losses equivalent to Tanzanian shillings 550,000 monthly. Furthermore, Dogeje (2023) revealed that YDF loans is ineffective in improving the income of its beneficiaries due to limited financial literacy, inadequate training and insufficient funding. The study by Madonda *et al.* (2020) on the impact of microfinance to asset ownership among youth revealed that youth who are beneficiaries of the microfinance acquired different assets and improved their living standards. However, this study was on microfinance which are commercially run and not Youth Development Fund which is government collateral and owned interest free scheme.

Njuguna *et al.* (2017) revealed the increase in asset ownership among youth who joined self-help groups such as sewing machines, motorbikes, refrigerators, cookers, television sets, chairs, and mobile phones and personal saving. However, the study noted that, individual asset ownership for some assets decreased after joining youth groups because assets were sold to repay the loan. Therefore, these contradictory findings from the previous studies on youth asset ownership raises a fundamental question to ask, do YDF have a positive effect on the asset ownership among the beneficiaries. The evidence available on the effect of YDF on youth asset ownership has not been able to empirically demonstrate how Youth Development Fund has improved asset ownership.

1.2 Research Objectives

The primary objective of this paper is to assess the effects of the Youth Development Fund on asset ownership among the beneficiaries. Specifically, the paper is guided by the following objectives;



- i. To examine the types of assets owned by YDF beneficiaries before and after accessing loan in terms of types, quantity, and monetary values
- ii. To examine the level of asset ownership among the beneficiaries of YDF in Chalinze District and the Dar es Salaam City Councils after accessing loan.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Sustainable Livelihoods Framework (SLF)

This study is guided by the sustainable livelihood Framework founded by Chambers and Conway (1992). Accordingly, SLF provides conceptual tools such as assets, capabilities and capitals that enable people in this context YDF beneficiaries to make a sustainable living (Raniga, 2022). The SLF indicates that livelihoods depend on the endowment of livelihood assets mainly human (abilities, experience, skills and the good health), social (networks and connections), physical (infrastructure, tools) financial (savings, credit and debt, remittances, pensions, wages) and natural (land, water, trees, wildlife) capitals which together enable households or individuals to pursue a sustainable livelihood. These livelihood assets support people in identifying and implementing various livelihood activities that improve their lives (Demeke, 2024; Mwakilema, 2023). In this study SLF is used to assess how the YDF contributes to asset ownership among youth. Specifically, SLA is used to assess types, quantity and monetary value of owned assets but also in assessing the changes in assets owned before and after accessing YDF.

2.2 Empirical Review

Asset Ownership is the legal ownership of material assets by an individual or entity. Assets are important because they have financial benefits, and can improve the living standard of the people (Magambo & Nyamwesa, 2022). It is believed that if people including youth are financially included can have greater access to capital assets. Ownership of assets such as land and a house provides them with security and tends to moderate men's violent practices because economically empowered people are in better chance to have greater access to economic assets. Mbiti (2024) referred assets as the resources available to individuals, organisations or entire communities that can be used to create more wealth, reduce or prevent poverty, and redress skewed distribution. Broadly, assets may therefore be stocks that can be developed, transferred, managed and shared across generations.

Owning livelihood assets has an impact on livelihood improvement because assets can be liquidated to provide funds for managing risks and vulnerabilities (Munanura *et al.*, 2021). Additionally, Yerrabati (2023) confirmed that livelihood assets serve as a foundation for livelihoods and significantly contribute to poverty reduction in both rural and urban settings. Livelihood assets provide potential for job creation as alternative employment options for the predominant labour force in nations where substantial and escalating unemployment has emerged as a critical economic issue (Mwakilema, 2023).

According to Tambe (2022) livelihood assets consist of five assets such as human capital, which include, skills, knowledge and capability, and good health to enable people to create and secure livelihoods. In this regard, the assets play an important role in generating livelihood outcomes that increase well-being (Munanura *et al.*, 2021). Therefore, ownership of livelihood assets among the beneficiaries of YDF determines the achievement of sustainable livelihoods. Livelihood assets have a significant impact on livelihood options and income in the framework of sustainable livelihoods (Guo *et al.*, 2022; Ma *et al.*, 2018). The ability of people to generate income depends on access and ownership of livelihood assets (Yang *et al.*, 2021; Li *et al.*, 2020). Therefore, lack of livelihood assets is both a symptom and a cause of poverty among vulnerable individuals, including youth (Soma *et al.*, 2022). This demonstrates that the poor households are vulnerable as they are unable to take up economic activities with higher returns due to a lack of access and ownership of assets (Soma *et al.*, 2022; Bird *et al.*, 2022). (Sibarani & Somboonsuke, 2024) revealed that the achievement of sustainable livelihood is influenced by the ownership of livelihood assets. This also proves that people who do not own assets are vulnerable due to their inability to withstand livelihood shocks and risks.

The study by Ibrahim *et al.* (2018) on the level of livelihood assets ownership among vulnerable groups on the east coast of Malaysia, found that, among the assets, human asset has the highest value, followed by social assets and natural assets ownership. According to this study, ownership of financial and physical assets had low index score values, indicating that a lack of financial assets inhibits production and sales increases. The study by Nyamu (2015) on entrepreneurship training and growth of youth enterprises among YEDF beneficiaries in Kenya revealed that the growth and development of youth enterprises do not have a significant relationship with the level and quality of entrepreneurship training. This implies that the training received did not contribute to the growth of enterprises and thus did not contribute to the asset ownership. The VSO report of 2018, on youth entrepreneurship and empowerment,

in Uganda and Kenya found that young entrepreneurs lack competencies and employable skills therefore, they are vulnerable as they cannot own livelihood assets (Francis *et al.*, 2020).

Njuguna *et al.* (2017) revealed that there is an increase in asset ownership and personal savings among urban youth due to their engagement in self-help groups. The study categorised assets into housing, electrical, machinery and furniture and found increased asset ownership among youth before and after joining youth groups. For instance, ownership of sewing machines, motorbikes, refrigerators, cookers, television sets, chairs, and mobile phones. Unexpectedly, the study revealed that individual asset ownership for some assets decreased after joining youth groups implying that ownership of assets for sustainable livelihood among youth remains a challenge. According to Li *et al.* (2020), low incomes constrain people to increase production and in the acquisition of essential livelihood assets for coping with livelihood shocks and stresses.

John (2021) revealed that YDF in Morogoro municipality and Mvomero District councils contributed slightly to the ownership of assets such as motorcycles. However, the study revealed that the increased change in asset ownership is not contributed only by YDF alone but also by the incomes from the other sources. According to Mwakilema (2023) VET youth graduates had a higher level of asset ownership than non-VET graduates. Nkelame, (2024) asserted that, the net income of YDF beneficiaries in Kasulu Town Council decreased after accessing YDF due to the increase in taxes which reduce their net income, purchasing power, ability to save and invest. Similarly, Dodeje (2023) asserted that, YDF is ineffective in improving the overall income due to limited financial literacy, inadequate training and insufficient funding.

Furthermore, Diraditsile (2021) corroborated that, YDF in Botswana has no significant contribution to the livelihoods of youth where very few managed to acquire economic assets while the majority were only able to meet their basic needs. Njuguna *et al.* (2017) revealed that the unemployed urban youth in Kenya who received YEDF sold their assets as a way of coping with unemployment challenges and in the struggle to repay debts and ended-up being more vulnerable. This contradicts Chambers (1997), who argued that livelihood is sustainable when it has the capacity to cope with and recover from the stress and shocks while enhancing its capabilities and assets.

The study by Bilegeya and Rocky (2025) on effects of Youth Development Fund in Business Performance among Beneficiaries found that, YDF beneficiaries had more assets than the non-beneficiaries. However, the most owned asset is television set by 52%, family house 37% and sofa set, 32.3%. The types of assets owned does not assure youth to withstand livelihood risks and shocks because they are not for income generation. Also, the study is silent on the level of asset ownership before and after accessing YDF. The findings also indicated a slight change on annual sales revenues, 29.5% of beneficiaries had sales revenues between 900,000-2,000,000 Tanzanian Shillings where the majority earned lower indicating level of vulnerability. This still leads to more empirical analysis on effect of YDF on acquisition of financial asset.

Madonda *et al.* (2020) conducted the study on the impact of youth microfinance on asset ownership and found that, microfinance has a positive impact on improving the living standard of the people, where the profit generated is used in purchasing various assets such as land, power tiller machines, poultry, construction of houses, buying livestock (poultry, goats, cows) and motorcycle for transport or taxi. Terano *et al.* (2015) revealed that, microfinance has a positive impact to the borrowers, because the access to microfinance has an impact in terms of job creation, business profits and assets creation. The study further indicated that, most of the youth spent the loan from microfinance in improving both the quality and quantity of the business and in expanding ongoing entrepreneurial activity. However, the study was on microfinance and is not specifically on youth development fund offered by the Local Government Authorities.

Mkenda (2023) conducted study on economic empowerment of Tanzanian women through ownership of tourism Micro, Small, and Medium Enterprises (MSMEs) and found that people who are economically empowered are in better position to acquire assets. The study further indicated that, asset ownership is an important indicator of economic empowerment because it enables people purchase large productive assets such as land. Additionally owning assets like land and houses increases chances of obtaining formal loans, making people less vulnerable and more resilient to shocks. Assets ownership is an important component of empowerment as it creates economic independence among the marginalised group such as women and youth.

Notwithstanding the importance of the YDF in Tanzania to asset ownership among the youth, the literature examining its effects on asset ownership among the beneficiaries remains scant. Some of the existing studies on this theme have focused on the effects of YDF on employment creation, livelihood improvement, growth of enterprises and effect of YDF on income levels, impact of microfinance (Dodeje, 2023; John, 2021; Madonda *et al.*, 2020; Diraditsile, 2021; Nyamu, 2015). Therefore, this paper examines the effects of YDF on asset ownership among the beneficiaries.

III. METHODOLOGY

3.1 The Study Area and Location

The study was conducted in the Chalinze District Council and the Dar es Salaam City Council. These LGAs were chosen because they had a high number of YDF loan beneficiaries compared to other Local Government Authorities (NEEC, 2021). According to the National Economic Empowerment Council (NEEC) report (2021) Chalinze District Council had 2819 beneficiaries of YDF while Dar es Salaam City Council had 6525. Since the chosen LGAs had the highest number of YDF beneficiaries it was worth being used in analysing livelihood activities undertaken and the asset ownership. The Local Government Authorities (LGAs) were also chosen based on the volume of loans provided to youth, with the Dar es Salaam City Council disbursing TZS 5.4 billion in 2020/2021 (President's Office Regional Administration and Local Government [PO-RALG], 2022). The Chalinze District Council report (2022) revealed that from 2016/2017 to 2021/2022, the YDF disbursed TZS 8.6 billion to 4,290 recipients from 323 groups.

3.2 Research Design

The study employed a cross-sectional research design, allowing for simultaneous data collection and the examination of variables at a particular point in time. The design facilitated the investigation of the types of assets, monetary value and levels of asset ownership among the beneficiaries of the YDF (Ibrahim *et al.*, 2018). The study population comprised beneficiaries of YDF in Chalinze District and Dar es Salaam City Council who received YDF loan in the past five years that is between 2017/2018 and 2021/2022. The unit of analysis is individual beneficiaries.

3.3 Sampling Procedures and Data Collection Methods

A four-step multi-stage sampling procedure was used for sampling the beneficiaries of YDF. The first step was purposive selection of the two Local Government Authorities (LGAs). The second step involved purposive selection of ten (10) wards (five wards from each LGA) based on the number of beneficiaries. The third step was the selection of 40 groups from respective wards based on the number of beneficiaries. The fourth stage was the use of a simple random procedure in the selection of individual respondents from the groups to fit the number of respondents. Simple random sampling was used because it gives equal chances to participate in the interview. This study used 200 respondents who were randomly selected as Mbiti (2024), and Clarke and Green (1988) recommend that, a sample size of at least 10% is enough for statistical analysis. Furthermore, the sample size of 200 drawn from the population of 2000 is in line with Komba (2025) who argued that, a sample size of 30 respondents is a basic minimum for statistical analysis regardless of the size of the population. In the same vein, Sekaran and Bougie (2016) argued that a sample of 200 is adequate for statistical generalization in social science research.

Quantitative data collected included the type of assets owned, the quantity and monetary values owned assets by the beneficiaries of YDF was collected by using a structured questionnaire. Qualitative data were collected through Focus Group Discussions (FGDs), key informant interviews (KIIs) and observations. The FGD participants included chairpersons, vice chairpersons, secretary, vice secretaries, one co-opted member and treasurers for beneficiaries of YDF who were chosen based on their knowledge and experience. A total of ten FGD sessions, each with seven participants, were conducted across two Local Government Authorities (LGAs), where five FGD sessions were held in each LGA. The number of FGD participants based on Stewart and Shamadasani (2014), who established that, six to twelve participants are ideal for focus group discussion as it is easy to manage. Additionally, fewer than six participants may give less information (Njau & Matto, 2024).

A total of ten KIIs were conducted, that is five KIIs in each LGA involving Councils' Directors, Community Development Officers, Youth Development Officers, Councils' planning officers and the Council's treasurers. Primary data included demographic characteristics, types of assets owned, quantity and monetary value of assets owned. Secondary data including, list of beneficiaries and their IGAs, YDF loan disbursed, LGAs budget, published documents, unpublished documents and reports from different sources such as, LGAs reports, National Economic Empowerment Council (NEEC) reports, Journals and websites.

3.3 Data Analysis

The qualitative data obtained from the open-ended questions in the questionnaire, FGD, and key informant interviews were analysed by using the content analysis. The qualitative data which were recorded in notebooks and audio were transcribed, coded, categorised and thereafter grouped into themes in relation to the objectives of the study. The quantitative data were analysed using descriptive statistics and asset ownership index to better understand the types, quantity and levels of asset ownership among beneficiaries of YDF. The level of asset ownership was measured by an asset ownership index (AOI). The response weights were yes (1) and no (0). Thereafter, each asset

ownership indicator was assigned points, and all the points were added up to get the overall scores on asset ownership where the overall scores ranged from 0 to 1.

The index scores were then categorized based on the calculated median cutoff points and were then classified into levels (Table 5) to differentiate the asset ownership among the beneficiaries of YDF after computing the median score, minimum and maximum scores. Given that, the categories for the beneficiaries of YDF were high asset ownership, moderate asset ownership level and low asset ownership level. The cut-off points were chosen by using the computed median where median (0.47) was used as a moderate category (Mwakilema, 2023; Mchopa, 2019; Ibrahim *et al.*, 2018; Machimu, 2016). The levels of asset ownership were high assets ownership (0.48-1.00), moderate (0.47) and low asset ownership (0.00-0.46) The assets in this regard as indicated in Table 1 are categorised into five groups recommended by Njuguna *et al.* (2017) which are electrical, furniture, financial, machinery and physical assets. The group of electrical-related assets includes television, mobile phones, radio, iron-box, fan and refrigerators. Furniture-related assets include dining table, beds and sofa set, while financial assets related to cash and saving. The machinery-related assets comprise of motorcycle, tricycle, photocopier, bricks making machine, welding machine, sewing machine and milling machine. The assets grouped as physical involve house, building plots and livestock.

IV. FINDINGS & DISCUSSION

4.1 Asset Ownership before and after Accessing YDF Support

Asset ownership before and after accessing YDF was analysed by considering type, quantity and monetary values of assets in Tanzanian Shillings (TZS). The findings in Table 1 indicate the category of electrical assets owned before and after YDF. The findings revealed that value of electrical related assets changed from TZS 48.6 million to TZS 61.8 million after accessing YDF. The findings further indicated the increase of beneficiaries owing television sets from 14.5% before to 39.5% after where the value of the assets increased from TZS 10 million to an average value of TZS 20 million. This is in support with Bilegeya and Rokcy (2025) who found that YDF increased ownership of Television set by 52% among the beneficiaries. Similarly, the ownership mobile phones increased from 71.5% to 72.5% after accessing YDF with the decreased from TZS 18.9 million to TZS 12.6 million. The decrease in values of the mobile-phones indicate a shift in financial priorities where beneficiaries invest the money in other assets rather than mobile devices, possibly focusing on business or household improvements. Additionally, the ownership of other electrical assets like gas-cookers increased from 20% to 59.5% and its values from TZS 5.5 million to 8.3 million. Similarly, the ownership of radio increased from 13% to 37.5% and its values from TZS 1.8 million to TZS 3.4 million after accessing YDF. The similar trend is observed in the ownership of refrigerators whose quantity and value increased respectively.

The increase in ownership of the non-productive assets contradicts the government intension to empower youth economically by supporting entrepreneurship activities. Lack of ownership of economic or productive assets is an indicator of poor socioeconomic status and remain vulnerable to economic shocks and risks. Besides, ownership of non-productive assets affects intensification and diversification of livelihood strategies hence degrading the livelihood outcomes of the youth (Njuguna *et al.*, 2017). The findings further imply that, youth utilised YDF loan and associated income to acquire non-productive assets. The findings are in line with (Ibrahim *et al.*, 2018) who established that, lack of economic assets inhibits people from increasing production scales and consequently, makes it difficult to diversify livelihoods. The ownership of the productive assets would facilitate and inspire the improvement of other livelihood assets, thus contributing to the improvement of the level of livelihood among the YDF beneficiaries.

Table 1

Electrical Asset ownership

Category	Asset owned before YDF				Category	Assets owned after YDF			
	Assets	Freq.	(%)	Value (TZS)		Assets	Freq.	(%)	Value (TZS)
Electrical	Television set	29	14.5	10,330,000	Electrical	Television set	79	39.5	20,010,000
	Mobile Phone	143	71.5	18,945,000		Mobile-phone	145	72.5	12,650,000
	Gas-cooker	40	20	5,466,000		Gas-cooker	119	59.5	8,331,000
	Radio	26	13	1,818,000		Radio	75	37.5	3,365,000
	Iron-box	57	28.5	2,439,000		Iron-box	53	26.5	1,463,000
	Fan	30	15	1,819,000		Fan	14	7	1,943,000
	Refrigerator	18	9	7,810,000		Refrigerator	28	14	14,075,000
Total				48,627,000	Total				61,837,000



4.1.1 Ownership of Furniture and Financial Assets

The findings in table (2) indicate that, the total value of furniture assets changed from TZS 54.5 million to TZS 55.4 million. The ownership of beds decreased from 73% to 45% and its value decreased from TZS 37.3 million to 28.6 million after accessing YDF. The ownership of sofa set increased from 15.5% to 63.5% after accessing YDF and the values increased from TZS 12.7 to TZS 22.9 million. This support Bilegeya and Rocky (2025) who established that, YDF loan increased ownership of Sofa sets by 32.3% among beneficiaries in Ukerewe. Similarly, the ownership of dining table increased from 6% to 13.5% and the value decreased from TZS 4.5 million to 3.9 after accessing YDF. The findings imply that, youth used the fund for acquiring non-economic assets which does not foster their economic empowerment. The use of fund to acquire the non-productive assets may result to loan defaulting due to misuse of the income or capital. Additionally, owning non-productive assets do not assure sustainable livelihoods due to associated vulnerability, and inability to withstand economic stress and shocks (Chambers, 1997).

The findings in (Table 2) indicate that, the ownership of cash increased from 2.5% to 6% where the amount increased from TZS 2.5 million to 5.6 million. Similarly, saving changed from 3% to 11% and the savings increased from TZS 2.5 to 10.4 million. This indicates the financial capability growth of youth who accessed YDF, probably due to increased income from their businesses. Despite of the notable change in financial assets still the change is negligible due to the fact that the fund was used to acquire non-productive assets instead of saving or re-investing it for generating more income. The findings are in support of Azumah *et al.* (2023) who revealed that financial assets positively influence livelihood strategies and outcomes.

Table 2
Ownership of Furniture and Financial assets

Category	Assets owned before YDF				Category	Assets owned after			
	Assets	Freq.	(%)	VALUE (TZS)		Assets	Freq.	(%)	VALUE (TZS)
Furniture	Dining-table	12	6	4,515,000	Furniture	Dining-table	27	13.5	3,910,000
	Bed	146	73	37,285,000		Bed	90	45	28,585,000
	Sofa	31	15.5	12,705,000		Sofa	127	63.5	22,920,00
Total				54,505,000	Total				55,415,000
Financial	Cash	5	2.5	2,500,000	Financial	Cash	12	6	5,687,000
	Saving	6	3	2,570,000		Saving	22	11	10,415,000
Total				5,070,000	Total				16,102,000

4.1.2 Ownership of Machinery Assets

The findings in (Table 3) indicate that total value of the machinery assets increased from TZS 15.3 million to TZS 303 million after accessing YDF. Furthermore, the ownership of motorcycles increases from 3.5% to 33.5% while the value increase from TZS 15.3 million to TZS 152. 5 million. This increase in the ownership of motorcycle indicates that some youth invested in income generating or economic assets to improve their economic status. The findings support Dogeje (2023) and John (2021) who argued that, youth engage in motorcycle transport because it has a quick return when compared to other IGAs. The findings further support Msangi and Pesha (2023) who posit that, motorcycle transportation has played an essential role in promoting socioeconomic development among youth. The findings were supported by KII in Dar es Salaam City Council who argued that;

“Motorcycle riding business has simplified transportation and marketing access to small scale business persons, but also have been of a great support in motorcyclist livelihoods in the city. The motorcyclists are also among the youths who repay their loans timely”. (Key informant interview in Dar es Salaam City Council March, 2023)

Furthermore, the findings in (Table 3) shows that ownership of tricycle grew from 0% to 10.5% photocopier to 2.5%, brick making machine 2%, welding machine 1.5%, sewing machine (6.5%) and milling machine 4% after accessing YDF. The findings imply that YDF has played an important role in enhancing the economic status of youth by enabling them to acquire machinery assets. This not only improves their financial sustainability but also contributes to their wellbeing, therefore, investing in youth empowerment interventions like YDF enables youth to acquire assets and sustain their livelihoods. Furthermore, the increase in machinery ownership means that youth are investing in productive assets, which can generate income over the long term but also may create employment opportunities, both for the youth themselves and for others. Despite of the realised change still these assets are owned by the minority, meaning the majority are still susceptible to vulnerability and shocks.

Table 3
Ownership of Machinery Assets

Category	Assets owned before YDF				Category	Assets owned after YDF			
	Assets	Freq.	(%)	VALUE (TZS)		Assets	Freq.	(%)	VALUE (TZS)
Machinery	Motorcycle	7	3.5	15,300,000	Machinery	Motorcycle	67	33.5	152,500,000
	Tricycle	0	0	-		Tricycle	21	10.5	66,800,000
	Photocopier	0	0	-		Photocopier	5	2.5	9,480,000
	Bricks-making machine	0	0	-		Bricks-making machine	4	2	11,500,000
	Welding-machine	0	0	-		Welding-machine	3	1.5	2,160,000
	Sewing-machine	0	0	-		Sewing-machine	13	6.5	9,610,000
	Milling-machine	0	0	-		Milling machine	8	4	51,000,000
	Total			15,300,000		Total			303,050,000

The findings in Table 4 indicate that, the total value of physical assets changed from TZS 165.1 million to TZS 358.1 after accessing YDF. The ownership of house increased from 5% to 11.5% after accessing YDF while the value of the house changed from TZS 139.6 million to TZS 203.2 million. The findings are in support of Tambe (2022) who posit that, the access to credit leads to improvements in housing conditions, as households prioritize durable investments once income stabilizes. The ownership of livestock increased from 7.5% to 34% while value increased from TZS 11.8 million to TZS 54.2 million. The increase in livestock ownership among YDF beneficiaries suggests they are building resilience and future income sources as Randela et al. (2000) argued that; the smallholder farmers often use livestock as a store of wealth and as an insurance against shocks. The findings are in support of (Madonda *et al.*, 2020) who opined that, microfinance has a positive impact on improving the living standard of the people and part of their profit is used in creation of the assets such as buying of land, keeping poultry, construct residential houses and buying goats/cows. This growth in physical assets not only strengthens household economic stability but also enhances long-term livelihood security.

Table 4
Ownership of Physical Assets before and after YDF

Category	Assets owned before YDF				Category	Assets owned after YDF			
	Assets	Freq.	(%)	Value (TZS)		Assets	Freq.	(%)	Value (TZS)
Physical	House	10	5	139,680,000	Physical	House	23	11.5	202,200,000
	Building plot	42	21	13,570,000		Building plot	6	3	100,650,000
	Livestock	15	7.5	11,830,000		Livestock	68	34	54,206,000
Total			165,080,000	Total			358,056,000		

4.1.3 Levels of Asset Ownership among Beneficiaries of YDF

Asset ownership among the beneficiaries of YDF was computed and categorised into three levels namely high, moderate and low. The findings in Table 5 indicate that 50% of the beneficiaries of YDF had a higher level of asset ownership. The existence of (50%) of youth in high asset ownership level confirms that the YDF is effective by the beneficiaries to acquire assets. However, with nearly half (49%) of the beneficiaries at the low level indicates that the benefits are not equitably distributed, and some beneficiaries suffer to acquire tangible assets. The low asset ownership makes beneficiaries to remain economically vulnerable, with limited ability to cope with shocks contrary to the goal of YD. The findings are in line with (Weyer *et al.*, 2017) who revealed that, rural youth hardly own assets, indicating that only 15% owned the land or building plot and only 1% had the title deeds that serve as the proof of ownership.

The findings are also supported by the YDF beneficiaries during FGD who argued that:

“The amount of loan we receive is not sufficient to make us improve our livelihoods by owning various livelihoods assets (FGD, Kinyerezi Dar es Salaam, March, 2023).”

The quote establishes that, the YDF provided was not sufficient to make the beneficiaries own livelihood assets and increase their ability to withstand shocks and vulnerabilities. Furthermore, the fact that nearly half of the beneficiaries of YDF are still in the lower level of asset ownership challenges the effectiveness of the YDF in improving the livelihood of the youth in terms of asset ownership. This also confirms that, beneficiaries of YDF did



not make sufficient incomes from their businesses which could enable them to own assets since the majority have a lower level of asset ownership. The high proportion of the beneficiaries in the low asset ownership level implies that YDF overall effectiveness in enhancing youth economic resilience and asset ownership is limited or uneven. The findings are in support of Mwakilema (2023) who established that self-employed graduate youths did not make sufficient incomes from self-employment thus remaining vulnerable to unforeseen livelihood shocks.

Table 5

Levels of asset ownership among the beneficiaries of YDF

Index Value	Index category	Level of asset ownership
0.00 – 0.46	Low	Low asset ownership level
0.47	Moderate	Moderate asset ownership level
0.48-1.00	High	High asset ownership level

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Youth Development Fund has contributed in the ownership of assets in-terms of quantity and monetary value. The increase in ownership of non-productive livelihood assets inhibit empowerment and livelihood diversification which is contrary to government's purpose on YDF. The low level of ownership of productive assets indicates that an overall effectiveness of YDF in enhancing youth economic resilience is limited. The ownership of cash and saving is the least owned asset in all categories of assets. Therefore, regardless of the YDF support the level of livelihood asset ownership is still low indicating that, beneficiaries are still vulnerable as they are unable to withstand shocks, risks and stresses.

5.2 Recommendations

Based on the findings, it is recommended that, the Local Government Authorities (LGAs) should provide entrepreneurship trainings, mentorship, and practical demand-led business development and management to YDF beneficiaries for proper fund and IGAs management and generate income and own livelihood of assets. The LGAs should also provide sufficient loans to youth, empower them on financial management and investment in order to improve their livelihood. The LGAs should collaborate with other like-minded stakeholders in the operationalisation of youth empowerment interventions like YDF by linking unemployed youth to other potential service providers. This will enable youth to access different opportunities like financial and other services that the government cannot afford aiming to improve the level of asset ownership. The LGAs should establish or strengthen monitoring mechanisms to ensure YDF loans are used productively. For beneficiaries of YDF, it is recommended to, actively and wisely use the loan for economic empowerment by acquiring productive assets and improve their livelihoods.

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Effectiveness of modern teaching methods on students' English performance in secondary schools in Burera District, Rwanda

Mpumuje Maurice^{1*}
Bazimaziki Gabriel²
Nyirahabineza Pascasie³
Uwababyeyi Anastasie⁴
Muragijimana Jean de la Paix⁵
Mfurankunda Pravda⁶

^{1*}mpumujemaurice@gmail.com

¹<https://orcid.org/0009-0005-0406-6028>

²<https://orcid.org/0000-0003-3119-1965>

³<https://orcid.org/0009-0001-1901-634X>

⁴<https://orcid.org/0009-0004-2091-1888>

⁵<https://orcid.org/0009-0005-8717-6264>

⁶<https://orcid.org/0009-0005-4737-9657>

^{1,2,3,4,5,6}University of Rwanda

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ABSTRACT

This study investigated the effectiveness of modern methods of teaching the English language on students' performance in secondary schools within Burera district. Anchored in Vygotsky's Sociocultural Theory, it adopts a mixed-methods approach. This study employed a descriptive survey, integrating both qualitative and quantitative approaches. A systematically selected sample of 368 respondents was drawn from 4561 individuals, including 3788 students, 424 teachers and 349 school staff from 86 secondary schools. Data were gathered through questionnaires aligned with the research questions. The quantitative data were processed using the Statistical Package for Social Sciences (SPSS), involving editing, coding, summarising, and analysis through descriptive statistics. Qualitative data were analysed thematically and presented narratively. The findings revealed that communicative strategies such as language games, role plays, discussion, and the development of grammatical communicative competence within communicative contexts significantly enhance students' English performance in secondary schools. Moreover, it was found that Computer-Assisted Language Learning (CALL) enables the teachers to use poems, chants, stories, drama and games, and pictures to effectively teach English to enhance students' performance. Based on these results, it is recommended that schools establish and sustain the effective application of communicative teaching and learning and computer-assisted language learning, which will improve students' English fluency, proficiency and performance on the whole.

Keywords: English, Modern Standard Teaching Methods, Secondary Schools, Students' Performance

I. INTRODUCTION

Proficiency in English has increasingly become vital for people to thrive in today's globalized world where English serves as lingua-franca in many life domains. As Ali (2022) notes, learning English is essential for accessing new knowledge and opportunities in a global context. Over time, various methods have been used in teaching English, including the Direct Method, Grammar Translation Method, Computer-Assisted Language Learning (CALL) and the Communicative Approach (Sugano & Mamolo, 2021). In Rwanda, English language instruction has evolved significantly from the Grammar Translation Method which emphasized the introducing of grammar rules, written exercises, and a bilingual vocabulary list (Hillman, 2018). Instruction relied on demonstration, objects, pictures, and association of ideas with abstract vocabulary with concrete ideas. With this method, British educators prioritised speech, listening comprehension, correct pronunciation, and grammatical accuracy. Elements of this method remain in use today, particularly in nursery schools where English is taught through visual aids and demonstrations (Almekhlafi, 2022).

In the late 1970s, Communicative Language Teaching (CLT) was originally developed in England and was later extended to additional English speaking nations. Many Asian countries modified their teaching strategies and attitudes

as English gained importance in the global community to address the English language concerns more directly, increase awareness among native English speakers in the classroom, and improve students' speaking abilities and performance (Chien, 2010). The Grammar Translation Method (GTM), Direct Method (DM), Audio-Lingual Method (ALM), Silent Way (SW), and Computer Assisted Language Learning (CALL) were among the methods that were introduced over the past few decades but later became outdated because they were unable to meet the needs of learners (Qing-xue & Jin-fang, 2007). The CLT approach is not considered an effortless one despite challenges that face the learners. One of the reasons is that CLT requires a lot of practice and hard work for teachers and learners (Agbatogun, 2014). The next method which was introduced in Rwanda was the communicative approach which emphasized the teaching of language through the four language modes.

In Rwanda, concerns over declining student performance in English prompted some educators to develop the Integrated English textbook. Grounded in Communicative Approach, this textbook emphasizes learner-centered learning through group discussion, pair works, and integrated exercises (Harmer, 2020). The emergence of Computer-Assisted Language Learning (CALL) reflects a shift among educators and linguists dissatisfied with traditional language teaching methods (Almekhlafi, 2016). Despite various pedagogical innovations, many students remain passive in their speaking ability. Consequently, the integration of Computer-Assisted Language Learning (CALL) is anticipated to improve students' language learning, particularly in developing speaking proficiency (Agbatogun, 2014; Tran et al., 2024; Bhatti et al., 2025, Eragamreddy, 2024). Computer-Assisted Language Learning (CALL) through information and communication technology are expected to help motivate students, develop their knowledge, and attract the attention of each student. Then, when the teacher gives a difficult task, students will find it easier to do it and student participation will reach a higher level when technology is used as part of the learning process. According to Ngoc (2023) teachers should apply the appropriate approaches and strategies if they want their students to be able to use the language. As a result, teachers must choose effective teaching methodologies for foreign language learners in order for students' future output to be of higher quality. Because there are many aspects to consider when teaching English to students in secondary schools in Rwandan in order to create an effective teaching-learning process.

Communicative and computer assisted technologies integrate the grammar translation, reading, audiovisual and audio-lingual method in an attempt to make communication in the target language as easy as possible (Ngubane et al., 2020). Richards and Rodgers (2001) suggest that to improve learners' speaking ability communicative language teaching approach (CLT) and CALL can be used. According to Humaera (2015), inhibition is condition in which someone or students are losing face, worry about making mistakes and afraid of the attention that their speech attraction. According to El-Ghonaimy (2015) expressed that lack of topical knowledge, sometimes when the teacher asks the students to speak, they cannot say anything, low participants of the students, personality of the students Albiladi (2019) state that mother tongue use, the mother tongue use is so influence to the students speaking skill.

Many studies had been conducted to discuss computer-assisted language learning application in teaching English in schools. For example, Reinders and Chong (2024) posit that the use of Computer assisted language learning is increasingly growing among the new methodologies in the pedagogy of English language. A study by Chiu et al. (2007) discussed the application of a novel computer-assisted language learning application called Automatic Speech Recognition (ASR) to help the students engage in meaningful speech interactions and debate activities. His findings revealed that this language teaching approach permits the students to have high performance in speaking, writing and reading English.

El-Ghonaimy (2015) found that integrating CALL is the best English teaching method for improving the students' speaking proficiency and performance. Uwizeyimana (2018) carried out an investigation on the effect of the application of CALL in enhancing English proficiency in schools in Rwanda. His study noticed that the focused group improved their English language proficiency more than those in the control group. Consequently, EFL learners need to be provided with effective techniques and tools to improve their oral competencies and to create a relaxed atmosphere when they can use language.

1.1 Statement of the Problem

Students' poor performance in English language has been and is still a worrying issue that needs be examined without scant attention. While Teaching English to young learners presents several challenges that impact global perspectives and local realities, Copland et al. (2014) found out that the students are continuing to perform poorly in English language. Second-language learners often struggle to understand texts due to insufficient fluency and a restricted range of vocabulary. In Rwanda, English is a language that helps its citizen to integrate and connect regionally and internationally, with diverse parts of the globe not only for communication technology (ICT), but also education, business, tourism, among other things. However, the performance of secondary students in that language still poses unsolved questions. Inherently, students do not speak English at the expected level, and their language proficiency remains poor in secondary schools (Ministry of Education [MINEDUC], 2022). Therefore, this study sought to investigate the effectiveness of Communicative Language Teaching method (CTL) and Computer-Assisted Language

Learning (CALL) on students' English performance in secondary schools in Rwanda with particular interest in schools of Burera District. The study was guided by the following question: "Are Communicative Language and Computer-Assisted Language Learning used as modern English methods to improve students' speaking skills in secondary schools within Burera District?"

1.2 Research objectives

- i. To evaluate the impact of communicative Language teaching methods on the students' English performance in secondary schools within Burera District.
- ii. To examine the influence of computer-assisted Language Learning (CALL) on students' English performance in secondary schools within Burera District.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Vygotsky's Sociocultural Theory (1978)

A theoretical framework for this study posits that modern, learner-centered methods (independent variable: e.g., task-based instruction, CLT activities, cooperative learning, flipped classroom, project-based learning/PBL) mediate learning processes (engagement, opportunities for output, peer/scaffolded support) which in turn improve English performance outcomes (dependent variable: test scores, speaking ratings, pass rates). Contextual moderators include teacher training, resources/ICT access, class size, and language background.

The theoretical foundation for modern, learner-centered English teaching is rooted in sociocultural and constructivist theories which foreground social interaction and active meaning-making (Vygotsky, 1978). Communicative Language Teaching (CLT) and Task-Based Language Teaching operationalize these ideas by centering real communicative tasks and interaction in the classroom (Canale & Swain, 1980; Richards & Rodgers, 2001). Empirical studies report positive effects of CLT, TBLT, cooperative learning, and flipped-classroom strategies on learners' engagement, speaking ability and perceived academic performance, although results depend on teacher preparation and resource availability (Barungi et al., 2024; East, 2015; Baingana, 2024). These findings motivate a focused, district-level study in Burera to determine whether and how modern methods affect standardized English outcomes when contextual moderators (teacher training, ICT access, class size) are measured, and implementation fidelity is documented.

2.2 Empirical Review

This section presents the literature review related to effect of communicative language and Computer-assisted Language Learning on students' performance in English in secondary schools.

2.2.1 The Impact of Communicative Language Teaching on students' English performance

Communicative Language Teaching (CLT) is a teaching method of 21st century which unquestionably takes a very important place, if not central place in many African countries' curriculum for secondary schools and high learning institutions (Kasumi, 2015). The essence of CLT is the commitment of the students in communication to allow them to develop their communicative competence. The elaboration of what is known as CLT can be traced to concurrent 20th-century developments in linguistic theory and language learning curriculum design both in Europe and in North America (Savignon, 2007). A good curriculum is generally a system highly dependent on the environment which embodies and consists of completely different elements, such as teacher training, qualification standards, political expectations and traditions (Ministry of Education, Science, Technology and Innovation [MESTI], 2021). In Malaysia, English teaching curriculum strongly emphasizes the CLT and Task - Based Learning (TBL) to which relate to the (laissez-faire) curriculum, where the student is independent to communicate and to optimize the topic or situation to talk about. This approach aligns with critical curriculum theory, which emphasizes learning language not merely for academic achievements, but for practical, real-world application in everyday contexts, such as airports, restaurants, shops, streets, churches and any other places out of the school compound (Melviza, 2017).

In Africa, the introduction of CLT in teaching approach in secondary schools aims to improve students' performance in English listening, reading and speaking, while promoting communicative competence as a core teaching objective (Mutolwa & Mwanza, 2025). Indeed, English as a target language is a tool for communication in the classroom in many African countries in Africa, including Ghana, South Africa, Zambia, Kenya, Uganda and Rwanda (Ngubane et al., 2020). A function may have different linguistic forms. Since the focus of the course is the real use of language in all school activities to improve the students' performance in English. In Africa, the introduction of CLT in teaching approach in secondary schools aims to improve students' performance in English listening, reading and speaking, while

promoting communicative competence as a core teaching objective (Mutolwa & Mwanza, 2025). . In Rwanda, the CLT method has been implemented since 2010 and even a little earlier for some stages. Currently, the teachers of English focus more on communication skills, cooperation, and group work activities to allow their students to overcome the obstacle they encounter while talking (Republic of Rwanda, Ministry of Education, 2020). Furthermore, priority is given to speaking skills through listening, reading, and writing practices in the target language. Thus, to encourage students to be familiar with English teachers do not allow students to speak in their first language (Bazimaziki, et al, 2019). This will develop learners' target language competency and encourage them to speak the language creatively and perform well English.

2.2.2 Influence of Computer-Assisted Language Learning (CALL) on Students' Performance in English

Computer-assisted Language Learning is gaining more polarity in language learning and teaching (Dwivedi & Seema, 2022). It is a teaching and learning method that depends on the use of computers and electronic devices such as the Internet to present, reinforce, and assess the English or other subject to be learned (Nezhad-Arani, 2018). Sukmara et al. (2025) defined CALL as "any visual, audio, text, or graphic format associated with the conveyance of information via technology). Albiladi (2019) states that teaching English in English as Foreign Language (EFL) countries is a challenging task, especially the teaching of pronunciation, speaking and reading because of lack of interaction with target language and lack of motivation. In Indonesia, many English teachers use computer devices to aid their students' language instruction in school and enable them to perform well in all four English skills (Reading, writing, speaking and listening) (Kisno, 2024). In Kenya, many teachers use computer devices to aid their students to perform well in English (Rashid et al., 2010).

In Democratic Republic of Congo, a PowerPoint presentation is one of the most common computer-assisted language learning methods. Both teachers and students are enthusiastic about language learning in the classroom using laptops, smart boards, the internet, and other technology to practice discussions, playing games, singing songs, oral reporting, role playing, small group discussions, giving speeches, news reading, poetry reading and debates (Kasanga, 2022). With regard to the learners' improvement of their English-speaking proficiency, another method that East (2015) puts up is using the storytelling wherein language learners are exposed to new vocabulary, real context expressions and pronunciation to be used in oral production, to do so, application of computer assisted approach (British e-dictionary) to enhance English pronunciation can help learners to know how a given word is pronounced correctly.

In many secondary schools in Rwanda, technologies and modern teaching mechanisms were fostered since 2015. Due to the efficiency and effectiveness provided by modern technologies, especially in teaching language, dynamic and self-motivated learning can be encouraged (Majaliwa et al., 2024). Many language learners in the age of globalization focus their studies on connecting with foreigners in English so that they can be integrated into the world as universal citizens which as real case of globalization many Rwandese are facing (Kral, 2022).

In general, attention to the use of digital tools in L2 learning is still beneficial in the digital era (Zhang et al., 2021). Modern teaching techniques and language pedagogy emphasize an immersive setting or a more active training method in which students can use English as a real-life communication tool rather than learning for the sake of passing an exam which indicate their proficiency and performance in English (Chien, 2010). Importantly, CALL can be utilized with a number of tools and applications to educate and acquire vocabulary, pronunciation, listening skills, writing abilities, and even reading skills in English in Rwanda as suggested by MINEDUC through Rwanda Education Board.

III. METHODOLOGY

3.1 Research Design

This study employed a descriptive survey, integrating both qualitative and quantitative approaches to investigate the effectiveness of modern standard methods of teaching English on students' performance in English in secondary schools across Burera district., A cross-sectional survey was utilized to capture the attitudes, opinions, and as experiences of teachers, students and head teachers. This design was deemed appropriate as it allowed the collection of extensive data at a single point in time, offering efficiency and cost-effectiveness (Lodico, et al, 2020). Moreover, the cross-sectional approach was appropriate for gathering information from a diverse population segment within a short timeframe, allowing for generalization of the findings to the broader study population.

3.2 Research Setting

The research was conducted in several secondary schools situated in Burera District, a region in Northern Province of Rwanda. This setting was chosen based on its socio-cultural and linguistic context, providing a valuable insight into second language learning and communicative competences of learners. The selection of schools is based on their accessibility, willingness to participate in the study, and their relevance to the study objectives.



3.3 Research Population

Willie (2024) defines the target population as the particular group of individuals from whom a researcher plans to gather data for a study. This research targeted a population from 86 secondary schools in Burera District, consisting of school staff, students, and teachers.

3.4 Sample Size

Creswell (2009) states that sample size denotes the quantity of individuals or observations selected for participation in a study or experiment. It is a statistical subset drawn from the larger population to serve as its representation. Using systematic random sampling, the sample size was determined from 3788 students, 424 teachers and 349 school staff. Applying the Slovin’s formula at a confidence interval of 95% and margin of error of 5% or 0.05, the sample was determined as follows:

$$n = \frac{N}{1 + N(e^2)}$$

$$n = \frac{4561}{1 + 4561(0.05^2)}$$

$$n = \frac{4561}{1 + 4561(0.0025)}$$

$$n = 367.82 \approx 368$$

Considering different categories of the target population, the researcher uses the stratified, quota and purposive sampling techniques to get different elements of the sample. According to Creswell (2009), if a population from which a sample is to be drawn does not constitute a homogeneous group, stratified sampling technique is generally applied to obtain a representative sample, and then the selection of items from each stratum is made to constitute the sample. Thus, after the researchers determined the categories and number of individuals from each category, the elements from stratum 1 of school leaders were determined using proportional allocation. This group was chosen because it represents a significant portion of respondents with similar characteristics from whom qualitative data had been collected. Under the proportion allocation, the sizes of the sample from strata are kept to the size of the strata using the following formula:

$$n_1 = \frac{n * P_1}{N}$$

n_1 represents the sample size for stratum one; n represents the total sample size; P_1 represents the proportion of population in stratum one; and N represents the total population. Therefore, sample size for students is shown and presented in table 1 as follows:

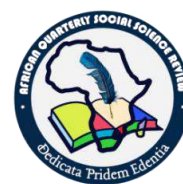
Table 1
Respondents Sampling Selection Breakdown

Category of population	Number	Ratio calculation	Sample ratio	Sample calculation	Sample size
School leaders	349	349/4561	0.0765	0.0765 *368	28
Teachers	424	424/4561	0.0929	0.0929*368	34
Students	3788	3788/4561	0.8305	0.8305*368	306
Total	4561				368

The researcher dealt with 28 school leaders, 34 teaching staff (teachers) and 306 students. The size of sample for each category of school staff was obtained using proportion of population in each stratum.

Table 2
Respondents Sampling Selection Breakdown

Respondents	Targeted population			Sampling	Research tools
	Population		Sample size		
School staff	Head teachers	86	7	Purposive sampling techniques	Interview
	Director of studies	86	7		
	Matron	53	4		
	Patron	38	3		
	Accountants	86	7		
S. total		349	28		
Teachers		424	34	Simple random	Questionnaire
Students		3788	306	Simple random	Questionnaire
Total		4561	368		



3.5 Research Instruments and Data Collection

Data was collected using a structured questionnaire through direct interview. The researchers used face-to-face semi-structured interviews to explore 28 school staff viewpoints and opinions about the theme. Questionnaires were given to 34 teachers and 306 students. Findings obtained supplemented information from interviews and documentary reviews. The researchers reviewed a range of documents such as Rwanda Education Board (REB) documents, school enrolment records, schools ‘code of conduct, school’s black books, letters from student suggestion boxes, newspapers and district reports. These sources were analyzed to gather information pertinent to the study, particularly related to the impact of modern technologies on the students’ English performance in secondary schools across Rwanda.

3.6 Data Presentation and Analysis

The present study applied quantitative analysis employing statistical analysis using IBM SPSS statistics version 20.0 to evaluate data. Quantitative data collected using questionnaires were analyzed using SPSS with descriptive statistics. Additionally, the researchers used frequencies, percentages and mean values to interpret the quantitative data. Qualitative data obtained through interview was handled using narrative analysis.

The data collected on the effectiveness of Communicative Language Teaching and Computer-Assisted Language Learning on students’ performance in English in secondary schools were edited, coded, and summarized. Quantitative analysis was conducted through a series of stages, including data assembly, comparison, interpretation and reporting of findings. The quantitative data were presented in the form of tables and mean score using Statistical Package for Social Science (SPSS) and presented in tables. The respondents’ data was analyzed, and results are tabulated. Frequencies and percentages as well as mean scores were calculated for analyses. Qualitative data was presented in form of notes, word for word transcripts, single words, brief phrases and full paragraphs. Data was interpreted by content analysis composing explanations and substantiating them using the respondents’ open responses. The study was approved by the district and permission was obtained from each involved secondary school in Burera District.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Response Rate

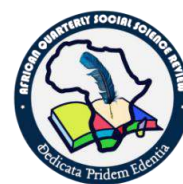
Participants in this study included 368 secondary school students, teachers, and leaders from Burera District, Rwanda. These respondents answered questions aimed at evaluating the effectiveness of modern teaching methods on students’ performance in English. Their responses provided valuable insights into various aspects of students’ achievement in the English language. The findings are organized according to the study’s objectives, with the research questions addressed and answered accordingly.

4.1.2 Influence of Communicative Language Teaching methods on the students’ English performance in secondary schools within Burera District.

To investigate the impact of Communicative Language Teaching methods on students’ English performance in secondary schools in Burera District, the following research question was formulated: ‘What is the effect of Communicative Language Teaching methods on students’ English performance in these schools?’ The findings are summarized in the table below.

Table 3
Influence of Communicative Language Teaching Methods on the Students’ English Performance

Statements	Agreement		Disagreement		Mean Value
	F	%	F	%	
Language game improves students’ English performance	300	88.2	40	11.8	3.79
Role plays improve the students’ English performance	302	88.8	38	11.2	3.81
Discussion as the communicative teaching activities leads to high students’ English performance	330	97.0	10	3.0	3.97
Informative gap activities improve the students’ English performance	331	97.3	9	2.7	3.98
Interactivity through a language lead to the students’ English performance	288	84.7	62	15.7	3.66
The grammatical communicative competence teaching improves the students’ English performance	329	96.7	11	2.3	3.95
Sociolinguistic communicative competence increases the students’ English performance	271	79.7	69	20.3	3.49
Average mean					3.807



In the above table, it is important to consider Agreement as (strongly Agree & Agree), Disagreement as (Disagree & Strongly Disagree), F= Frequency and % = Percent.

Table 3 shows that most of respondents strongly agreed that Communicative Language Teaching methods improves the students’ English performance in secondary schools in Burera District as it was shown by the average mean ($\mu=3.807$) tends towards maximum value 4 (Strongly agree). The survey revealed that 88.2% respondents agree that using language game as the Communicative Language Teaching strategy enhances students’ English performance. Similarly, 88.8% teachers and students strongly agreed that role plays improve the students’ English performance. In the same manner, a bigger portion of respondents strongly agreed that Discussion (97.0%), informative gap activities (97.3%) and grammatical communicative competence as the communicative teaching activities lead to high students’ English performance in secondary schools in Burera District. Finally, the majority (84.7%) strongly agreed that Interactivity through a language lead to the students’ English performance while 79.7% agreed that sociolinguistic communicative competence increase the students’ English performance. Basing on the findings in table 3, the overall decision is that majority of respondents strongly agreed that language game, role plays, Discussion, Informative gap activities and grammatical communicative competence enable the students to be establish a meaningful interactivity through a language and carefully about the language they hear which improve their competencies in English pronunciation, vocabulary, grammar, fluency and English comprehension as the indicators of students’ English performance. This finding agrees with previous research (Ngoc, 2023; Wulandari et al. 2019; Sukmara et al., 2025; Jayesh & Singh, 2023).

Findings from interview revealed that CLT method encourages more communication skills, cooperation, and group work activities to allow their students to overcome the obstacles they encounter while talking. One key informant added that CLT gives priority to speaking skills through listening, reading, and writing practices in English which is needed for the students in our secondary schools. One head teacher argued that CLT helps to avoid students’ use of their mother tongue in classrooms which will develop learners’ English language competency and encourage them to speak the language creatively. In contrast, when learners are allowed to use their mother tongue in EFL, they produce more coherent and imaginative English outputs (Jayesh & Signh, 2023; Vu et al., 2023).

4.1.3 Influence of computer-assisted Language Learning on students’ English performance in secondary schools in Burera District

To investigate the effect of Computer-Assisted Language Learning on students’ English performance in secondary schools across Burera District, the following research question was formulated: “What is the impact of Computer-Assisted Language Learning on students’ English performance in these schools?” The findings are presented on the table below.

Table 4
Influence of Computer-Assisted Language Learning on Students’ English Performance

Statements	Agreement		Disagreement		Mean Value
	F	%	F	%	
Computer assisted language learning facilitates better knowledge retention in the English subject	292	85.8	52	14.2	3.71
It helps the students to find appropriate word sounds, phonology and performing well in English	340	100.0	0	0.0	4.00
It attracts active participation of students in the English subject’s classes and therefore improves learner’s performance in the subject	189	55.5	151	44.5	2.71
It enables practice of collaboration skills and improves on the learners’ academic performance in the English subject	110	32.3	230	67.7	1.99
It helps the students to correct pronunciation errors and mistakes and improve performance	337	99.1	4	0.9	3.99
CALL enables the teachers to use Poems, Chants, Stories, Drama and Games, pictures to effectively teacher English to enhance students’ performance	340	100.0	0	0.0	4.00

Referring to table 4, all respondents (100%) unanimously agreed that CALL supports the students in identifying appropriate word sounds, phonology and performing well in English. The same percentage of respondents knew that CALL enables the teachers to use Poems, Chants, Stories, Drama and Games, pictures to effectively teacher English to enhance students’ performance. The survey showed that a big portion of respondents (99.1%) strongly agreed that CALL enables practice of collaboration skills and improve on the learners’ academic performance in the English subject while few respondents (55.5%) agreed that CALL attracts active participation of students in the English subject’s classes and therefore improve learner’s performance in the subject. Nevertheless, 67.6% respondents disagreed that CALL enables



practice of collaboration skills and improve learners’ academic performance in English subject. Basing on the general findings on the second objective, it is noticeable that computer-assisted Language Learning enhanced students’ English performance in secondary schools within Burera District, this is evidenced by the overall mean value ($\mu=3.40$) indicated that respondents agreed to the statement.

The quantitative data are in line with the interview results. The school leaders confirmed that they have observed noticeable improvements in their students’ English proficiency following the integration of CALL in the classroom. One head of academic affairs stated that using audio-visual aids and Internet to present and learn English, the students at my school became more active and engaged in conversations on purpose, they are motivated and focused and demonstrated a positive reaction towards the used tools. Therefore, it should be concluded that students must practice listening to imitate the language in order to build speaking abilities. One of Head teacher in another school noted that CALL provide a variety of listening options and speaking proficiency in English. A key informant (Matron) clearly argued that girl students at my school through use of computer communicate effectively with other students to share homework, discuss the English topics, having oral expressiveness which is significantly linked to listening, writing, speaking and reading English.

Other key informants share the views and perceptions that their students learnt more about how to participate, communicate, and interact with one another in English by using computer resources such as headphones, speakers, and data-shows to effectively capture all four English skills and in educational settings, educators frequently employ technologies to enhance the learning process and make student activities more accessible. Using computer to display Pictures, songs, games and movies for instance, allow students to elaborate on their ideas or narratives by deriving inspiration from images, movies, songs and expressing themselves in their unique language and preferred style. All respondents confirmed that incorporating CALL is effective in enhancing students' speaking skills and performance. The Head of Studies explained that

“Using computer and internet as CALL tools, pictures, movies, songs are displayed, and this stimulates learners' attention, retention, helping build mental concepts that can later be expressed verbally which is crucial for improving spoken English, especially when learners are prompted to provide verbal comments about the pictures, movies, songs and others” (L. Hakizimana, personal interview, May 15, 2025, 10:00 a.m.)

Table 5

Modern Teaching Methods and Students’ Performance in English Subject in Secondary Schools in Burera District, Rwanda

Model	R	R Square	Adjusted R Square	β	p-value
1	.892 ^a	.798	.795	.337	.027

Predictor: Modern teaching methods **criterion:** Students’ performance in English

Table 5, the Model shows that 79.8% of variation in student performance is explained by Modern teaching methods ($R=.798$). It also shows a significant relationship between modern teaching methods and students’ performance in English subject in secondary schools in Burera district, Rwanda ($\beta= .337, p= .027 < .05$). These results mean that a one- unit increment in modern teaching methods will result in .317 units of increase in students’ performance in English. Based on his, the researchers confirm that the study purpose was achieved, as modern teaching methods affect positively the students’ performance in English subject.

4.2 Discussion

The results in this study were discussed in this section based on both research objectives and research questions. In this section, the primary findings are examined in connection to the literature and research done previously. The study survey revealed that 88.2% respondents agreed that Language game as the communicative language teaching mechanism improves students’ English performance. The findings collaborate with the literature that language game is an enjoyable activity that make students enjoy learning valuable communicative practice in English to improve their retention, knowledge and performance (Freemanin, 2017). The results also revealed that 88.8% respondents (teachers and students) strongly agreed that role plays improve the students’ English performance. This is supported by Kasumi (2015) and Wulandari et al. (2019) who say that role play gives learners practice to speak in the target language before they apply it in a real environment.

Role play is an essential communicative technique which develops fluency, promotes interaction in the classroom and increases motivation to perform better in English. Furthermore, respondents strongly agreed that discussion (97.0%), informative gap activities (97.3%) and grammatical communicative competence as the communicative teaching activities lead to high students’ English performance in secondary schools in Burera District. The above findings collaborate Savignon’s (2007) views that Discussion, Informative gap activities and grammatical communicative competence enable the students to be carefully about the language they hear to improve their

competencies in pronunciation, vocabulary and grammar acquisition in English. The present study shows both students and teachers' positive perceptions of using CALL as a learning or teaching tool to improve English language speaking abilities and performance in secondary schools within Burera District. CALL application has been an essential ingredient in today's English-speaking related activities. The study results revealed that CALL helps the students to find appropriate word sounds, phonology and performing well in English. These findings are supported by Agbatogun (2014) that CALL helps the students to correct pronunciation errors by their own to enhance speaking skills and their performance.

All teacher and student respondents strongly agreed that CALL enables the teachers to use Poems, Chants, Stories, Drama and Games, pictures to effectively teach English to enhance students' performance. These findings are supported by Kisno (2024) who stated that CALL enables the teachers to use media such as poems, chants, stories, drama, games, pictures, movies and Total Physical Response (TPR) activities to enhance English speaking skills among the learners. To this research, these media can be used to teach language and enhance the students' English interlanguage for more language performance in primary, secondary and high learning institutions. The survey study showed that a big portion of respondents (99.1%) strongly agreed that CALL enables practice of collaboration skills and improve on the learners' academic performance in the English subject. The findings are consistent with previous studies that Computer-Assisted Language Learning (CALL) through information and communication technology are expected to help motivate students, develop their knowledge, and attract the attention of each student and collaborative attitudes and high performance (Nezhad-Arani, 2018). However, using CALL that allows students to participate in oral-gap exercises and role-plays outside of the classroom and with or without the participation of the teacher is a potential solution to the lack of classroom speaking practice (Almekhlafi, 2022).

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study underscores that language game, role plays, discussion, informative gap activities and grammatical communicative competence enable the students to establish a meaningful interactivity through a language and carefully about the language they hear to improve their competencies in English. The researchers concluded that Communicative Language Teaching significantly improves the students' speaking skills and performance in secondary schools in Burera District. However, application of CALL in teaching English is a paramount important modern teaching approach as it allows the English teachers to use various media to enhance learners' proficiency in spoken English such as include cooperative activities, the use of poems, songs, pictures, stories, videos, drama, games, and role play. In short, the findings underscore the use of CTL and CALL to enhance learners' English proficiency and performance in secondary schools within Burera District.

5.2 Recommendation

Based on the study findings, it is recommended that teachers adopt a multifaceted instructional approach to enhance English language outcomes. Specifically, they should incorporate Communicative Language Teaching (CLT) strategies to enhance students' speaking skills and overall English proficiency, utilize Computer-Assisted Language Learning (CALL) tools to create engaging and effective learning experiences, and encourage cooperative and interactive classroom activities that promote meaningful use of English in communication.

School administration should provide training and continuous professional development opportunities for English teachers to support the effective integration of modern teaching strategies in secondary school classrooms. They should also foster an environment that encourages the use of interactive and technology-enhanced teaching methods to improve students' language competencies and performance across Rwanda, with focused efforts within Burera District in particular. Lastly, future studies should consider conducting similar studies in different districts or regions to compare the impact of CLT and CALL across diverse educational contexts.

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Factors influencing persistence of violence against children in Mjini Magharibi “B” District, Zanzibar, Tanzania

Rukaiya Shauri Khamis¹
Luhuvilo Mlungwana Lupondo^{2*}
Emanuel Amon Kikwale³

^{2*}llupondo@irdp.ac.tz

^{1,2,3}Institute of Rural Development Planning, Tanzania

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ABSTRACT

This study examined the socio-economic factors influencing child violence at Mwanakwerekwe Shehia in Zanzibar. The study was guided by social learning theory and the social ecological model. A cross-sectional research design was utilized to gather data from 90 household heads (respondents) via interviews, focus group discussions, and documentary reviews. Respondents were selected randomly using simple random sampling from a population of 1,226, including all parents or guardians in Mwanakwerekwe Shehia. In addition, key informants such as community leaders were selected by purposive sampling. Descriptive statistical methods were used to analyze the demographic characteristics of respondents, and inferential analysis (multiple linear regression) was employed to examine socio-economic factors that influence the persistence of violence against children. The study observed that the socio-economic factors influencing violence against children (VAC) were household income ($p = 0.007$), child disability ($p = 0.003$), marital status of parents ($p = 0.002$), parental emotional bond level ($p = 0.000$), exposure to violent environments ($p = 0.001$), and uncontrolled media use ($p = 0.042$). These findings indicate that there is a statistically significant relationship between all the mentioned variables and violence against children in Zanzibar. To reduce child violence, the study recommends that the government should strengthen social support systems to provide support to families for their necessary needs. In addition, local government authorities should enhance awareness campaigns to raise awareness about the rights of children and the harmful effects of violence. Moreover, the government should strengthen law enforcement mechanisms to protect child rights and establish a clear mechanism for reporting and addressing violence.

Keywords: Child, Child Protection, Mjini Magharibi “B” District, Violence Against Children, Tanzania, Zanzibar

I. INTRODUCTION

Violence against Children (VAC) is a serious public health issue worldwide. It encompasses all forms of violence against people under 18 years, and perpetrators can be peers, caregivers, romantic partners, strangers and even parents. It includes sexual, physical, psychological, neglect, commercial or other exploitation. It occurs in all countries at all levels of development and affects children of all ages (World Health Organisation [WHO] & United Nations Children Fund [UNICEF], 2020).

It is estimated that globally, around one billion children aged between two and 17 suffered from physical, sexual, or emotional violence or neglect in 2019. In 2015, 54% of children within the same age group encountered violence, with the highest prevalence rates in Africa, Asia, and North America, where at least 50% of children experienced violence in the past year (Hillis et al., 2016; WHO, 2020). Factors such as substance abuse, poor emotional connections, low educational attainment, ineffective parenting, family instability and separation, overpopulation, weak social cohesion, insufficient social protections, enforcement of discriminatory laws and policies, along with societal norms that accept violent behaviour, contribute to violence against children (Hillis et al., 2016).

Violence against children is more pronounced in less developed nations that have limited financial resources for strengthening child protection systems, inadequate infrastructure to ensure equal access to all children; increased instability from armed conflicts, natural disasters, political unrest as well as availability of infectious and chronic diseases that limit the ability of children to defend themselves (Schleussner et al., 2016; Crea et al., 2018; Kushitor & Boatemaa, 2018).

Exposure to violence in early childhood can greatly affect brain development and impair learning capabilities. It frequently results in a range of behavioural and emotional challenges. Children who experience violence are more prone to face legal issues and involve themselves in risky behaviours during adolescence and adulthood, including



substance abuse and unsafe sexual practices. Furthermore, individuals who witnessed or experienced abuse are at an increased risk of becoming either victims or perpetrators as they mature (United Republic of Tanzania [URT], 2024).

In Africa, based on a global prevalence study on violence conducted across 24 African countries, it was found that 50% of adolescents aged 15–17 experienced physical, sexual, or emotional abuse (Hillis et al., 2016). Additionally, UNICEF (2017) indicated that in 2016, half of the children aged 2-17 were subjected to one or more types of violence. Notably, a much higher percentage of younger children aged 2-14 faced any form of violence at 87%, compared to 51% of adolescents aged 15-17 (UNICEF, 2017).

In East Africa, the rate of violence against children (VAC) is notably higher in Kenya compared to Uganda, Rwanda and Tanzania (Okova et al., 2025). The report indicates that nearly half of the females and more than half of the males reported experiencing violence in 2018, with physical violence being the most common type of childhood violence, impacting almost two out of five females and about half of the males. In Uganda, 40% of girls and 60% of boys aged 13 to 17 encountered violence in 2014, with a greater prevalence among boys than girls.

In Tanzania, based on the VAC study, 28% of girls and 13% of boys experienced sexual violence, predominantly occurring within their homes. 73% of girls and 72% of boys faced physical violence primarily in the forms of being punched, whipped, or kicked, with the majority (60%) being targeted by a relative. One-quarter of children, regardless of sex, were subjected to various types of emotional abuse. Additionally, three out of four children aged 2 to 14 faced some form of abuse, with psychological abuse being more prevalent than physical abuse. Three-quarters of children experienced psychological violence while about half were subjected to physical punishment (URT, 2024). Also, between January and June of 2018, there were 6,376 reported incidents of child violence, which is an increase of 1,648 compared to the same period in 2017, with 91% of the reported cases being sexual violence and 9% classified as physical and psychological violence. Most of the incidents were domestic in nature, linked to inadequate care and parental guidance, a lack of knowledge regarding parenting and child care among parents and guardians, household poverty, beliefs in witchcraft, limited awareness of child rights and family breakdown (Ngaiza & Omari 2021).

In Zanzibar, more than 6% of girls (over 1 in 20 girls) and 9% of boys (at least 1 in 10 boys) surveyed stated that they had experienced at least one incident of sexual violence before turning 18. The most common forms of childhood sexual violence that were reported included attempted unwanted sexual intercourse, unwanted sexual touching, and coerced unwanted sex. According to reports, the most common places where sexual violence occurred for both boys and girls were in someone's home, at school or while commuting to and from school. A thorough understanding of factors influencing violence against children specifically at Mwanakwerekwe in Mjini Magharibi B District, Zanzibar is essential to inform policy makers, planners and all other stakeholders engaged in child protection to curb VAC in the country.

1.1 Statement of the Problem

Violence is a reality that many children in Zanzibar face. This violence often comes from parents, caregivers, teachers, strangers, and other adults in nurturing or authoritative roles who engage in aggressive behaviours. Such violent actions not only put children in danger but also violate their rights (UNICEF, 2017). To address this problem (VAC), the revolutionary government of Zanzibar has implemented policies such as the National Strategy for Growth and the Reduction of Poverty (MKUZA II), the National Plan of Action to End Violence against Women and Children (2017–2022), Children's Act (No.6) of 2011, place the prevention of and response to violence against children at the core of the National development agenda. Despite these efforts, incidents of violence against children continue to be a significant concern with enduring consequences for the children. In 2020, the Gender Desk Office reported a total of 1,146 cases of violence, with 84.1% being cases of sexual violence against children. Out of these cases, 899 (78.4%) involved girls, while 247 (21.6%) involved boys (Babune & Salum, 2024).

While various studies have been conducted in Zanzibar such as those examining the effectiveness of laws, strategies and national efforts to combat violence against children (Ahmed, 2016; Kheri, 2017; Marzuk, 2017), the role of health professionals in preventing and responding to child sexual abuse (Babune & Salum, 2024), and the knowledge, attitudes, and practices regarding child abuse as well as studies on the economic factors influencing sexual violence against children in school settings (Msambila & Abdallah, 2021), still little is known on socio-economic factors influencing violence against children specifically at Mwanakwerekwe Shehia in Mjini Magharibi B District, Zanzibar.

1.2 Research Objectives

The study specifically examined the socio-economic factors influencing persistence of violence against children (VAC) at Mwanakwerekwe Shehia in Magharibi B District, Zanzibar.



II. LITERATURE REVIEW

2.1 Theoretical Review

A theoretical framework for the study of child violence is Social Learning Theory and Social ecological model.

2.1.1 Social Learning Theory

Social learning theory was established by Albert Bandura in 1977. The theory integrates cognitive and behavioural approaches, emphasizing that people learn through observation, imitation, and modelling of others' behaviours in a social context (Bandura, 1977). Based on social learning theory, violent behaviours can be learned. Parents, caregivers or relatives do so because they encountered or witnessed violence at a young age.

2.1.2 Social-Ecological Model

The ecological systems theory was initially proposed by Urie Bronfenbrenner during the 1970s (Bronfenbrenner, 1977). This model is extensively used in public health to understand unsafe or unhealthy behaviours in humans and to change those behaviours by introducing targeted interventions or programs at various levels, including individual, interpersonal, community, and societal. The model posits that the factors contributing to violence are complex, interconnected and exist across multiple contextual levels such as individual, family, community and societal levels. At the individual level, personal and biological characteristics that heighten the risk of violence include younger age, lack of education, low socio-economic status and a history of abuse during childhood. Dynamics among family and peers that influence gender roles are associated with family levels, whereas the community level pertains to the environment in which social relationships occur. The societal level encompasses economic, health, educational and social policies that influence violence against children.

2.2 Empirical Review

2.2.1. Socio-Economic Factors Influencing Persistence against Children

A qualitative study, involving 49 participants conducted in Chakwama, Lusaka, Zambia by Chitundu et al. (2020) by using nine Focus Group Discussions (FDGs) found that parental negligence, heavy alcoholic intake by parents/guardians, parents' lack of control and having prostitute parents were the contributors of child sexual abuse among boys and girls.

Matto et al. (2025) conducted a study on an exploration of the drivers of child sexual abuse in Arusha and Arumeru districts, Tanzania. The study found that globalization and lifestyles, family poverty, excessive alcoholism, and drug abuse were found to contribute to CSA. The study further revealed that family conflict and separation, myths and traditional beliefs and practices were responsible for child sexual violence.

Mbunda and Nyaki (2024) in their study on "Community responses to child sexual abuse practices conducted in Kinondoni Municipality, Tanzania", found that belief in witchcraft is one of the factors for the increase of child sexual violence. Thus, some people abuse their own children or children of their relatives or neighbours for the sake of getting wealth and perceived high social status. A study conducted by UNICEF (2017) on "the drivers of violence against children and positive change in Tanzania," found that, socio-cultural beliefs and practices, child marriage, gender inequality and discrimination, witchcraft and superstition, traditional customs and ceremonies, transactional sex, alcoholism, globalization and decline of public morality, extreme poverty and ineffective responses to sexual violence were the drivers of violence against children.

Msambila and Abdallah (2021) conducted research on "economic factors influencing sexual violence against children in primary schools in the Urban District of Zanzibar, Tanzania." The study gathered information from the sample population through interviews using a semi-structured checklist guide. The findings revealed that poverty and a lack of essential resources for children were the economic factors contributing to the issues faced by primary school children. Children from impoverished families often struggle to meet their basic needs in a timely manner, creating opportunities for perpetrators of sexual violence to exploit these vulnerabilities. Moreover, poverty and economic pressures can heighten family conflicts and increase the risk of violence against children. Families experiencing financial difficulties may have limited access to resources and support networks, which can make them more susceptible to using violence as a method of exerting control (Tagwireyi & Fluks, 2023). Additionally, Maguire-Jack and Font (2017) indicate that both an individual's poverty level and the poverty of their surrounding neighbourhood are significant factors in child abuse.

A study by Ezekiel et al. (2017) investigating factors associated with child sexual abuse in Tanzania revealed factors for child abuse including poverty, ambitions and moral decline, prevalent myths and beliefs, urbanization, influence of foreign cultures, and inadequate parental supervision. Reports indicated that instances of sexual violence took place in the homes of perpetrators, as well as in unfinished buildings, religious schools, and entertainment venues where children could watch movies freely. Those responsible for these crimes were individuals in authoritative positions,



as well as those who had close relationships with and were trusted by the victims. Settings where child sexual abuse occurs often involve overcrowded living conditions and social gatherings that extend late into the night. Family structures and dynamics, including parenting styles and intergenerational transmission of violence, can influence the prevalence of violence against children. Research indicates that children from families with authoritarian or abusive parenting styles were more likely to experience violence (Mwakisiki, 2025).

III. METHODOLOGY

3.1 Study area

This study was conducted at Mwanakwerekwe Shehia which is found in Magharibi ‘B’ district in the Urban West Region in Unguja Island. According to Tanzania population census 2022, Mwanakwerekwe shehia had a total population of 19,729, whereby there were 9,529 males and 10,200 females, with a sex ratio of 93 and 1226 households.

Therefore, Magharibi “B” district with all 34 Shehia has a total population of 344,517, sex ratio of 90, with 71,015 households, and 4.9 average household size. This area has been selected because it is among the districts which have high number of cases of violence against children (Hamdan, 2022).

3.2 Research Design

This study employed a cross-sectional design to assess factors influencing persistence of violence against children in Mjini magharibi “B” district, Zanzibar, Tanzania. This design was chosen by researchers because of its ability to facilitate data collection at a single point in time, making it both efficient and cost-effective.

3.3. Sampling and Sample Size

Both probability and non-probability sampling were used. Simple random sampling was used to select respondents particularly heads of households. Purposive sampling technique was used to select key informants such as Shehia leaders including Community development officer. The study employed a sample size of 90 respondents which involved heads of households.

3.4 Data Collection and Analysis

Both qualitative and quantitative data were collected from both primary and secondary sources through semi structured interview, documentary review and focus group discussion. Primary data were collected direct to community members who were residing at Mwanakwerekwe Shehia. Additional data were obtained from key informants such as community development officer and police officer. Secondary data were obtained through reviewing relevant documents including books, journals, research reports both published and unpublished related to violence against children.

In data analysis, both descriptive and inferential statistical analysis were used. The descriptive analysis, were used to provide general summary and features of the data such as frequencies, mean and standard deviation of demographic characteristics of respondents. Multiple Linear regression was used to analyse the social-economic factors influencing persistence of violence against children in Mwanakwerekwe Shehia. Linear regression was used to examine Multiple factors associated with violence against children.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n \dots \dots \dots \text{Equation i}$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \epsilon \dots \dots \dots \text{Equation ii}$$

Where:

- Y = Violence against Children (Dependent variable)
- X₁ to X₇ = Independent variables
- β₀ = Intercept (constant)
- β₁ = Beta coefficients (measuring the influence of each independent variable)
- ε = Error term (random disturbances)

Table 1*Description and Measurement of Variables*

Variable	Name	Description	Measurement Scale	Expected Effect
	Dependent Variables (Y)			
Y	VIOLENCE	Violence against Children	Frequency and severity of violence experienced by children)	+ / -
	Independent Variables (X)			
X ₁	INCOME	Level of Income	Amount in Tanzanian Shillings	+ / -
X ₂	PEER	Peer pressure	Dummy 1 =peer influence 0 =otherwise	+ / -
X ₃	DISABILITY	Disability/ or chronic illness	Dummy 1= Disability 2= Otherwise	+ / -
X ₄	MARITAL	Marital status	1 =Married 0 =Otherwise	+/-
X ₅	PARENTAL	Parent bond level	Dummy variable 1 =close supervision, 0 = not (Otherwise)	+ / -
X ₆	BREAKDOWN	Family break down	Dummy variable 1=family breakdown 2 =Otherwise	+/-
X ₇	ENVIRONMENT	Exposure to Violence	Dummy variable 1=Exposed to danger environment , 2=otherwise	+/-
X ₈	MEDIA USE	Un limited media use	Dummy 1=Unlimited 0=Otherwise	

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Gender of the Respondents

Out of the total respondents, majority (63%) of the respondents were female. This implies that many females are aware of child violence, which may be due to their major responsibility of taking care of children compared to males. The same results were obtained by a report by Gewirtz and Finkelhor (2020) on child sexual abuse and assault, that mothers are more sensitive to matters related to sexual abuse than fathers.

4.1.2 Marital Status of the Respondents

The results from Table 2 show that majority (52.2%) of the respondents were married. These findings indicate that married people are most responsible in taking care of children and are also easy to identify violence against them. This result is similar to study conducted by Doyle et al. (2012) on the sexual behaviour of adolescents in sub-Saharan Africa, the study reported that married people are emotionally affected much by matters related to any abuse against children.

4.1.3 Age of Respondents

The results in Table 2, indicate that, majority (57%) of the respondents were 40 years and above. This indicates that the aged people have much experience and highly responsible in taking care of children rather than young ages. This result aligns with study conducted by Gershoff et al. (2018) on the strength of the causal evidence against physical punishment of children and its implications for parents, which revealed that parents have much experience on taking care of their children compared to people who do not have children.

4.1.4 Education Status of the Respondents

The results Table 2 show majority (42%) of respondents had secondary education and above. This result reveals that most of respondents who were aware of child violence were educated. This result is consistent with the study done by Gewirtz and Finkelhor (2020) which reported that educated people were much aware of child rights.

Table 2*Demographic Characteristics of the Sample Respondents*

Gender	Frequency	Percent
Male	56	63
Female	34	37
Total	90	100.0
Marital status		
Single	28	31.1
Married	47	52.2
Widow/ widower	8	8.9
Divorce	7	7.8
Total	90	100.0
Age		
Below 18 years	7	8
18- 28 years	10	11
29- 39 years	22	24
40 and above	51	57
Total	90	100.0
Education level		
No formal education	08	09
Primary education	12	13
Secondary education	32	36
Tertiary education	38	42
Total	90	100.0

4.2 Descriptive Analysis for Socio - Economic Factors that Influence Persistence of Violence against Children

The descriptive results indicate that the means percentage of 72, this implies that most of respondents reported these factors are mostly significant for persistence of child violence in Zanzibar. The standard deviation of 19, implies that, there is moderate variability. Therefore, all factors contribute to child violence however; they differ on level of contribution. Example household income, child disability, marital status of parent or guardian, exposure to violence, family breakdown and uncontrolled media use have been reported as significant factors while parental emotion bond level, and peer pressure are seen as moderate factors since they do not contribute much to persistence of child violence.

The following are the multiple responses results from Table 3 and figure 1, indicating the factors that contribute to persistence of child violence in Zanzibar.

4.2.1 Household Income

The results from multiple responses from Table 3, indicate that the issue of income was mentioned several times by many respondents (72%) that, lower income families can contribute a child to being exposed to violence example a girl was associated with sexual violence. Low-income conditions often weaken parental supervision as caregivers engage in multiple informal jobs, leaving children unsupervised and vulnerable to abuse. This result is supported by Msambila and Abdallah (2021) that economic stress within impoverished households reduces tension of taking care children.

4.2.2 Child disability

The result from Table 3 indicates that majority (86%) of respondents reported that, child's disability can be a risk factor for child abuse, as these children are at a significantly higher risk of maltreatment than their peers without disabilities. This result is similar to Stalker and McArthur (2012) that when children have problems with, communication, vision, hearing or physical functioning, they face difficulties of protecting themselves against any form of abuse.

4.2.3 Marital Status of Parents

The result from Table 3, indicates that marital status was a major significant factor. It was highlighted by the majority (82%) of the respondents. This implies that marital aggression among married couples puts children's physical safety at risk. Also, single-parent families or divorce increases the likelihood of child abuse. Moreover, the absence of one parent often leads to increased economic and psychological strain on the caregiver, which can indirectly affect parenting quality and children's overall well-being. This result is consistent with a study conducted by Lamela and Figueiredo (2017), on the comparison study between married parents and divorced parents. The result revealed that children reared by divorced parents had a higher likelihood of experiencing physical abuse.



4.2.4 Parental Emotion Bond Level

The result from Table 3 indicates that, parental emotional bond has a moderate influence to the persistence of child violence, this was mentioned by 53% of the respondents. Generally, parental emotional bond level can be a significant source of children’s vulnerability to violence when the relationship between parents and children is weak, inconsistent, or emotionally distant. A low level of parental emotional bonding often results in feelings of neglect, insecurity and lack of attachment, which can make children more susceptible to both physical and emotional abuse. When parents fail to express affection, empathy, or consistent care, children may seek emotional connection elsewhere, sometimes exposing them to exploitative or violent relationships outside the home. This result aligns with Whitcombe-Dobbs (2020) who observed that if parents are not well bonded in parenting their children, the possibility of their children to be abused is high.

4.2.5 Exposure to Violence environment

The result from Table 3, indicates that, when children live in an environment exposed to violence, the probability of being abused is high. The result from Table 3 indicates 91% of the respondents reported that children exposed to violence, crime, or abuse in their homes, schools, and communities are more likely to be violated. Also, they are more likely to become perpetrators of violence when they become adults. A similar result was reported by Chitundu et al. (2020) on Community Attitudes towards Child Sexual Abuse in Zambia.

4.2.6: Family breakdown

The result from Table 3, indicates that family breakdown is also a major factor for the persistence of children’s violence. 71% of the respondents highlighted it as a major factor. This implies that family breakdown can expose children to violence when children are witnessing or experiencing abuse between their parents. In addition, when children are put in the middle of their parents' conflicts. The instability and stress associated with family breakdown can increase aggressive behaviours in children and make them more vulnerable to future violence (Mooney et al., 2009).

4.2.7 Uncontrolled media use

The result from Table 3, indicates that uncontrolled media use, can expose children to violence, that children may be watching action videos, and think this is real. When children are not limited or supervised in their use of media, they are more likely to be exposed to violent content, which can contribute to increased risks of child violence and behavioural aggression. Unrestricted media exposure including social media, television, online games, and streaming platforms can expose children to violence. Continuous exposure to such content can desensitize them to violence or even normalize aggressive behaviours. This result was similarly reported by Browne and Hamilton (2005), that children learn bad habits from free media. Therefore, the probability of acquiring and practicing or being influenced to practice is high.

Table 3

Multiple Responses: Socio- Economic Factors that Influence Persistence of Violence against Children

Factor	Responses (N)	Percentages (%)	Mean	Standard Deviation
Household Income	80	72	72	19
Child Disability	95	86	72	19
Marital Status of Parents	90	82	72	19
Parental Emotion Bond Level	58	53	72	19
Exposure to Violence	100	91	72	19
Peer Pressure	32	34	72	19
Family Breakdown	75	71	72	19
Uncontrolled Media Use	98	89	72	19

4.3 Regression Analysis of Socio-Economic Factors Influencing the Persistence of Violence against Children

4.3.1 Household Income

The results from Table 4 show that household income has a p-value of 0.007, indicating that, it is a significant factor for persistence of violence against children, meaning that differences in income levels are associated with the occurrence of child violence. The study found that lower-income families have a significantly greater risk of child abuse. This result is similar to the study conducted by Font and Maguire-Jack (2020) which reported that, the income level can be a push factor to child abuse.

One of focus group discussion member reported.....

“Most of children specifically girls are being abused due to family income, most of them are going to street to find money for food and other needs” July, 2025



4.3.2 Child Disability

The result from Table 4 indicates that, child disability level has a p-value of 0.003, showing it is a significant factor, meaning that the disability can limit children to protect themselves from abuse. This may verify that children with disability are at increased risk of experiencing abuse. Physical functioning of the body will influence their vulnerability. This result aligns with Norman et al. (2012), who revealed the long-term health consequences of child physical abuse and emotional abuse. Similarly, Fang et al. (2022) revealed that children with disability, as a group, have a nearly four times higher risk of experiencing violence than their non-disabled peers.

One of Community development officer reported

“Children with disabilities that hinder their ability to walk or run are at increased risk of becoming victims of child violence “August, 2025

4.3.3 Marital Status of Parents

The results from Table 4, indicate that, marital status has a p-value of 0.002, indicating high significance, meaning that single parent specifically single mothers, their children have got high risk of violence from their step fathers. This result is similar to study conducted by Schneider (2017) who revealed that Black mothers' transitions to being single are associated with the risk for child abuse. One of Shehia leaders reported:

“We are concerned because whenever mothers are raising children alone and later get married again, the probability of children to experience violence from new fathers is high. August, 2025

4.3.4 Parental Emotion Bond Level

The report from Table 4, indicates that, child supervision has a p-value of 0.000, indicating a significant factor to child violence. This implies that when parents maintain strong emotion bonds, close supervision and consistent communication with their children, the chances of child abuse are reduced. This result is consistent with a study conducted by Sousa et al. (2011) which revealed that, strong and positive emotional bond between a parent and child is associated with a lower incidence of child abuse, as it improves parent-child communication, leading to positive interactions and enhancing a safer environment for the child.

One of focus group member reported:

“We have been observing that, when parents are close to their children, children get room to talk more openly and share their problems. This situation reduces chances of abuse because if there is any indicator of violence, children feel free to share to their parents” August, 2025

4.3.5 Exposure to Violence

The result from table 4 indicates that, exposure to violence has p value of 0.001, showing that, it is a significant factor. This implies that children who are residing in overcrowded household and high crime rates are more exposed to physical and emotional abuse. A similar result was reported by Cohen et al. (2009) in their study on Understanding Children's Exposure to Violence. One of Key informant (Community Development Officer reported ...

“Children who grow up witnessing violence are at higher risk of being abused and becoming perpetrators of violence because such environments are dangerous to their life” July 2025

4.3.6 Peer Pressure and Family Breakdown

The results from Table 4 indicate that, peer pressure and family breakdown are both have p-values greater than 0.05, showing that these factors have a statistically significant influence to child violence. Children may still be exposed to violence due to peer influence, either through direct advice or by observing violence among their friends, which aligns with social learning theory that emphasizes the role of modelling in shaping behaviour (Bandura & Walter, 1977). Similarly, when family breakdown does not show a strong statistical effect, it can still contribute indirectly to child vulnerability, particularly when separated or divorced parents fail to provide adequate care, supervision, and emotional support.

4.3.7 Uncontrolled Media Use

The result from Table 4 indicates that uncontrolled media use to children has a p-value of 0.04. Therefore, uncontrolled media use is statistically significant. This implies that when children have unlimited use of different programs in media through Information and communication technology (ICT) tools such as television, mobile phones and tablets. In addition, children can watch movies and be attracted to bad behaviours. Repeated exposure to such material can normalize bad behaviours, since they cannot distinguish between real-life consequences and action movies. This result is similar to a study conducted by Finkelhor et al. (2024), on the prevalence of child sexual abuse due to online media. Also, one respondent reported:



“ Nowadays children are highly exposed to various forms of media, through which they learn different behaviours for instance some television programs (movies) show scene of children being subjected to sexual violence for financial gain, then they can also be attracted to get money in such ways” August, 2025

Table 4

Regression Analysis of Socio-Economic Factors Influencing the Persistence of Violence against Children

Model					
Model	R Square	Adjusted R square			
1	0.7712	0.75656			
Regression Coefficients					
Model	Unstandardized coefficients	Standardized coefficients		t	P -value
	B	Std. error			
Constant)	-340.90	221.18			.000
Household income	3.783	4.34		2.759	.007
Peer pressure	98.07	15.22		1.907	.058
Disability	6.21	4.33		3.121	.003
Marital Status	7.346	5.44		3.573	.002
Parent emotion Bond level	0.352	0.273		3.170	.000
Family breakdown	0.114	0.015		1.873	.063
Exposure to violence environment	0.672	0.198		3.392	.001
Un controlled Media use	0.8123	2.012		2.06	0.042

4.2.8 Fitness of the Model

Table 4 further indicates that, the model is better because R square is closer to 1.0 also when R² is high Adjusted R decreases. According to Gujarati and Porter (2009), a higher R² value signifies that the model explains more of the dependent variable’s variation, indicating a better fit. Although the Adjusted R² slightly decreases as R² increases, it remains relatively high, confirming the model’s robustness and explanatory power (Wooldridge, 2016). The results from Table 3 indicates that, most independent variables included in the model were good predictors of child violence such as the household income, child disability, parental emotion bond level, family breakdown and child exposure to violence because all of them were significant at P < 0.05) except two variables which are peer pressure and family breakdown.

V. CONCLUSION & RECOMMENDATION

5.1 Conclusion

The study concludes that, the major factors influencing persistence of violence against children (VAC) at Mwanakwerekwe Shehia in Mjini Magharibi “B” district in Zanzibar are low household income, child disability, marital status of parents, parental emotional bond level, children’s exposure to environment of violence and unlimited media use.

5.2 Recommendations

The study recommends that the government should strengthen social support systems to provide support for families for their necessary needs. In addition, local government authorities should enhance awareness campaigns to raise awareness about the rights of children and the harmful effects of violence. Moreover, the government should strengthen the law enforcement on protecting children’s rights and ensure that a clear mechanism for reporting and addressing violence is established. Furthermore, Parents should make sure that they keep enough time, balance between their work and family so as to raise their children in good behaviours. Lastly, parental control over media should be improved in order to prevent children from imitating bad actions.

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Exploring community-based ecotourism resilience for post-pandemic recovery: Insights from the Kassena Nankana West, Ghana

Samuel Akonga^{1*}
Christopher S. Boatbil²

^{1*}sakonga@bolgatu.edu.gh

¹<https://orcid.org/0000-0002-2208-1302>

²<https://orcid.org/0009-0007-4728-1929>

^{1,2}Bolgatanga Technical University, Ghana

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ABSTRACT

Despite the tourism sector's susceptibility to disruptions, it remains a significant gatekeeper and pillar of rural households in developing nations. This study evaluated the effectiveness of ecotourism resilience strategies in the aftermath of the COVID-19 pandemic. A mixed-methods explanatory sequential design was used with both qualitative and quantitative methods. Qualitative data were gathered from key informants and focus groups through interviews and discussions employing a purposive sampling approach. The resilience theory informed the research process. Wholesalers, retailers, and market leaders of ecotourism items were the objects of study. A sample of 297 respondents was derived from a population of 1,140. Descriptive statistics, i.e., frequencies and percentages, were used in analysing the data. The findings show that the stakeholders embraced resilience measures, including digital infrastructure development, quality improvement of health services, local community involvement in tourism planning, and indigenous cultural heritage enhancement. The adoption of ecologically sustainable practices, including waste management and the protection of heritage resources, also resulted in the revitalisation of ecotourism activities during the post-pandemic era. The strategies, therefore, resulted in spectacular growth in the monthly revenues of the stakeholders. However, sentiments regarding the impact of these measures were mixed; many respondents stated that aid did not trickle down evenly, favouring established players and leaving out smaller or newer businesses. The study recommends policymaking via multi-stakeholder participation to ensure equitable distribution of benefits to all stakeholders.

Keywords: Cultural Heritage, Conservation, Ecotourism, Resilience Strategies, Waste Management

I. INTRODUCTION

The global pandemic has led to unprecedented disruption across various sectors, with tourism being the most severely affected. According to the United Nations World Tourism Organisation (UNWTO), international tourist arrivals plummeted by 74% in 2020 compared to 2019, resulting in over one billion fewer international travellers and a loss of US\$1.3 trillion in export revenues from tourism (Godfrey, 2022). This significant shock necessitated a reconsideration of adaptive strategies in the tourism sector worldwide to enhance resilience, sustainability, and adaptability in the face of prevailing and emerging global uncertainties (Elbaramelgy et al., 2019).

Resilience can be described as the capacity of a system, structure, community, or ecology to withstand, adapt to, and recover from adversity, stress, or shocks (Kong et al., 2022). This is the ability to recover from challenging situations, typically in an even stronger or greater capacity (Antonelli et al., 2022). The tourism industry in Africa, which had been registering steady growth before the pandemic and contributing around 7% of the continent's Gross Domestic Product [GDP], experienced a 75% decline in foreign visitors during the year 2020 (Elbaramelgy et al., 2019), the pandemic revealed structural vulnerabilities of Africa's tourism systems, such as foreign tourist overdependence, digital infrastructure scarcity, and inadequate crisis management systems.

But according to Senbeto (2022), it also opened up the chance of shifting towards more localised, resilient, and inclusive tourism approaches. Several African countries have since employed channels such as promoting domestic tourism (Irmdu, 2022), digitalising tourism businesses, and diversifying tourism products to revive the sector (Musavengane, 2022). Ghana, in particular, had a 70% decline in foreign visitors last year, from 1.13 million travellers in 2019 to approximately 355,000 in 2020 (Preko & Anyigba, 2024). The pandemic had cut short Ghanaian flagship projects like "Beyond the Return," aimed at leveraging the success of Ghana's 2019 "Year of Return." However, the country promptly reshuffled itself by utilising its heritage, ecotourism, and diaspora engagement (Yahaya et al., 2022).

While much of the recovery effort has focused on the southern belt, including Accra, Cape Coast, and Kumasi, the northern five regions, with their own cultural topographies and ecological locations, are under-represented in policy debates and research (Aniah et al., 2025). Northern Ghana, encompassing the North East, Savanna, Upper East, Upper West, and Northern Regions, has untapped tourism potential in forms of cultural festivals, historical sites, wildlife reserves, and community-based ecotourism. Such areas, nonetheless, undergo compound vulnerabilities brought about by limited infrastructure, climatic conditions, and persistent sentiments of insecurity in the area (Aniah et al., 2025).

Despite previous studies on post-pandemic activities in the field of tourism (Senbeto, 2022; Hall et al., 2021; Delgado-Serrano, 2018), there is still some paucity of literature and data regarding the topic under investigation respect to the study area, as such studies have basically centred on the management of natural resources in the wake of the pandemic and the effects of COVID-19 on local tourism enterprises. This study, however, examines the sustainable resilience interventions employed by stakeholders of some tourist destinations within the Upper East Region of Ghana during the recovery period following COVID-19. Thus, the recovery period post-pandemic presents a crucial window for examining how tourism stakeholders in the region are adapting and planning in response to new global travel trends, such as increased motivation for sustainable tourism, e-planning of travel, and health-conscious travel behaviour. The study seeks to answer the following questions:

1.1 Research Questions

- i. What resilience strategies have been implemented to mitigate the effects of the COVID-19 pandemic on ecotourism?
- ii. Are the implemented resilience strategies sensitive to ecological sustainability?
- iii. How do post-pandemic recovery revenue generation patterns compare to the pre-pandemic era in the tourism industry?
- iv. What are stakeholders' perceptions regarding the effectiveness of the resilience strategies in the post-COVID-19 pandemic recovery?

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Resilience theory

Resilience theory, as initially proposed by Holling (1973), was theoretically used in this study. Under the theory, systems, including communities, firms, or industries, possess the capacity to absorb shocks, adapt, and recover through inherent capacity and external support (Fiksel & Fiksel, 2015). The COVID-19 pandemic was an exogenous shock that disrupted tourism activities, livelihood, and overall well-being. To mitigate human-induced and natural threats, local processes such as participation and agency, resource management, income generation, and conservation function as adaptive mechanisms, enabling the capacity of societies to absorb adversity. These processes embody the resilience theory's focus on adaptation peculiar to a context and the utilisation of existing capacities to cushion disruptions.

They influence the main recovery processes of economic recovery and diversification, social cohesion and local agency, environmental sustainability, and constructing adaptive capacity. These findings illustrate the tourism industry's ability to bounce back and emerge more resilient against any disruption in the future (Elbarmelgy et al., 2019; Delgado-Serrano et al., 2018; Gabriel-Campos et al., 2021). Sustainable post-pandemic recovery involves revitalising tourism activities, reducing vulnerability to future shocks, and enhancing community welfare. The success of these endeavours is contingent on external factors. Availability of finance, supportive policies, and digital infrastructure are some of the factors that have a significant role in facilitating or inhibiting resilience (Tangcharoensathien et al., 2018). Such moderating variables align with the resilience theory perspective that recovery is a function of the availability of resources, institutional capacity, and innovation (Mokline & Ben, 2021). The model suggests that tourism resilience following COVID-19 includes empowering adaptive systems through local action, strategic support, and collaboration (see figure 1).

2.2 Empirical Review

During the COVID-19 pandemic, ecotourism globally, and particularly in Africa, was severely affected. Governments, operators, and communities came up with an array of mechanisms to cushion the impact. Health and safety protocols such as mandatory mask-wearing, social distancing among visitors, increased sanitation, and biosecurity policies were instituted to rebuild tourist confidence while protecting wildlife. For instance, in Uganda, conservationists gave top priority to strict visitor management in great ape tourism to prevent reverse zoonotic transmission since human respiratory disease was a key threat to chimpanzees (The Guardian, 2024). Domestic tourism marketing, online advertisement, and virtual tours were in a position to become necessary stop-gap measures at home in Ghana and the entire continent of Africa, enabling operators to experience some level of interaction with prospective visitors when international tourism was suspended (Soliku et al., 2021). Such coping mechanisms were possessed with varying levels

of ecological sustainability. On the one hand, lower tourist arrivals lowered short-term pressures on the ecosystem, while increased participation in outdoor, low-density types of tourism activity was in line with sustainable goals (Mudzengi et al., 2022). The decline in tourism receipts, however, dampened conservation finance and threatened protected areas. Lacking assured income, other societies employed unsustainable practices such as charcoal production and wildlife hunting, such as in Ghana's Upper East Region, where marginal stakeholders excluded from government relief programs were forced to pursue ecologically degrading coping strategies (Akonga et al., 2023). This implies that resilience efforts risk neglecting the ecological dimension of sustainability in the absence of social and financial inclusion.

Post-pandemic trends in revenue generation have experienced a robust rebound, but with considerable variations by region and tourism niches. According to the United Nations World Tourism Organisation (UNWTO, 2024), international tourist arrivals returned to pre-pandemic levels by late 2024, with Africa reporting a 6% increase above 2019. Tourist spending even grew faster than arrivals, which demonstrated a robust economic rebound (Samuel et al., 2024). However, this recovery was uneven, with ecotourism destinations that depended nearly solely on international visitors lagging behind mainstream or upmarket tourism segments. Operators in Ghana's Savannah region both experienced livelihood restoration and environmental issues, highlighting that diversification of tourism markets and local capacity building remain essential to resilience (Soliku et al., 2021).

Both achievements and deficiencies are also evident in stakeholder mentality towards resilience measures. In Côte d'Ivoire, local communities living along Banco National Park reported continued support for ecotourism during the pandemic, largely based on their recognition of its socio-cultural, environmental, and economic benefits (Kouadio et al., 2023). Conversely, in Ghana, the majority of local stakeholders perceived the strategies as unfair, given that powerful players enjoyed unequal access to government aid while vulnerable groups were excluded (Akonga et al., 2023). This exclusion engendered distrust and temporary environmental degradation, thereby undermining long-term objectives of sustainable recovery (Cobbinah et al., 2017). Also, conservation-tied wage subsidies, emerging digital innovations, and the transition toward local tourism were universally seen as required and partially effective measures that cushioned the industry (Eshun & Tichaawa, 2019). The inferred effectiveness of resilience measures appears to depend on inclusivity, adequate funding, and the balance between economic revival and ecological preservation (Dayour et al., 2024).

III. METHODOLOGY

3.1 Profile of Study Area

The Kassena Nankana West District of the Upper East Region of Ghana, located at 10.97° North latitude and 1.10° West longitude, features numerous cultural and environmental tourist sites, including the Sirigu Women's Art and Pottery Centre (SWOPA) and the Chief's Crocodile Pond (Yahaya et al., 2022). According to the Ghana Statistical Service report of 2021, the population in the district is 90,735, comprising 43,909 males and 46,826 females. The district lies within the Sahel Savannah vegetation belt, characterised by open savannah grasslands with few fire-resistant deciduous trees and limited broad-leaved species (Aniah et al., 2025). Dense cover is found on riverbanks and in forest reserves. Dawadawa, Shea, Baobab, Neem, and Mango are some of the serious economic trees found in the district (Adongo et al., 2019). Economically, around 74% of people above 15 years of age are economically active in the labour force, out of which 97.6% are employed (Nartey, 2025). The remaining 26% are economically inactive, with most of them being students (52.6%), followed by those involved in domestic work (19.2%), and others unable to work due to sickness or disability (6.3%) (Agyekum et al., 2024). Half of the unemployed are first-time job seekers. The main livelihood activities in the district include crop farming, animal husbandry, basket making, production, and pottery (Anokye et al., 2024). The district further has tremendous tourism potential with attractions such as the Zenga Crocodile Pond, Kayoro sacred pythons, Chiana caves, Pikworo Slave Camp, and the culturally significant Chief's Crocodile Pond at Paga. The beautiful scenery and panoramic points invite visitors from all over the world to experience nature (see Figure 1).

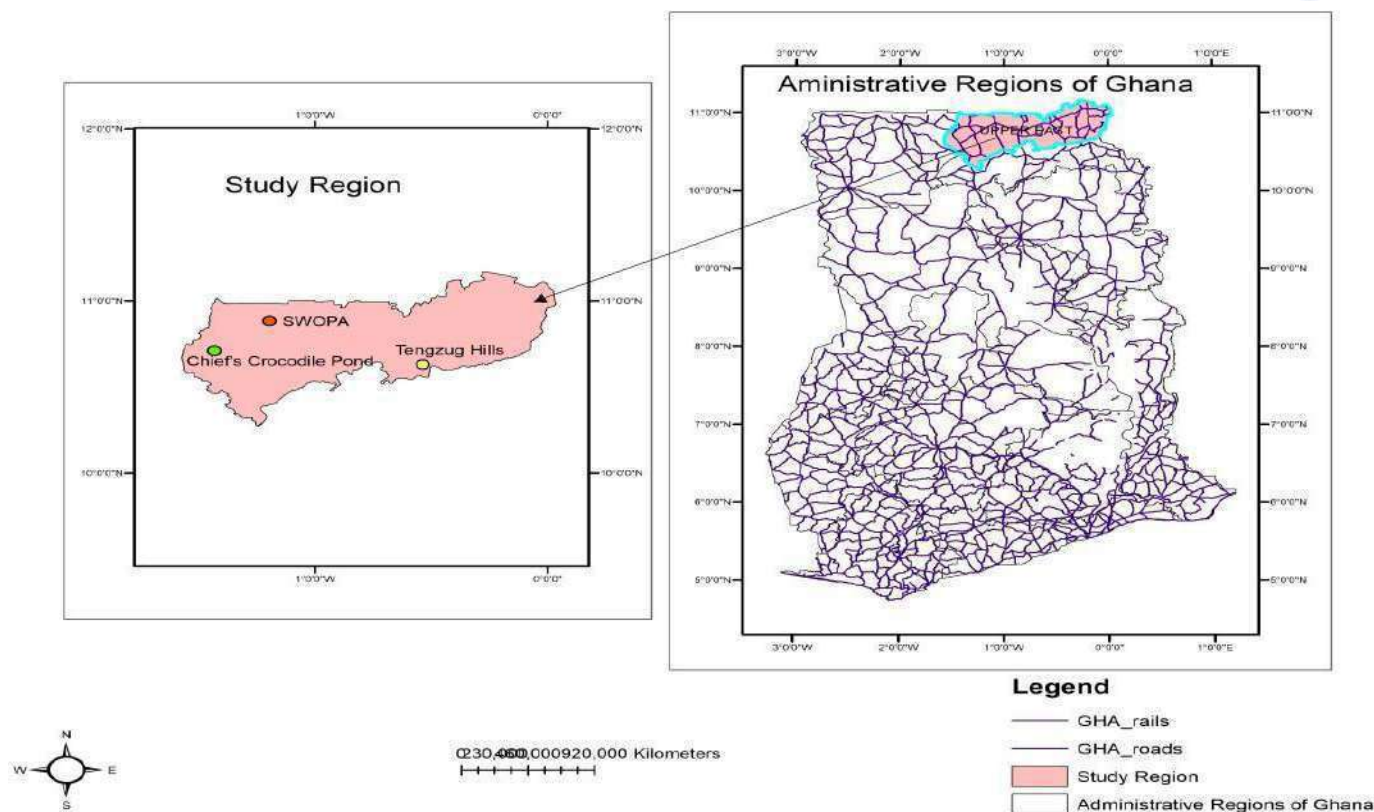


Figure 1
Profile of Study Areas

3.2 Research Design

Embedded in pragmatism as a research philosophy, the study employed a mixed-method explanatory sequential approach, incorporating qualitative and quantitative methods. The data were gathered within a period of seven months (February-September 2023). In naturalistic research, such as in ecotourism-based communities, the mixed-methods approach is particularly relevant because it enables the researcher to inquire and interpret as well as measure real-life events, practices, and complex socio-cultural facets of livelihoods. Such a combination provides a fuller picture of such phenomena that are not fully explained by any single technique. The quantitative component provides measurable evidence on pattern, association, and magnitude of effects, while the qualitative component provides deeper insight into perception, experience, and meaning accorded to ecotourism and resilience strategies. Cumulatively, these approaches bring rigour and richness to the findings, and the research design is suited to investigate complex problems in which context and experience are of equal worth to quantitative data (Creswell & Plano, 2023).

3.3 Sampling Techniques and Sample Size Determination

Given the dynamic nature of ecotourism, a combination of probability and non-probability sampling methods was employed to gather the quantitative data. A computerised simple random sampling method was used to select 297 respondents from the sampling frame of 1140 (see Table 1). The details of the sample frame of tourism business stakeholders were obtained from the Ghana Statistical Services and the Ghana Tourism Authority in Bolgatanga, with each shop assigned an ID number. Using Microsoft Excel's random number generator, respondents were selected automatically, ensuring objectivity and eliminating bias. The sampling frame included retailers, wholesalers, basket and smock weavers. The probability sampling was adopted because it provides a sample that practically reflects the population under investigation (Mertler et al., 2021). The non-probability sampling techniques (purposive sampling and snowballing) were deployed to select key informants for the qualitative data collection process. The non-probability technique is cost-effective and provides access to hidden populations that the probability sampling technique cannot. In total, 8 key informants were interviewed in the study communities. This included 3 in Sirigu Women’s Pottery and Art (SWOPA), 2 in the Zenga crocodile pond, and 3 at the chief’s crocodile pond in Paga.

Participants in the qualitative survey included tour guides, management of the selected tourist sites, sectional group leaders from various units in the sector, and market queen mothers and tour guides. The sample size was determined using Taro Yamane’s mathematical equation:

$$n = N / [1 + N(e^2)] \dots \dots \dots \text{equ. [1]}$$

Where:



n = sample size
 N = population size (1,140), and
 e = margin of error (0.05), representing a 95% confidence level.

$$n = \frac{1140}{1+1140(0.0025)} \dots\dots\dots \text{equ. [2]}$$

Table 1
Sample Size Distribution of Respondents in Tourist Sites

District/Municipal	Name of Tourist Site Based on Tourism Participation	Number of stakeholders	Target Sample Size
Bolgatanga Municipality	Centre for National Culture	395	395/1140*297=102
Kassena-Nankana West District	Sirigu Women’s pottery site	289	289/1140*297=75
	Zenga crocodile pond	229	229/1140*297=59
	Chief’s crocodile pond	240	235/1140*297= 61
	Total	1140	297

For the qualitative component, purposive sampling was employed once more to identify and engage key informants, including market queens, retailers, wholesalers, and sectional leaders.

3.4 Data Analysis and Presentation

The qualitative data were collected through key informant interviews and focus group discussions using interview guides. They were transcribed and systematically coded using thematic analysis to identify key patterns and insights. The findings were illustrated with direct quotations from participants to provide context and depth to the themes that emerged. Quantitative data were analysed using descriptive and inferential statistical techniques, with the aid of the Statistical Package for the Social Sciences (SPSS, version 27). SPSS was chosen for its robust analytical capabilities, particularly in handling a wide range of bivariate and multivariate statistical methods (Mertler et al., 2021). The results were presented using tables, frequency distributions, graphs, percentages, and mean values to effectively summarise and interpret the data.

IV. FINDINGS & DISCUSSION

4.1 Demographic Characteristics of Participants

Table 2 presents the demographic characteristics of the study participants, namely: sex, age range, and level of education.

Table 2
An Illustration of the Demographic Characteristics of Respondents

Characteristics of Sampled Tourism Stakeholders	Frequency	Percent
<i>Sex</i>		
Male	123	41.4
Female	174	58.6
<i>Age range</i>		
20-30	63	21.2
31-41	94	31.6
42-52	66	22.2
53≥	74	24.9
<i>Level of education</i>		
Tertiary	63	21.2
Primary level education	95	32
No formal education	93	31.3
Secondary education	46	15.5
<i>Marital Status</i>		
Single	81	27.3
Married	155	52.2
Yet to marry	39	13.1
Not interested in marriage	22	7.4
Total	297	100



The findings in Table 2 shows that females constitute 58.6% of respondents, indicating women's significant engagement in tourism activities and recovery processes. This gender distribution highlights the need for gender-sensitive tourism recovery strategies in participation, jobs, and decision-making. Age distribution shows that most respondents are middle-aged: 31.6% of respondents were between 31-41 years, 22.2% were between 42-52 years, and 24.9% were above 53 years. The remaining 21.2% fall within 20-30 years. These suggest that the respondents have substantial life experience. Education levels of respondents show that 21.2% of the respondents have attained tertiary education, 32.0% of the respondents have attained primary education, and 31.3% of the respondents have had no formal education. The fringe communities are predominantly family-oriented, with 52.2% of respondents being married and 27.3% of respondents being single.

4.2 Resilience Mechanisms of Ecotourism Stakeholders in Fringe Communities

Figure 2 illustrates how stakeholders in ecotourism ventures employed various resilient mechanisms to mitigate the adverse effects of the post-COVID-19 pandemic on tourism businesses. As the figure indicates, nearly 27% of the respondents reported that adopting digital infrastructure, including internet access and telecommunication services, facilitated business growth through social media promotion. In addition, 22% of the respondents mentioned that they widened the accessibility of health services to tourists to bolster security and confidence. Moreover, 17% of the respondents mentioned that ActionAid Ghana and the STAR Ghana Foundation provided financial assistance to sustain their business operations during and after the pandemic. In addition, 16% stated that community participatory engagement in tourism planning helped build ownership and preservation of heritage properties, thereby enhancing the continuation of business after the pandemic. Finally, 15% asserted that encouraging cultural pride helped attract tourists, thereby supporting tourist arrivals and revenue generation. The findings support key informants' assertions that:

"Things would have been terrible without the intervention of the NGO. The STAR Ghana Foundation supported me with a sum of GHS 3,521, which was used to purchase baskets, smocks, and other artefacts. This has gone a long way in boosting the business's resilience and sustainability strength (Head of Smock Weavers, SWOPA, 21st May 2023).

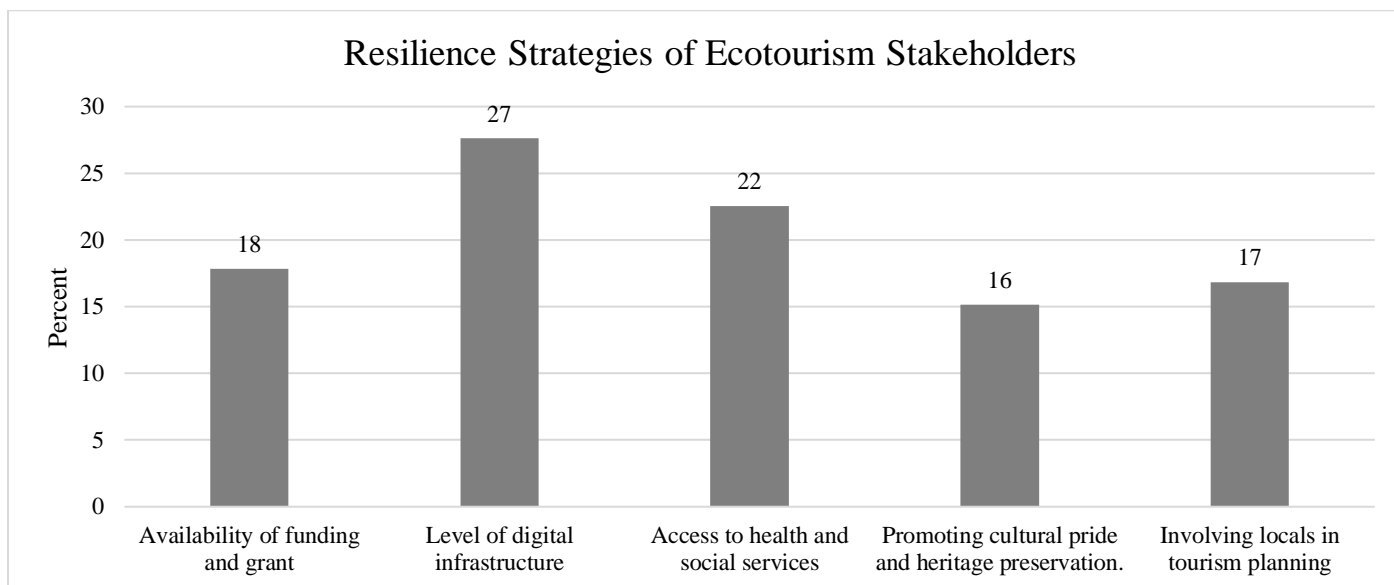


Figure 2
Resilience Strategies Adopted by Ecotourism Stakeholders

4.3 Effectiveness of post-COVID-19 Resilience Strategies on Ecological Management

Table 3 reveals that for the claim, *Tourists are well informed about the tourist site's ecological guidelines and sustainability values*. 112 respondents strongly agreed, 51 agreed, 54 were neutral, 50 disagreed, and 30 strongly disagreed. This results in a total agreement level of 163 and a disagreement level of 80, indicating moderate confidence in tourist awareness, with room for improvement. Regarding the assertion that *Environmental sustainability is a core principle in how ecotourism is managed in this community*, 88 strongly agreed, 92 agreed, 56 were neutral, 37 disagreed, and 24 strongly disagreed, leading to a strong agreement level of 180, which reinforces the perception of sustainability as a guiding principle.

Relative to the opinion, *Operators actively implement conservation practices*, 57 strongly agreed, 102 agreed, 56 were neutral, 77 disagreed, and 5 strongly disagreed. Although 159 respondents agreed, the relatively high disagreement count of 82 suggests concerns about the visibility or effectiveness of these practices. Regarding the



promotion of *Local ecotourism as a resilience strategy in sustaining tourism and biodiversity*, 85 strongly agreed, 79 agreed, 38 were neutral, 55 disagreed, and 40 strongly disagreed, indicating a total agreement of 164 but also the highest disagreement total of 95, revealing scepticism about the biodiversity benefits of ecotourism. Finally, for the statement, *Waste management practices at tourist sites are effective and environmentally sound*, 99 strongly agreed, 90 agreed, 34 were neutral, 53 disagreed, and 21 strongly disagreed, yielding the highest total agreement of 189, suggesting this aspect of sustainability is most widely acknowledged and appreciated. The results corroborate the findings of focus group discussants.

Ecological sustainability and the usage and protection of heritage sites are key in the implemented strategies. Resilience strategies were implemented with ecological sustainability at the core of planning (Sirigu focus group discussants, December 2023).

Table 3

Opinion of Stakeholders regarding the effectiveness of Implemented Resilience strategies on Ecotourism Management

Opinions of the respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<i>Tourists are well informed about the ecological guidelines and sustainability values of the area</i>	112	51	54	50	30
<i>Environmental sustainability is a core principle in how ecotourism is managed in this community</i>	88	92	56	37	24
<i>Operators actively implement conservation practices</i>	57	102	56	77	5
<i>Local ecotourism projects help to protect biodiversity in the</i>	85	79	38	55	40
<i>Waste management practices at tourist sites are effective and environmentally friendly</i>	99	90	34	53	21

4.4 Comparative Monthly Earnings from Tourism Activities: Pre- and Post-Pandemic Periods

Table 4 illustrates the fluctuations in monthly earnings of selected tourism sites across the pre-pandemic, peak pandemic, and post-pandemic periods.

Table 4

Revenues Generated from Tourism Activities per Month (Pre-Pandemic and Post-Pandemic)

	Pre-pandemic Earnings (P1)	Arrivals per month	Earnings During Pandemic (P2)	Arrivals per month	Differentials D1=(P1-P2) (GHS) LOSSES (D1)	Post-pandemic earnings (P3)	Arrivals per month	Differentials D2= (P3-D1) (GHS) GAINS (D2)
Sirigu Women's Pottery and Art (SWOPA)	4,567	459	1,452	92	3,115	6523	876	3,408
The Chiefs' crocodile pond	2,758	341	1,234	102	1,524	4,128	780	2,604
Craft village-Bolgatanga	7,342	1268	2,145	354	5,197	12,498	2579	7,301

Table 4 shows that Sirigu Women's Pottery and Art (SWOPA), Chiefs Crocodile Pond, and Craft Village-Bolgatanga experienced significant income falls during the peak of the pandemic (P2) compared to the pre-pandemic period (P1), with SWOPA incurring a loss of GHS 3,115, Chiefs Crocodile Pond GHS 1,524, and Craft Village GHS 5,197. However, in the post-pandemic period (P3), each tourism site not only recovered but also surpassed its pre-pandemic earnings, leading to substantial gains. SWOPA recorded a profit of GHS 3,408, Chiefs Crocodile Pond GHS 2,604, and Craft Village-Bolgatanga GHS 7,301. This trend points to a strong post-pandemic recovery, with increased earnings possibly driven by renewed tourism interest, improved marketing efforts, or adaptive strategies adopted during the recovery phase. The data highlight both the vulnerability of these local tourism enterprises during crises and their resilience in seizing post-pandemic opportunities.

The findings corroborate the views of the key informants that:

“During the COVID-19 pandemic, I experienced a cessation in sales, primarily due to the decline in tourist arrivals and patronage. Previously, I generated approximately GHS 400 per month. However, I currently earn about GHS 1750 per month from the sale of my baskets to tourists, predominantly from countries such



as Canada, the United States, and the United Kingdom. I attribute this increase to the strategies we have implemented” (Leader of Market queens of chief’s crocodile pond, April, 2024)

4.5 Stakeholder Perception of the Effectiveness of Resilience Strategies on Employment

The assessment of stakeholder perceptions regarding the effectiveness of resilience strategies in job creation within the tourism sector revealed a range of views, mainly positive. A considerable proportion of respondents (50.2%) strongly agreed that these strategies helped create jobs and sustain businesses, with an overall mean score of 2.9226, indicating a fairly strong consensus on the usefulness of resilience measures in maintaining business continuity during and after disruptions. Concerning the improvement of tourism stakeholders' livelihoods, 42.4% strongly agreed and 21.5% disagreed, resulting in a mean of 2.7205. This reflects a moderately positive view; however, a significant segment (36%) disagreed, showing that not all groups saw tangible benefits to their livelihoods. About community members' participation in planning these strategies for job creation, only 36% strongly agreed and 21.2% disagreed, producing a lower mean score of 2.5320. This suggests that community involvement in the planning process was somewhat limited, highlighting the need for more inclusive and participatory approaches in future resilience initiatives. Overall, while the strategies were seen as effective in keeping businesses running, their impact on community engagement and broader livelihood improvements seems less significant (see Table 5).

Table 5

Tourism stakeholders’ perception regarding the effect of resilient strategies on job creation

Variables Measured	SA		A		D		D		Mean
	F	%	F	%	F	%	F	%	
Community members actively participated in planning resilience strategies.	107	36	63	21.2	70	23.6	57	19.2	2.5320
Resilience strategies aided in sustaining businesses.	149	50.2	85	28.6	18	6.1	45	15.2	2.9226
The livelihoods of tourism stakeholders have improved due to the resilient mechanisms.	126	42.4	64	21.5	31	10.4	76	25.6	2.7205

Note: Strongly agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD)

The opinions of key informants were mixed relative to the findings, as they claimed.

“In my assessment, the resilient strategies we collectively implemented significantly influenced my business. During the peak of the pandemic, I was unable to generate sufficient income to support my household, pay for my children's school fees, and fulfil other domestic responsibilities. However, at present, I can meet these obligations due to the surplus earnings I derive from my business” (head of smock weavers at SWOPA, 2024)

“I have not made any improvements in sales after the COVID-19 pandemic. To me, the resilient strategies are not effective because the government funding was targeted at well-established wholesalers in the industry. Those of us engaged in retailing were not considered. Hence, the business is not effective post-COVID-19 because we lack the resources to invest in the business for expansion” (Leader of Tengzuk basket weavers’ association, September 2024)

4.6 Discussion

4.6.1 Resilience Strategies of Ecotourism Stakeholders in Fringe Communities

The findings indicate that ecotourism stakeholders employed various resilience strategies to adapt to the COVID-19 pandemic's hardships and achieve operational sustainability (Gössling et al., 2021). These included diversification of digital infrastructure, which enhanced the visibility of ecotourism products. Digital platforms enabled stakeholders to share information on services and procedures, as well as manage tourists' expectations (Sigala, 2020). Stakeholders have improved the provision of primary healthcare in tourist destinations by supplying trained nurses to address minor illnesses, such as malaria, catarrh, and diarrhoea (Lew et al., 2020). Efforts increased visitors' confidence and tourist arrivals, increasing family incomes (Goodwin et al., 2020). Post-pandemic recovery was significantly enhanced by NGO funding, which enabled tourism stakeholders to invest in their enterprises following the resumption of tourist arrivals (Citaristi, 2022; Gössling et al., 2021). The involvement of locals in planning and executing recovery efforts brought ownership and accountability, which were necessary for the smooth implementation (Scheyvens & Biddulph, 2018; Telfer & Sharpley, 2015). Preservation of culture was an essential aspect through local crafts and cultural performances (Richards, 2018). Culture-enhanced destination uniqueness while inculcating values among locals (Lew et al., 2020), making it more desirable and generating revenue in the post-pandemic era (Citaristi, 2022).



4.6.2 Post-COVID-19 Resilience Strategies Implemented on Ecological Sustainability Effects

Ecologically focused resilient strategies have been instrumental in helping ecotourism recover from the impact of the COVID-19 pandemic. The strategies, with their root in ecological consciousness, sustainability, conservation, and reduction of waste, have acted as a pivotal force in restoring tourists' confidence and raising awareness of the attractiveness of ecotourism destinations. Promoting environmental consciousness among tourists was central to recovery since educating tourists on environmental regulations rendered ecotourism a safe and sustainable option. Locations that focused on sustainability recovered rapidly, with tourists seeking ethical and nature-based experiences (Citaristi, 2022; Gössling & Higham, 2021). Following the inclusion of environmental sustainability as a core guiding principle, recovery was not reactive but transformational and aligned with the 'build back better' policy that is centred on sustainability in an attempt to promote long-term resilience (Liu & Zhang, 2025; Saarinen & Rogerson, 2021).

Recovery efforts minimised space in more resilient environmental aspects. Conservation efforts enhanced sector resilience and were evidence of a commitment to environmental stewardship. Post-pandemic success provided the opportunity to redefine conservation goals and further consolidate community partnerships (Scheyvens & Biddulph, 2018; Stronza et al., 2019). Local ecotourism support mitigated international travel restriction impacts and promoted domestic nature tourism. Localisation re-stimulated rural town revenues and reduced ecosystem pressure through dispersing tourists (Fletcher et al., 2020). Enhanced waste management in destinations displayed environmental responsibility and security. Through the backing of green waste systems, managers guaranteed tourists while upholding ecological principles, which supported recuperation at a quicker rate (Becken & Hay, 2012; Simpson et al., 2023).

4.6.3 Pre and Post-COVID-19 Pandemic Comparison of Tourism Activity Earnings

The experience attests to a strategic shift of local tourism enterprises in Ghana's Upper East Region. The SWOPA, Chiefs Crocodile Pond, and Craft Village experiences are a testimony to the benefits of grassroots tourism for regional economic renaissance and long-term stability. The Sirigu Women's Pottery and Arts (SWOPA), Chiefs Crocodile Pond, and the Centre for Art and Culture-Bolgatanga were initially vulnerable to COVID-19 but had a strong financial recovery after the shutdown, although they experienced immense revenue loss due to travel restrictions and public health uncertainty. Post-pandemic was characterised by immense revenue turnover for domestic tourism, which bounced back in excess of pre-pandemic levels (Hall et al., 2020). Evidence of their resilience and ability to weather crisis conditions (Citaristi, 2022). Enabling factors include the re-opening of the market, which increases demand for nature-based, culturally endowed destinations, and mitigation strategies such as enhanced marketing, e-promotion, and safety (Guo et al., 2022). Collaborative efforts with NGOs or local governments also helped restore visitor confidence. Evidence is that local tourism enterprises of Ghana's Upper East region have bounced back financially and strategically repositioned in the emerging tourist scenario. The sector has utilised the crisis as a business upgrading opportunity, diversification of products to be offered, and increased community engagement. Such enterprises prove the worthiness of community-based tourism as a richer cultural and economically viable system for development in times of uncertainty (Ruiz-Ballesteros & del Campo Tejedor, 2020)

4.6.4 Perception of Tourism Stakeholders towards the Success of Resilience Strategies

The findings conclude that overall, stakeholders viewed the resilience actions within the tourism industry as successful, particularly in safeguarding employment and business continuity during and after the COVID-19 pandemic. These actions were seen as crucial for maintaining the sustainability of tourist enterprises and avoiding widespread closures during a period of significant disruption. Most respondents believed that these interventions were necessary to keep companies afloat in response to the pandemic shock and to recover more quickly once lockdowns were eased. However, perceptions of the overall impact of these interventions on household and individual livelihoods were mixed (Guo et al., 2022). While many stakeholders reported some benefits to livelihoods, a considerable proportion remained sceptical about whether the actual improvements were meaningful. This suggests potential gaps between the intended outcomes of resilience efforts and the actual results, leading to unequal distribution of benefits across different groups within the sector. Participation in local decision-making was not universal, revealing a deficiency in inclusive planning processes. This disengagement may have affected the success of certain strategies and diminished local ownership and long-term sustainability (Wang et al., 2021). The study highlights the importance of establishing participatory strategies that are adaptable enough to incorporate local input into resilience planning, thereby enhancing both the legitimacy and the effectiveness of recovery efforts.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study aimed to examine the effectiveness of adopted resilience interventions in the tourism industry during post-pandemic COVID-19 recovery. Overall, stakeholders viewed these resilience measures as effective, particularly in safeguarding business continuity during and after the COVID-19 pandemic. The interventions were seen as vital for

promoting the sustainability of tourist businesses and preventing large-scale redundancies during a period of significant interruption. Most interviewees stated that the policies were crucial for helping tourism businesses survive the pandemic's shock and recover more quickly once the lockdown ended. However, opinions on the overall impact of the policies on family and household livelihoods were more complex. While many stakeholders reported some improvement in livelihoods, a group expressed scepticism about the tangible benefits they had experienced. This highlights a potential gap between the coverage and benefit distribution of the resilience interventions and the real-world outcomes on the ground, indicating that different groups within the industry may experience varying levels of coverage and benefits.

Participation of the community members in decision-making didn't extend far enough, indicating a deficiency in inclusive planning practice. This isolation would have affected the success of some of the strategies and reduced local ownership and long-term sustainability. The study concludes that while resilience interventions across the tourism sector tended to be successful in securing jobs and business continuity in the COVID-19 pandemic, their net contribution to household livelihoods remains uncertain. While a majority of stakeholders were impressed with some change in livelihoods, others questioned the benefits realised because they felt there was no alignment between the intended impact and everyday practices. The peripheral participation of local communities in the decision-making process also detracted from the inclusiveness and long-term sustainability of such interventions. The evidence points to the need for more inclusive and participatory approaches to future resilience planning that make the benefits more inclusively enjoyed and responsive to local conditions.

5.2 Recommendations

It is recommended that fringe communities be involved directly in post-COVID-19 resilience planning in order to enhance the importance, ownership, and duration of such intervention. Additionally, there is a need to track systematically the actual impacts of resilience strategies on local livelihoods to capture and fill gaps between planned aims and resulting outcomes. All such a process needs to be done by multi-stakeholder interaction between community people, policymakers, and industry actors. Policies too need to be constructed inclusively in the same interaction to ensure benefits accrued are shared in proportion among all groups, with particular emphasis on vulnerable members in society in the ecotourism venture. Finally, the Government of Ghana needs to pay attention to skills upgrading of local players for capacity building and improvement of future resilience.

Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding this research.

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Exchange rate and agricultural output performance in Kenya

Sharon Mwendwa^{1*}
Maureen Ndagara²
Paul Mugambi³

^{1*}mwendwasharon716@gmail.com

²ndagaramaureen@gmail.com

³mugambi.paul@embu.ac.ke

^{1,2}Tharaka University, ³Embu University, ³Kenya

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ABSTRACT

The purpose of this research was to examine the effect of exchange rates on the performance of agricultural output in Kenya from the year 1986 to 2023. The theoretical framework that guided this research was the export-led growth theory. The research applied the time series analysis and causal study design. The secondary data used was filtered on many sources of government data, such as economy surveys and the Kenya National Bureau of Statistics (KNBS). The study used the VECM model to analyze both short-run and long-run impacts by using Stata as the statistical program to test the quantitative data. Based on the healthy VECM that was developed, the findings revealed that the exchange rate had a positive significant short-run relationship with agricultural output. However, in the long run, the exchange rate and agricultural output had a negative and statistically significant relationship. This implied that a 1% increase in the exchange rate would result in a 0.127% decrease in agricultural output. Also, agricultural land influenced agricultural output negatively in the short run. However, in the long run influenced agricultural output positively, suggesting that expansion of land increases productivity. The findings suggest that the depreciations in the exchange rates would lead to a rise in the agricultural productivity of the country in the short run but negatively influence agricultural output in the long run due to a high increase in imported input prices. Hence, the policymakers ought to implement appropriate policies that aim at stabilizing the exchange rate, therefore making production cheaper, and also the government should encourage the people to use the local inputs.

Keywords: Agricultural Land, Agricultural Output, Exchange Rate, Exchange Rate Depreciation

I. INTRODUCTION

Agriculture is a vital part of Kenya's economy, says the Kenya National Bureau of Statistics (KNBS). It offers a solid foundation for Kenya's economy and accounts for around 22.4% of the country's Gross Domestic Product [GDP]. Forty percent of Kenyans work in agriculture with that number rising to around seventy percent in rural areas. Indirectly, via relationships with related industries, the agriculture sector is expected to contribute approximately 27% to the country's GDP (Food and Agricultural Organization [FAO], 2023). Crop production, livestock raising, forest management, and aquatic life cultivation are all part of Kenya's agricultural landscape. Food security, international commerce, poverty reduction, and rural employment and incomes have all been greatly enhanced by Kenya's agricultural sector, which is the backbone of the country's economy (Government of Kenya, 2019). To attain food security and reduce poverty, the agricultural sector is of the highest importance, according to the Sustainable Development Goals (SDG) (Mabiso et al., 2012). The agricultural sector's impact on Kenya's GDP has a direct bearing on the country's economic performance as a whole. Periods of higher economic growth have been associated with periods of higher agricultural growth (PricewaterhouseCoopers [PwC], 2023). On average, between 2013 and 2017, the agriculture industry contributed 21.9% to the GDP, according to Wankuru et al. (2019). At least 56% of the workforce was employed in this sector in 2017. The government's Big Four development agenda is aiming to guarantee full food and nutritional security for all Kenyans by 2018, and the agricultural sector is a crucial part of this objective.

Kenya Vision 2030 designates the agricultural sector as essential for achieving the projected annual economic growth rate of 10 percent. The growth of the agricultural sector is strongly linked to the whole economy; a 1 percent rise in agriculture is anticipated to yield a 1.6 percent increase in total GDP (Government of Kenya, 2019). The agricultural sector, as the foundation of the Kenyan economy, has significantly improved rural employment, incomes, food security, international trade, and poverty reduction (Government of Kenya, 2019). This industry continues to be

the principal contributor to GDP in most developing countries, including Kenya. The Kenyan government's decade-long agricultural growth strategy seeks to enhance productivity and income for smallholder farmers, augment value addition for agricultural output, and boost household food security (Njeru, 2021, FAO, 2023). In 2004, the government launched the Strategy for Revitalizing Agriculture (SRA) to address challenges in the agricultural sector (Adongo, 2020). The strategy aimed to transform the agricultural industry into a profitable commercial enterprise that would attract private investment and ensure national food security (FAO, 2008). The phenomenon was observed in 2007, when sector growth above the target of 3.1, reaching a maximum of 6.1 percent (Government of Kenya, 2010). In 2008, the Agricultural Sector Development Strategy (ASDS) was instituted in response to post-election violence that impeded growth, with the objective of attaining a 10 percent yearly rise (Adongo, 2020). The ASDS plan aimed to augment income and employment while positioning the agricultural sector as a crucial contributor to the projected 10 percent annual growth rate specified in the economic pillar of Vision 2030 (Government of Kenya, 2010).

The agricultural development strategy of the nation for 2010-2020 aimed for an annual growth rate of 7 percent in agriculture and a 30 percent reduction in food insecurity (International Fund for Agricultural Development [IFAD], 2020). In 2017, the country attained an annual growth rate of 3 percent, which was below the sector's anticipated growth of 7 percent (Kenya National Bureau of Statistics. [KNBS], 2017). Between 2008 and 2012, the sector experienced an annual growth rate of 0.98 percent, albeit a significant surge of 6.6 percent in 2010. This arose from the advantageous weather conditions that endured (Oduor, 2019). Consequently, it decreased to 1.5 percent in 2011 due to erratic weather patterns and increased agricultural production expenses (KNBS, 2013). Between 2013 and 2017, the agricultural sector represented an average of 21.9 percent of GDP, with a minimum of 56 percent of the total labor force employed in agriculture in 2017 (Wankuru et al., 2019). With contributions of 18.9% in 2018, 19.4% in 2019, and 21% in 2020, agriculture was the backbone of the economy. Even though the Kenya Vision 2030 called for a 7% yearly growth rate, the nation only managed 3% growth in 2017 (KNBS, 2017). From 2017 to 2021, the agricultural sector's share of total growth fell 0.4% (KNBS, 2022). Inadequate rainfall, which limited agricultural production, was said to be the cause of the slowed growth. Because of unfavorable weather that reduced the output of crops and cattle, Kenya's agricultural industry saw a fall in growth rate from 5.2% in 2020 to 0.1% in 2021 (Central Bank of Kenya [CBK], 2022). The agriculture sector's success has been affected by adverse macroeconomic variables such as exchange rate, government policies, and other reasons. The decrease in performance of the agricultural sector has been attributed to different factors including exchange rate policy.

The amount of the original currency that needs to be converted in order to buy other currencies is called the exchange rate, according to Schiller (2008). As an example, Ncube and Ndou (2011) state that currency rates impact both the relative prices of local and foreign commodities and the demand for home goods by customers abroad. The value of one currency relative to another affects the cost of goods and services both at home and abroad. The value of one currency relative to another can rise or fall depending on fluctuations in exchange rates (Kimani, 2016). Kenyans exchange rate has had abrupt movements since the mid-1980s. The nominal shilling-dollar rate moved from as small as 16 per dollar in the mid-1980s to one hundred per dollar in the early 2020s, showing a long run depreciation and high volatility over time, and policy responses such as the liberalization in the early 1990s and macroeconomic stabilization. This currency movement change the relative prices affecting farmers, exporters and producers, that is, the depreciation of the currency can result to export competitiveness but can also increase the cost of imported inputs making production expensive. Also, exchange rate volatility also raises uncertainties and can reduce investment in input and technology. Theoretically, it is argued that currency depreciation do promote exports of the country by making the export affordable to the international markets.

The flow of foreign income to the nation arising from the increased exports leads to increase in domestic investment and increased production resulting to increased productivity in the country. However, appreciation of the currency rate increases the import cost, which can result to decline in sector productivity. The production cost would increase due to increased input cost, therefore reducing the productivity of the agricultural sector. The nation's economy is profoundly affected by governmental policies, making them crucial. By considering the performance of the agricultural sector in different times of exchange rate reforms, it would be valid to ask "what is the impact of exchange rate on Kenya's agricultural output performance?" Being able to understand the effect of exchange rate policy on the growth of agricultural sector is important in formulating appropriate exchange rate policy that will boost the sector and increase productivity. Studies have investigated the effect of exchange rate on the agricultural output performance; however the findings have shown mixed effects. Several competing theories and lines of evidence provide credence to this viewpoint. The currency rate affects the performance of Kenya's agriculture business, according to Adongo et al. (2020). The long-term impact of the exchange rate on agricultural productivity is another matter entirely. According to Tunggal and Kadir (2015), a number of macroeconomic variables influence agricultural output. These include net exports, government spending, interest rates, currency rates, inflation rates, and money supply. Gatawa and Mahmud (2017) indicated that agricultural export volumes were positively influenced by the

official exchange rate and agricultural loans in the short run. Whether or not, exchange rate has had a positive or negative affect on the Kenya's agricultural output has remained a puzzle. Therefore, this underlines the need to conduct a study to evaluate how exchange rate influences agricultural output in Kenya.

1.1 Statement of the Problem

The agricultural sector is very vital to the Kenyan economy for it contributes 80 percent of national employment and contributes largely to the GDP growth. The agricultural sector faces several challenges, which include unfavourable macroeconomic variables, climate change, limited access to inputs and financing and poor infrastructure. However, the Kenyan government has implemented several policies and interventions, such as ASDS, ASTGS, and Kenya Vision 2030, which emphasize on adoption of modern farming techniques, enhance farmers' access to finance, promote value addition, and market access. Also through CBK, the government implemented policies to manage exchange rate in the economy. In recent years though, there have been fluctuating trends in the agricultural sector. The contribution of the agricultural sector to the overall growth contracted by 0.4 percent between 2017 and 2021, with the agricultural performance growth declining from 5.2 percent in 2020 to 0.1 percent in 2021. Therefore, this becomes a concern since poor performance in agricultural sector results into food insecurities, low employment among the youths, and increased poverty among the people. The consequences of these effects include, increased school dropout, increased crime rate, and diseases such as malnutrition and depression. There have been studies explaining the effect of various macroeconomic variables on the financial performance of tea sector in Kenya and on economic growth in Kenya; such as Kimani (2016), and Kyalo (2020) respectively, but there are limited studies explaining how the exchange rate affects the agricultural sector in Kenya. Hence there is need to evaluate the effect of exchange rate on agricultural output performance in Kenya.

1.2 Research Objective

The study examined the effect of exchange rate on the agricultural productivity in Kenya

II. LITERATURE REVIEW

2.1 Theoretical Review

The study was guided by the export led growth theory.

2.1.1 Export Led Growth Theory

Export-Led growth theory posits that the primary driver of economic growth is the expansion of exports. The hypothesis posits that, in addition to augmenting labor and capital, export expansion also stimulates overall economic growth. Furthermore, the growth of exports in a nation will drive domestic firms to focus more on the creation of export items, thereby enhancing the economy's productivity. Exports contribute to the balance of payments and enhance job prospects inside an economy. Trade enables a country to access diverse production processes, so enhancing its production capabilities and accelerating its growth rate. Therefore, a nation can enhance its production based on its comparative advantage and attain economies of scale to access international markets.

According to proponents of the export-led growth theory, exports can boost GDP by inspiring local businesses to adopt more efficient production processes and become more globally competitive. The expansion of agricultural production is one of the main forces propelling developing countries forward (Enoma & Anthony, 2010); consequently, many countries rely on agricultural expansion for employment, food security, foreign exchange, and governmental revenue (Child, 2008). The current study utilizes the Export-led growth theory as a foundational framework, emphasizing output growth through export expansion, such as agricultural production, which leads to enhanced food production, increased foreign earnings, and elevated GDP, thereby improving the standard of living.

2.2 Empirical Review

Olubiyi et al. (2019) did a study to investigate how exchange rate movement affects the export of selected agricultural products in emerging African countries. ARDL estimations were carried out and found that movement in exchange rate differs across countries on cocoa, coffee, vegetables, sugar, and fruits exports. In addition, the findings also showed that depreciation of exchange rate in some countries promotes export while in others it discourages export. Therefore, the study focused on a few selected agricultural products, leaving a gap in the exploration of the overall agricultural sector. To address this pressing need, this research will examine how exchange rates have influenced the performance of Kenya's agricultural sector.

Iliyasu (2019) sought to examine the effect of exchange rate on agriculture in Nigeria from 1999 to 2016. Pearson correlation analysis was used for data analysis. The research findings indicated that exchange rate had a

positive significant effect on the activities in the agricultural sector. In addition, exchange rate had a positive correlation with agricultural output. However, this study scope was distinct from the Kenya's agricultural output, therefore this results to a research gap. This study therefore rises to this challenge, examines how exchange rate will influence the performance of the agricultural output in Kenya.

Onwuagana and Areghan (2020) conducted a study to examine the impact of exchange rate and inflation rate on the agricultural development in Nigeria. The study utilized annual time series data from 1986 to 2020. The Ordinary Least Squares (OLS) method was employed. The results showed that agricultural development was positively influenced by the exchange rate and negatively influenced by inflation rate. However, the scope of the study remained distinct from the Kenya's agricultural sector. This leads to a research gap on how exchange rate, resonates with the agricultural sector in Kenya. Therefore, this research aims to investigate the correlation between exchange rates and the performance of Kenya's agriculture sector.

Kyalo (2020) set out to investigate the effect of selected macroeconomic variables on economic growth in Kenya using secondary data from 1970 to 2018. Regression analysis and Analysis of Variance [ANOVA] analysis was used for data analysis. The research results suggested that economic growth and exchange rate are strongly related. In addition, foreign direct investment has a positive relationship with economic growth. The study however did not explain the impact of exchange rate on agricultural output also revealed that the higher the inflation rates, the lower the economic growth. The study, however, did not explain the impact of the selected macroeconomic variables on the performance of the Kenya's agricultural output. This knowledge gap calls for studies to further investigate ways in which exchange rate can shape the agricultural sector performance in Kenya. Guided by this knowledge gap, the current study seeks to find out how exchange rate affects the performance of the agricultural output in Kenya.

Gatawa and Mahmud (2017) conducted research to determine the effect of exchange rate fluctuations on agricultural exports (crops) in the Nigerian economy from 1981 to 2014. Autoregressive Distributed Lag (ARDL) and GARCH model was used in this study. The results indicated that agricultural export volumes were positively influenced by the official exchange rate and agricultural loans in the short run, and similar results were found in the long run except for exchange rate, which affected agricultural export volumes negatively in the long run. However, the scope of this study remained distinct from Kenya's agricultural sector. This study leaves behind a gap, inviting more scholars to find out how exchange rate would shape the performance of the agricultural output in Kenya. In the bid to bridge this scholarly gap, the current study examines the relationship between exchange rate and the performance of the agricultural output in Kenya.

Ogutu (2014) examined the influence of the real exchange rate on Kenya's trade balance over the period 1963 to 2013. The study employed regression analysis, incorporating cointegration techniques, vector autoregressive (VAR), and vector error correction models (VECM) to assess both the relationship and impact of the real exchange rate alongside other factors on the trade balance. The findings revealed that the real exchange rate had a positive and significant influence on the trade balance. Therefore, depreciation of the Kenyan currency led to an improvement in trade balances. However, this research took a narrow perspective, omitting the exploration of how the exchange rate fluctuations influence the performance of the agricultural sector in Kenya. To fill this research gap, this study seeks to analyze the relationship between the exchange rate, interest rate, GDP growth rate, inflation rate, and the agricultural sector's performance in Kenya.

III. METHODOLOGY

The research used a descriptive causal research design to determine the cause-and-effect interaction between the study variables. The study used yearly data from agricultural value added, and exchange rate (Ksh to US) and agricultural land as the control variable. The data was on the dependent variable which is agricultural output performance and independent variables which is exchange rate. The data ran from 1986 to 2023 since this period provides enough historical data on the variables and covers most of the economic changes, and policy reforms in the country. The data was extracted from Kenya National Bureau of statistics database on their websites. The data was then saved in excel spreadsheet which was then imported to Stata. Diagnostic evaluations were conducted to ascertain the model's accuracy.

3.1 MODEL SPECIFICATION

The Vector Error Correction Model (VECM) model was used to investigate the relationship between dependent variable Y which is agricultural output and the independent variables X_1 , which is exchange rate along with the error term ϵ . The VECM model allows the use of the variables in their original level, but they should be intergrated of order 1(1) only. The VECM models allow the variables to have lags thus capturing dynamic relationships over time. The resulting VECM model was expressed as;



Equation 1: VECM Model

$$y_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \varepsilon_t \dots\dots\dots (I)$$

Where:

- y_t Represents the value of the agricultural output performance
- β_0 Represents the constant of the equation
- β_1 - β_3 represents coefficient of the variables
- X_1, X_{2t} Represents the exchange rate and agricultural land
- t Represents the time series
- ε Represents the error term which is assumed to be normally distributed

IV. FINDINGS & DISCUSSION

4.1 Descriptive Statistics

Descriptive statistics summarizes major features of the variables, in order to get a preliminary picture of the data set, which includes, mean, median, maximum, minimum, standard deviation, skewness and kurtosis.

Table 1
Descriptive Statistics

	Agrivalueadded	Exchangerate	Agriland
Mean	23.4902	71.6464	48.0030
Median	24.2782	76.0556	47.5561
Maximum	28.7776	139.8464	49.7929
Minimum	16.2550	16.2257	46.2404
Std. Dev	3.6841	30.2959	1.1638
Skewness	-0.1571	-0.2479	0.3381
Kurtosis	1.7294	2.6385	1.6213

From the descriptive statistics in the table 1 above, the mean value of agricultural output, exchange rate and agricultural land is 23.4902, 71.6464 and 48.0030 respectively. The maximum values of agricultural output, exchange rate, and agricultural land were 28.7776, 139.8464, 49.7929 respectively, while the minimum values were 16.2550, 16.2257, and 46.2404 respectively. The standard deviation of agricultural output, exchange rate and agricultural land were 3.6841, 30.2959, and 1.1638 respectively. The skewness showed that the distribution of agricultural output, and exchange rate were positively skewed indicating that the distributions were asymmetric in nature. However, agricultural land was negatively skewed. The results of the kurtosis indicated that the distribution of agricultural output, exchange rate and agricultural land were platykurtic because they were all less than 3.

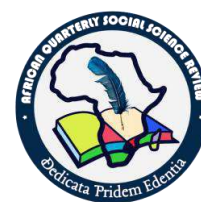
4.2 Unit Root Test and Cointegration Test

The unit root test was done to the time series data to ensure that the series has a constant mean and variance avoiding spurious results.

Table 2
Unit Root Test

	Test statistics	Critical value at 5%	P-value	Status
Agrivalueadded	-1.663	-2.966	0.4503	Non stationary
D.agrivalueadded	-6.717	-2.969	0.0000	Stationary
Exchangerate	0.067	-2.966	0.9637	Non stationary
D.exchangerate	-4.526	-2.969	0.0002	Stationary
Agriland	-1.260	-2.966	0.6474	Non stationary
D.agriland	-7.160	-2.969	0.0000	Stationary

The stationarity test was carried out to tests for the presence of unit root for the variables by applying Augmented Dickey Fuller test. All the variables were found to be stationary after first differencing confirming they are integrated of order one, 1(1). The use of VECM model requires that all variables should be integrated of order one 1(1).



4.3 Lag Selection Criteria

In time series data lags were used to take care of the data that may be related, from different periods thus taking care of the relationship in the analysis. The primary objective was to determine the lag order that best captures the relationship between data points across different time periods. The appropriate lag selection is the one that minimises the AIC, (Akaike Information Criterion).

Table 3
Lag Selection Criteria

Lag	LL	LR	df	P	FPE	AIC	HQIC	SBIC
0	-273.499				2324.03	16.2646	16.3106	16.3993
1	-185.408	176.18	9	0.000	22.2403	11.6123	11.796	12.151
2	-174.904	21.008	9	0.013	20.6571	11.5238	11.8453	12.4665
3	-167.224	15.36	9	0.082	23.1383	11.6014	12.0607	12.9482
4	-154.213	26.022	9	0.002	19.5821	11.3655	11.9626	13.1163

From table 3, the results showed that Lag 4 was the optimal lag to be used in the model because it yields the lowest AIC value (11.3655). This was carried out to take care of related data in the model.

4.4 Johansen Test for Cointegration

Cointegration means that there is a long run relationship between two or more variables. The study adopted the Johansen test because it accommodates integrated variables of order one and can also detect more than one cointegrating relationship.

Table 4
Johansen test for Cointegration

Rank	LL	Eigenvalue	Trace statistics	5% critical
0	-172.0912		35.7558	29.68
1	-160.2440	0.5019	12.0613	15.41
2	-154.2861	0.2956	0.1455	3.76
3	-154.2133	0.0043		

According to table 4, Johansen test was used to carry out cointegration test, at rank 0, the trace statistic was $35.76 > 0.05$; therefore the null hypothesis of no cointegration was rejected. At rank 1, the trace statistic was $12.06 < 15.41$; therefore, the null hypothesis was not rejected, signifying no cointegration. Therefore, there is one cointegration among the variables.

4.5 Diagnostic Test

In order to ensure the robustness of our findings, several diagnostic tests were performed on the residuals of the model. These tests include multicollinearity, autocorrelation, heteroscedasticity and normality test among the residual. The results confirmed that the model adheres to the necessary assumptions for valid inferences. Using the Lagrange Multiplier test it confirmed that there was no serial correlation with $(0.25 > 0.05)$, the null hypothesis that no serial correlation is accepted. Using white test, the results confirmed homoskedasticity $(0.736 > 0.05)$ thus, the null hypothesis of homoskedasticity is accepted, and no model specification, indicating the model was well specified. Additionally, the normality test showed that the residuals are normally distributed with Jacque-bera test indicating a p-value of $0.303 > 0.05$ therefore fail to reject the null hypothesis indicating the residuals are normally distributed.

4.6 Vector Error Correction Model Analysis

The study sought to find out how exchange rate affects the performance of agricultural output. To examine both the short run and long run effect the researcher used VECM model.



Table 5
Vector Error Correction Model Results

Variable	Coefficient	Std. Error	P-value	95% confidence
d.agrivalueadded	0.2368	0.1065	0.026	0.0280
agrivalueadded (L1)	-0.5363	0.2364	0.023	-0.9995
agrivalueadded (L2)	-0.5608	0.2237	0.012	-0.9993
agrivalueadded (L3)	0.1343	0.2180	0.538	-0.2929
exchangerate (L1)	0.1344	0.0451	0.003	0.0459
exchangerate (L2)	0.0019	0.0523	0.971	-0.1007
exchangerate (L3)	0.0187	0.0478	0.696	-0.0751
agriland (L1)	-0.1185	0.7499	0.874	-1.5882
agriland (L2)	-0.5869	0.6110	0.337	-1.7843
agriland (L3)	-1.3851	0.5764	0.016	-2.5148
dexchangerate	1.0524	0.4824	0.029	0.1070
agrivalueadded (L1)	-0.7875	1.0704	0.462	-2.8854
agrivalueadded (L2)	-1.9298	1.0131	0.057	-3.9155
agrivalueadded (L3)	0.6732	0.9871	0.495	-1.2615
exchangerate (L1)	0.3172	0.2043	0.121	-0.0833
exchangerate (L2)	-0.1448	0.2370	0.541	-0.6094
exchangerate (L3)	-0.2257	0.2167	0.298	-0.6504
agriland (L1)	0.1974	3.3958	0.954	-6.4582
agriland (L2)	-1.5198	2.7667	0.583	-6.9425
agriland (L3)	-6.4935	2.6102	0.013	-11.6094
d agriland	-0.0929	0.0273	0.001	-0.1464
agrivalueadded (L1)	0.1255	0.0605	0.038	0.0069
agrivalueadded (L2)	0.0276	0.0573	0.630	-0.0847
agrivalueadded (L3)	0.0208	0.0558	0.710	-0.0886
exchangerate (L1)	0.0126	0.0116	0.276	-0.0101
exchangerate (L2)	0.0121	0.0134	0.367	-0.0142
exchangerate (L3)	-0.0058	0.0123	0.636	-0.0298
agriland (L1)	0.0265	0.1920	0.890	-0.3499
agriland (L2)	0.2029	0.1565	0.195	-0.1038
agriland (L3)	0.1287	0.1476	0.383	-0.1606

Table 5, shows the short term relationship between the variables. The coefficient of the first lag, -0.5363, and the p-value $0.023 < 0.05$ and the coefficient of the second lag, -0.5608 and the p-value was $0.012 < 0.05$ of agricultural output, illustrated that agricultural output was negative and significantly significant in the short run. This suggested that previous levels of agricultural output exerted a negative effect on the current growth, which implies that the sector fluctuations in the short term tend to correct themselves over time. The coefficient of the first lag, 0.1344, and the p-value 0.003, indicated that in the short run, exchange rate had a positive significant effect on agricultural output in Kenya. This implied that, in the short run, exchange rate depreciation, may influence agricultural productivity positively therefore in agreement with the export-led growth theory. These results are in line with the results found by Ogutu (2014) and Onwuagana and Areghan (2020). However, subsequent lags have shown insignificant effects, indicating that the effect of exchange rate is temporary it does continue over time. Lastly, the coefficient of the third lag of agricultural land was -1.3851 with a p-value of $0.016 < 0.05$. This suggested that agricultural land had a negative effect on agricultural output. This implied that agricultural land expansion or reduction, takes a while to reflect in output changes, probably due to land productivity factors and cost adjustment. Other lags in agricultural land had insignificant effect, illustrating that fluctuations in the short run in land use, do not have an immediate effect on the output of the agricultural sector in the longrun 95%.

Table 6
Long-run Vector Error Correction Model Analysis

	Coeff	Std. Err	p-value	95% Coeff
Agrivalueadded	1			
Exchangerate	-0.1271	0.0308	0.000	-0.1875
Agriland	6.1755	0.7728	0.000	4.6609
constant	-307.2872			



Based on the findings in Table 6, the fitted model was:

$$\text{Agricultural output} = -307.2872 - 0.1271 \text{ exchange rate} + 6.1755 \text{ agricultural land} + \varepsilon$$

The findings show that exchange rate had a negative significant effect with agricultural output, with a coefficient of -0.1271 and a p-value of 0.000. Therefore, a 1% increase in exchange rate would lead to 0.127% decrease in agricultural output in the long run. This implied that in the long run, exchange rate depreciation have a negative effect on the productivity of the agricultural sector. According to the results, a weaker domestic currency leads to an increase in agricultural input costs, for example, machinery, fertilizers, and fuel given that most of these inputs are imported. This would results to increase in production in the sector. These results agree with Gatawa and Mahmud (2017) who found that exchange rate had a negative effect on agricultural exports in Nigeria in the long run. Agricultural land had a positive significant effect with agricultural output with a coefficient of 6.1755 and a p-value of 0.000. Therefore, a 1% increase in agricultural land would lead to a 6.1755% increase in agricultural output in the long run. This implied that increase in agricultural land, directly increased the output in the agricultural sector. The strong coefficient shows the importance of the agricultural land availability and utilization determines the output of the agricultural sector in Kenya. The constant -307.2872 indicates that the structural factors that were not captured in the model, might affect the agricultural output in the long term. These structural factors include climatic conditions, poor infrastructure and inefficiencies in policies of the nation.

V. CONCLUSION & RECOMMEDATION

5.1 Conclusion

The study aimed to evaluate the relationship between exchange rate and agricultural output performance in Kenya. The study found that exchange rate had a positive significant relationship with agricultural output performance both in the short run. This indicated that exchange rate depreciation would result to an increase in agricultural productivity in the short run. However in the long run, exchange rate had a negative significant effect on the output in the agricultural sector in Kenya. This implied that, in the long run, exchange rate depreciation, led to negative influence in the agricultural productivity. The agricultural land had a positive significant relationship with agricultural output; therefore expansion of agricultural land will increase productivity in the agricultural sector.

5.2 Recommendation

The study recommend that the Kenyan government should implement appropriate policies that aim at stabilizing the exchange rate, to ensure the low input costs in the agricultural sector, making production cheaper for the stakeholders and farmers in the agricultural sector and address structural concerns. The government should also encourage the use of local inputs in the sector, to reduce the effect of exchange rate shocks. Policy makers should also concentrate not only on expanding agricultural land but also enhance productivity and enhance land reform policies. The study examined how exchange rate affected agricultural output, therefore to close the gap on this limitation more studies should be conducted to now concentrate on the specific agricultural commodities rather than general agricultural output.

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Influence of parenting styles on child protection services in Igembe Central, Meru County, Kenya

Ivy Gatwiri Kimathi^{1*}
Dr. Heather Eddah Kipchumba²

^{1*} gatwiriivy1@gmail.com

¹<https://orcid.org/0009-0005-1472-555X>

²<https://orcid.org/0000-0002-8152-963X>

^{1,2}Kenyatta University, Kenya

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ABSTRACT

Parenting styles shape the well-being, resilience, and vulnerability of children to harm. This study examined the influence of parenting styles on child protection services by combining literature review with empirical evidence from Igembe Central. The research was guided by Baumrind's Parenting Theory and Bronfenbrenner's Ecological Systems Theory, which together explain how parenting behaviors and environmental systems interact to shape child safety and welfare outcomes. A descriptive research design was used with a target population of 52086. A sample size of 381 was selected. The sampling methods used were purposive sampling and simple random sampling. Questionnaires and key informant interviews were used to collect quantitative and qualitative data with a 70.18%. Content analysis was applied to analyze the qualitative data, while descriptive statistics and inferential statistics were applied to the quantitative data. Ethical considerations of anonymity and confidentiality were adhered to. The study found that parenting styles were the strongest predictors of child protection services ($\beta = 0.563$, $p < 0.001$). Specifically, permissive and neglectful parenting styles were positively associated with neglect, early pregnancies, child labor, and drug abuse among children, while authoritative parenting was linked with resilience and reduced vulnerability. The findings align with already existing research showing that authoritarian, permissive, and neglectful parenting styles heighten risks of maltreatment, while authoritative parenting protects against adverse childhood experiences. The study concludes that authoritative parenting enhances protective outcomes and recommends strengthening community-based parenting programs and capacity-building initiatives for caregivers in collaboration with local child protection services.

Keywords: Authoritarian, Authoritative, Child Protection, Maltreatment, Neglectful, Parenting Styles, Permissive

I. INTRODUCTION

Child protection remains a critical global concern, attracting sustained attention from governments, researchers, and international agencies. The United Nations Convention on the Rights of the Child (UNCRC) emphasizes every child's right to safety, care, and development free from abuse and neglect (United Nation Children's Fund [UNICEF], 2023). Despite this, global estimates show that over one billion children experience some form of physical, emotional, or sexual violence annually (World Health Organization [WHO], 2020). Parenting, as the primary socializing process, plays a central role in shaping children's developmental outcomes and in determining their vulnerability or resilience to harm. Studies have consistently demonstrated that parenting styles influence children's emotional regulation, discipline, social competence, and exposure to violence (Lansford et al., 2018; Martínez et al., 2020). Authoritative parenting is associated with warmth and consistent boundaries that promote safety, while authoritarian, permissive, and neglectful styles often correspond to increased child welfare concerns (Pinquart, 2017; Mwangi & Muriithi, 2021).

In Kenya, child protection continues to face significant challenges despite the existence of robust legal and policy frameworks such as the Children Act (2022) and the National Plan of Action for Children (2015–2022). Evidence from the *Violence Against Children Survey* (VACS) shows that nearly half of Kenyan children experience physical violence before the age of 18, while over one in ten girls face sexual violence (Centers for Disease Control and Prevention [CDC], Ministry of Labour & UNICEF, 2019). Further, poverty, cultural norms, and weak parental supervision have been identified as major drivers of abuse and exploitation (National Council for Children's Services [NCCS], 2019). The *Kenya Census Thematic Report on Children* (Kenya National Bureau of Statistics [KNBS] & UNICEF, 2021) highlights that rural areas are disproportionately affected due to limited access to protection services,

social stigma surrounding child abuse, and inadequate community awareness. Within this context, parenting styles emerge as a critical determinant of how caregivers manage risk, discipline, and emotional support.

In Meru County, particularly Igembe Central Sub-County, these challenges are intensified by socio-economic hardships, early marriage practices, miraa farming lifestyles, and household instability that weaken family cohesion. Observations from local child protection offices indicate rising cases of child neglect, teenage pregnancies, and school dropouts, which are partly attributed to inconsistent or ineffective parenting approaches. Understanding how different parenting styles influence child protection outcomes in this setting is therefore essential. This study examines the relationship between the four key parenting styles; authoritative, authoritarian, permissive, and neglectful and child protection outcomes in Igembe Central. The study not only provides empirical evidence for policy and practice but also contributes to the limited body of literature examining how family-level parenting behaviors intersect with formal child protection systems in rural Kenya.

1.1 Statement of the Problem

Meru County has consistently recorded high cases of child neglect, early pregnancies, drug and substance abuse, and harmful cultural practices, which place a heavy burden on child protection systems. According to the Department of Children's Services, in 2023 Meru was among the top five counties in Kenya reporting child neglect cases, with over 3,000 cases documented in a single year. National Authority for the Campaign Against Alcohol and Drug Abuse [NACADA] (2019) further identified Meru as a hotspot for underage alcohol and khat consumption, noting that weak parental supervision contributed to children's involvement in substance abuse. The National Council for Population and Development in 2018, also highlighted Meru among counties with worrying levels of teenage pregnancies and school dropouts, issues closely tied to inadequate parental guidance. In Igembe Central, there are signs of high child vulnerability including school dropouts, teenage pregnancies and reports of abuse. National evidence from the Kenya Violence Against Children Survey [VACS] in 2019 and the Kenya Child Protection Report of 2016-2019 shows that a large share of violence against children is perpetrated by close relatives and caregivers and that emotional and physical violence by caregivers remain important risk factors. County-level planning documents and a Meru Situation Analysis identify gaps in child protection structures and specialized services in Igembe Central. Despite these insights, limited research has directly linked parenting styles to child protection services.

1.2 Research Objective

The main objective of this study was to examine how parenting styles influence child protection services in Igembe Central Sub-County.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Baumrind's Parenting Theory

Baumrind's Parenting Theory (1966; 1991) identifies four parenting styles: authoritative, authoritarian, permissive, and neglectful. The theory posits that each style reflects varying degrees of parental warmth and control, shaping children's social life, emotional stability, and behavior. Authoritative parents combine warmth and firmness hence promoting self-discipline and security, while authoritarian parents enforce strict rules with little responsiveness, leading to anxiety or reduced autonomy. Permissive parents show warmth but lack structure, exposing children to risky behaviors, whereas neglectful parents demonstrate minimal involvement, resulting in neglect and emotional deprivation. In the context of this study, Baumrind's theory provides a behavioral foundation for understanding how parenting practices influence children's vulnerability to abuse or protection.

2.1.2 Bronfenbrenner's Ecological Systems Theory

Bronfenbrenner's Ecological Systems Theory (1979) explains child development as a product of interactions between the child and various environmental systems: the microsystem (family, school), mesosystem (community), exosystem (institutions) and macrosystem (cultural norms). This study applies the theory to illustrate how family-based parenting practices (microsystem) interact with community and institutional structures (meso/exosystem) to affect child protection outcomes in Igembe Central. Weak family supervision, limited communication, and poverty at the micro-level are often compounded by systemic gaps in child protection services at the macro level.

2.2 Empirical Review

Empirical evidence consistently demonstrates a link between parenting styles and child protection outcomes. In USA, the U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau (2024) produced a nationwide yearly report on child protection, focusing on neglect, statistics and abuse



handled by the Child Protection Services. The report noted that there was a variation across federal states on child maltreatment and fatalities, caused by poor parenting practices and therefore called for parental analysis and subsequent protection of vulnerable children. Complementary evidence from a nationwide study by Brown and Ward (2023) examined how parental stress, socio-economic hardship, and parenting style predict child welfare involvement across diverse communities. Their findings showed that authoritarian and neglectful parenting styles significantly increased the likelihood of child maltreatment reports, while authoritative parenting acted as a strong protective factor. The authors concluded that strengthening parental capacity and promoting positive parenting interventions should remain a priority in U.S. child welfare policy, given the consistent link between parenting behaviours and child protection outcomes.

In India, Sahithya and Raman (2021) conducted a study on the relationship between parenting style, parental personality, and child temperament among children diagnosed with anxiety disorders. The study found that permissive and authoritarian parenting styles were associated with higher levels of child anxiety, while authoritative parenting was linked to emotional stability and better social functioning. The authors observed that most cases of child distress stemmed from poor parental responsiveness and inconsistent discipline, reflecting how ineffective parenting can indirectly compromise child protection. Similarly, Li et al. (2023) conducted a cross-national comparative study that included Indian families and reported that children raised under authoritative parenting demonstrated better emotion regulation and social adjustment compared to those raised in authoritarian households. The findings reaffirm that parental warmth, communication, and balanced control are essential for fostering emotional resilience and reducing children's vulnerability to abuse.

Roman et al. (2016) did a study in South Africa on how parenting styles are perceived and how they vary based on the gender or ethnicity of the caregiver. The study found that authoritative parenting style was more linked to positive outcomes in local literature while authoritarian and neglectful parenting styles were harsh and linked with negative child behavior and emotional outcomes. The authors recommended positive parenting support programs as part of child protection/prevention strategies. In a later study, Louw and Stroud (2020) investigated parental disciplinary practices in Cape Town and found that caregivers who employed supportive, communicative approaches had children who demonstrated higher self-esteem and lower exposure to violence. The study emphasized that positive parenting directly enhances children's sense of safety and reduces reliance on punitive correction.

Jensen et al (2021) did a study on a home visiting parenting program implemented in Rwanda for strengthening social protection services. The study found that the home-visiting program led to improvements in caregiver stimulation and father engagement, better child cognitive and social-emotional outcomes, and reductions in family violence indicators in the short-to-medium term. The study demonstrated that parenting programs were crucial in reducing risk factors for mal-treatment and improving general child well-being. A follow-up evaluation (Jensen et al., 2025) confirmed sustained benefits in reduced harsh parenting and improved child emotional wellbeing, emphasizing the importance of scaling community-based parenting interventions in similar contexts.

The government of Kenya did the Violence Against Children survey of 2019 which measured prevalence, risk/protective factors, and consequences of physical, sexual, and emotional violence experienced by children and adolescents in Kenya. It documented high prevalence of childhood physical, sexual and emotional violence, with many incidents perpetrated by people known to the child, including family members and caregivers. It found concerning increases in certain adolescent subgroups, and identified gaps in reporting and access to child protection services. Buliva (2019) examined the influence of permissive parenting on delinquent behaviour among children from selected public primary schools in Butere Sub-County. The study found that permissive parenting, characterized by low control and excessive freedom, was associated with increased engagement in risky behaviours such as truancy, substance use, and early sexual activity. The researcher noted that inadequate supervision and parental indulgence weakened moral guidance and exposed children to abuse and exploitation. The study emphasized the need for parental training programs to strengthen boundaries and improve child safety outcomes.

The National Council for Children's Services; Meru County (2023) did a situation analysis to map children's services, institutional care, and gaps in child protection across the county. The analysis report highlighted that many children in institutional care are from families, meaning they are not abandoned, stressing the need for family reintegration and community-based parenting supports. The report flagged Igembe sub-counties as having service coverage gaps and recommended scaling county parenting/caregiver support linked to referral systems. A study by Mutunga et al. (2023) investigated the influence of parenting styles on discipline among secondary school students in Meru County. The study established that authoritative parenting correlated positively with students' self-discipline, responsibility, and academic motivation, while permissive and neglectful parenting styles were linked to indiscipline and poor performance. The researchers concluded that parenting behaviors directly affect children's social adjustment and emotional wellbeing, recommending that community sensitization on effective parenting be integrated into local education and child protection programs.



Empirical evidence shows that parenting styles are a central determinant of whether risks escalate into child protection cases (Baumrind, 1991; Odame-Mensah & Gyimah, 2018). Permissive and neglectful parenting styles are strongly associated with poor supervision, truancy, early sexual activity, and substance abuse (Kipchumba & Loong’onyo, 2024). Authoritarian parenting, though sometimes motivated by protection, often results in harsh discipline and secrecy that can manifest as emotional or physical abuse (Lansford et al., 2018). In contrast, authoritative parenting has consistently been linked to resilience, academic success, and reduced vulnerability to maltreatment (Martínez et al., 2020).

III. METHODOLOGY

The study utilized descriptive research design. This research design was adopted because it allowed for an in-depth examination and factual description of existing relationships between parenting styles and child protection services within Igembe Central. This design enabled the researcher to capture respondents’ perceptions, attitudes, and experiences without manipulating the variables. The target population was 52086 respondents drawn from household heads, children officer, the subcounty police commander and subcounty hospital head pediatric nurse in Igembe Central. A sample of 381 was determined using the Krejcie and Morgan (1970) sample size determination table, which identified that for a population of 52,086, a sample of approximately 381 is statistically adequate at a 95% confidence level and a 5% margin of error. The researcher purposively selected the children officer, subcounty police commander and the head pediatric nurse in the subcounty while the household heads were randomly sampled. Qualitative and quantitative data was collected through semi-structured questionnaires and key informant interviews. The questionnaire response rate was 70.18%. Descriptive and inferential statistics were used to analyze quantitative data and content analysis used to analyze qualitative data. The analyzed data was presented in tables. Ethical considerations of anonymity and confidentiality were adhered to.

IV. FINDINGS & DISCUSSION

4.1 Parenting Styles

The study assessed respondents’ perceptions of four parenting styles; authoritative, authoritarian, permissive, and neglectful and their influence on child protection. The findings in Table 1 illustrate the mean and standard deviation scores for each parenting style.

Table 1

Descriptive Statistics for Parenting Styles

Parenting Style	Mean	Standard Deviation	Interpretation
Authoritative	3.94	1.13	Promotes protection and positive child development
Authoritarian	3.83	1.18	Provides structure but limits confidence
Permissive	4.07	0.99	Associated with exploitation and poor supervision
Neglectful	4.34	0.81	Strongly associated with neglect and vulnerability

As shown in Table 1 **Error! Reference source not found.** above, respondents overwhelmingly agreed that children of neglectful parents are the least protected ($M = 4.34, SD = 0.81$), underscoring neglect as the strongest risk factor for child vulnerability in Igembe Central. Similarly, permissive parenting was strongly associated with children’s exploitation ($M = 4.07, SD = 0.99$). Authoritative parenting was positively perceived, with respondents affirming that it promotes children’s understanding of safety and wellbeing ($M = 3.94, SD = 1.13$). Authoritarian parenting attracted moderate agreement, with respondents noting that it produced less confident children ($M = 3.83, SD = 1.18$). These results highlight that while authoritative parenting is protective, both permissive and neglectful styles expose children to the risk of child maltreatment.

These results correspond with Mutunga et al. (2023) and Buliva (2019) who observed that permissive and neglectful parenting expose children to high vulnerability, while Martínez et al. (2020) emphasized that authoritative parenting fosters resilience, open communication, and emotional security.

4.2 Child Protection Services

The study further sought to evaluate respondents’ perceptions of the accessibility, responsiveness, and effectiveness of child protection services in Igembe Central. The mean scores in Table 2 summarize the overall assessment of service performance.

Table 2*Descriptive Statistics for Child Protection Services*

Aspect of Child Protection Services	Mean	Standard Deviation	Interpretation
Accessibility of services	3.72	1.07	Moderately accessible
Responsiveness to child abuse cases	3.81	1.02	Moderately responsive
Awareness of protection programs	3.68	1.08	Moderate awareness
Satisfaction with outcomes	3.83	0.99	Generally satisfactory
Composite Mean	3.76	1.04	Moderate effectiveness overall

The overall mean score ($M = 3.76$, $SD = 1.04$) suggests that child protection services in Igembe Central are moderately effective, though respondents highlighted disparities in coverage, low awareness, and resource constraints. These findings are consistent with the *Kenya Child Protection Report (2016–2019)* and *Violence Against Children Survey (VACS, 2019)*, both of which identified gaps in awareness and institutional capacity in rural counties (CDC et al., 2019; NCCS, 2019).

4.3 Regression Analysis

To determine the predictive strength of parenting styles on child protection services, the researcher analyzed this relationship through regression analysis.

Table 3*Regression Results*

Variable	Beta (β)	t value	P value	Interpretation
Parenting Styles	0.563	9.247	< 0.001	Significant predictor of child protection
Constant	1.231	4.372	0.000	-

The regression results revealed that parenting styles significantly influenced child protection outcomes ($\beta = 0.563$, $p < 0.001$). This implies that positive parenting behaviors, particularly those aligned with authoritative practices; enhance children's safety and welfare, while negative styles such as neglectful and permissive parenting weaken protective mechanisms.

4.4 Discussion**4.4.1 Authoritative Parenting and Child Protection Services**

The study found that authoritative parenting in Igembe Central is perceived as protective ($M = 3.94$, $SD = 1.13$). Respondents and key informants described authoritative parents as combining warmth with clear, consistent discipline. Children from such households were reported as confident, disciplined, and less likely to be abused. Thematic evidence shows that these homes foster trust and early disclosure of harm. Children raised by authoritative parents are more likely to be responsible adults who understand their limits, respect others and able to make good decisions without close supervision. The researcher noted that most of the household heads who adopt this parenting style are learned, with tertiary education levels. These parents understand the importance of raising confident children who have voices of their own and can think independently.

These results agree with empirical studies that link authoritative parenting to positive child outcomes and lower vulnerability. Martínez et al. (2020) report that authoritative caregivers foster resilience, self-regulation, and social competence. The Kenya Census Thematic Report on Children (KNBS & UNICEF, 2021) noted that households characterized by positive parental guidance recorded fewer child protection concerns.

4.4.2 Authoritarian Parenting and Child Protection Services

Authoritarian parenting in Igembe Central was associated with structure and obedience but also with emotional distance and suppressed independence ($M = 3.83$, $SD = 1.18$). Participants reported that children from authoritarian homes often conceal risky behaviours such as drug use and sexual activity and are less likely to disclose abuse, which delays engagement with child protection services. Respondents agreed that authoritarian parents, while often strict and demanding, tend to undermine children's confidence and sense of self-worth. Key informants observed that such children, though obedient, are often withdrawn and hesitant to express themselves openly. It was reported that students from authoritarian households were less likely to participate in class discussions and often appeared anxious during oral assessments.

This pattern aligns with studies that indicate authoritarian parenting can inhibit communication and self-expression, thereby reducing disclosure and help-seeking. Pinquart (2017) provides a nuanced view: while strict

control can sometimes reduce externalizing behaviours and deter delinquency, it may concurrently harm emotional wellbeing and reduce the likelihood of reporting abuse. Thus, the current findings are consistent with the literature that reveals children raised in environments characterized by harsh discipline and limited parental responsiveness are at higher risk of both physical and emotional harm (CDC et al., 2019).

4.4.3 Permissive Parenting and Child Protection Services

This was noted as the most common parenting style in Igembe central. Permissive parenting registered a high mean ($M = 4.07$, $SD = 0.99$), and thematic data emphasized weak supervision and an overemphasis on friendship with the children at the expense of safety. Respondents reported examples e.g., mixed-gender sleepovers and yielding to children's demands which link permissiveness to school dropout, substance use eg miraa chewing and alcohol consumption, early sexual activity and teenage pregnancy. Overall, permissive parenting was associated with increased child vulnerability and exposure to exploitation.

These results concur with empirical studies that document links between permissive parenting and risky behaviours: Buliva (2019); Chepgimis and K'Okul (2019) report increased delinquency and poor supervision under permissive regimes. Mutunga et al. (2023) also link permissiveness to indiscipline and vulnerability of children in Meru County. National survey data (CDC et al., 2019) identify poor parental monitoring as a driver of abuse further support this association.

4.4.4 Neglectful Parenting and Child Protection Services

Neglectful parenting had the strongest negative association ($M = 4.34$, $SD = 0.81$). In Igembe Central, it is characterized by minimal supervision and limited involvement in children's daily activities. Respondents overwhelmingly agreed that neglectful parenting left children unprotected and highly vulnerable to abuse, child labour, early marriage and teenage pregnancies. Unlike permissive parents who are indulgent, neglectful parents are often absent, physically, emotionally, or both. Neglected children are among the most affected in terms of school attendance and performance and often lack basic needs. Orphaned children were also reported to be highly vulnerable. Many are forced into sexual exploitation in exchange for basic needs such as food, clothing, or sanitary towels. Neglectful parenting in Igembe Central is also associated with low emotional responsiveness, limited communication, and failure to meet children's basic emotional and developmental needs. Such practices compromise children's psychosocial development and ability to recognize or report abuse, leaving them highly vulnerable. Respondents agreed that children raised in neglectful households are the least protected. The findings suggest that the absence of parental supervision and guidance not only increases immediate risks such as physical and emotional abuse but also undermines the formation of protective coping skills and resilience which are critical for navigating harmful environments.

This finding is strongly supported by existing literature. The *Kenya Child Protection Report* and VACS (CDC et al., 2019; NCCS, 2019) identify neglect as a leading form of maltreatment; Odame-Mensah & Gyimah (2018) and van IJzendoorn et al. (2019) similarly identify neglect as a major antecedent to adverse child outcomes globally. No empirical contradiction was identified regarding the harmful effects of neglect.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study set out to examine the influence of parenting styles on child protection services in Igembe Central, Meru County. Guided by Baumrind's Parenting Theory and Bronfenbrenner's Ecological Systems Theory, the findings established a significant relationship between parenting behaviors and child safety outcomes. Authoritative parenting emerged as the most protective style, promoting communication, warmth, and consistent supervision that strengthen children's resilience and awareness of personal safety. In contrast, permissive and neglectful parenting were associated with heightened vulnerability to abuse, exploitation, and neglect due to weak control and inadequate emotional support. Authoritarian parenting provided structure but limited emotional openness, potentially reducing children's confidence and capacity to report abuse. These findings imply that the quality of parenting directly shapes children's protection outcomes, underscoring the need for family-focused interventions as part of Kenya's broader child protection strategy.

5.2 Recommendations

Parenting Education and Capacity Building: The Department of Children Services (DCS) and local Non-Governmental Organizations should conduct structured parenting education programs focusing on promoting authoritative parenting, effective communication, and consistent supervision. Community Sensitization and

Awareness: Chiefs, religious leaders, and local administrators should spearhead awareness campaigns to discourage neglectful and permissive parenting practices that expose children to harm.

Integration of Child Protection Systems: Strengthen coordination between families, schools, health facilities, and law enforcement agencies to enhance the early detection and reporting of child abuse and neglect. Policy and Programmatic Interventions: The Meru County Government and national policymakers should integrate family-centered parenting interventions into child protection frameworks to ensure sustainability. Further Research: Future studies should employ longitudinal and comparative designs to examine how socio-economic and cultural factors interact with parenting styles to influence child protection outcomes across diverse Kenyan contexts.

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The quality of classroom instruction of religious and moral education teachers: Do their academic qualifications, professional qualifications and teaching experiences make a difference?

Eric Mensah¹
Bismark Sagoe²
Gladys Coleman³
Ebenezer Kyei Baffour⁴
Joyce Muminu⁵

¹eric.mensah5@ucc.edu.gh

²bismark.sagoe@stu.ucc.edu.gh

³nanaahenma18@gmail.com

⁴baffourebenezer100@gmail.com

⁵joycemumin67@gmail.com

¹<https://orcid.org/0000-0003-2362-8493>

²<https://orcid.org/0009-0007-6732-6549>

³<https://orcid.org/0009-0009-8910-5442>

⁴<https://orcid.org/0009-0002-9440-0162>

⁵<https://orcid.org/0009-0005-8932-9797>

^{1,2,3,4,5}University of Cape Coast, Ghana

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ABSTRACT

Effective teaching is considered a key contributor to successful students' outcomes. A cardinal determinant of effective teaching is the quality of the classroom instruction (QCI) of teachers. Literature hints that QCI is influenced by teachers' academic qualifications (AQ), professional qualifications (PQ), and their years of teaching experience (TE). Using the self-determination theory, this study sought to examine the influence of Religious and Moral Education (RME) teachers' AQ, PQ, and TE on their QCI within the Ghanaian context. The descriptive cross-sectional design was employed. Through the census method, all 170 RME teachers at Elmina were involved. A structured observational checklist was adopted for the study (reliability coefficient of .84). Descriptive (frequency, percentages, mean, and standard deviation) and inferential statistical tools (factorial ANOVA, ANOVA) were used to analyse data. The results indicated that the RME teachers have a moderate level of QCI. It was discovered that RME teachers' AQ, PQ, and TE combined brought about differences in their QCI. It was recommended that teacher education institutions in Ghana should ensure that pre-service training programmes emphasise both subject-specific pedagogy and reflective practice. Ghana Education Service (GES) should strengthen teacher deployment policies to ensure proper alignment between teachers' specialization and the subjects they teach. It is also recommended that regular in-service training and short courses in RME pedagogy be provided for teachers who were not originally trained in the subject. Stakeholders are therefore called on to institutionalise structured programmes focusing on innovative RME pedagogy, classroom interaction, and student engagement strategies.

Keywords: Academic Qualification, Moral Education, Professional Qualification, Religious, Teaching Experience, Teachers, Quality Classroom Instruction

I. INTRODUCTION

The concept of teaching has attracted considerable attention and scholarly interest. This interest has resulted in a wide range of definitions that are both simple (Hirst, 1974; Frimpong, 1990; Nilsen & Albertalli, 2002) and complex (Freire, 2000; Darling-Hammond et al., 2017; Merriam et al., 2007). Teaching is often characterized as both an art and a science (Rajagopalan, 2019). Schlechty (2004) defines teaching as an art of inducing students to behave in ways that are presumed to promote learning. Teaching is not just about content delivery but also engaging learners with the broader context in which learning occurs, making learners socially and culturally relevant (Casham et al., 2024). This implies that teaching requires more than merely the body of knowledge being conveyed; it demands various factors to ensure effective instruction. Effective teaching is a multifaceted and complex concept that has been defined as the

behaviours and classroom processes that contribute to better student performance (Ko et al., 2013) and also as that which encompasses not only academic outcomes but also other educational goals (Anderson, 1991). Anderson (1991) posits that effective teachers are those who achieve the goals they set for themselves or have set for them by others. The concept of educational effectiveness provides a framework for examining effectiveness at various levels, including individual teachers, schools, and educational systems (Anderson, 1991). Campbell and Malkus (2010) define teacher effectiveness as a process, thus, teacher effectiveness is the impact that classroom factors, such as teaching methods, teacher expectations, classroom organisation and use of classroom resources, have on students' performance. Shulman's (1986) requirements for teaching serve as the key elements that constitute most of the frameworks used in the field of education to describe effective teaching in schools.

Every subject taught in schools should be effectively taught, especially in Religious and Moral Education (RME) (Mensah & Ampem, 2023). RME holds profound importance as it plays an instrumental role in shaping the ethical, moral and religious dimensions of students. RME goes beyond imparting knowledge; it seeks to foster values, empathy, and critical thinking skills that are essential for navigating complex ethical dilemmas in society. RME encompasses the three dominant religions in Ghana: Christianity, Islam, and African Traditional Religion. The teaching of RME requires that the teacher has a fair knowledge and appreciates all the three religions, putting aside his/her personal religious affiliation. Nonetheless, Owusu and Mensah (2022) posit that there are challenges inherent in the effectiveness of teaching RME rooted in three (3) factors. These three factors are: the teacher who imparts knowledge, the student who is the recipient and the method used in teaching. Teachers bear the responsibility for the essential roles that schools play in society (Campbell & Malkus, 2010). The quality and effectiveness of teaching RME are not solely contingent upon the curriculum and resources; rather, they are significantly influenced by the teachers who deliver the instruction. For RME teachers to exert a significant influence on student learning, they must ensure their classroom instruction is of high quality. Thus, the concept of Quality Classroom Instruction (QCI) is of importance in this context.

QCI, also referred to as instructional quality, refers to the effective and impactful delivery of instruction in educational settings. It involves a combination of pedagogical skills, content knowledge, classroom management, and the ability to create a positive and inclusive learning environment (Nilsen et al, 2016). QCI is well explained by the Self-Determination Theory (SDT). This theory posits that human beings are inherently active and possess an innate tendency toward growth, mastery, and the integration of new experiences through a process known as organismic integration (Ryan & Deci, 2019). Schlesinger and Jentsch (2016) and Kunter et al (2013) point to challenges in measuring teacher and instructional quality. However, the establishment of the International Large-Scale Assessments (ILSA) and advancement in quantitative methods offer researchers new avenues to study the relationships between teachers, their instruction, and learning outcomes (Chapman et al., 2012). Gustafsson and Nilsen (2016) developed a framework from the dynamic model of educational effectiveness. Goe (2007) also used a framework to define teacher quality. Within this framework, teacher quality includes both the qualifications and characteristics of teachers, which are categorised as "inputs" that influence both the teachers' instruction, categorised as "process", as well as student outcomes. Furthermore, Gustafsson and Nilsen (2016) operationalized instructional quality based on a model comprising three "global dimensions of classroom process quality" (Klieme et al., 2009; Baumert et al., 2010). These dimensions include cognitive activation, supportive climate, and classroom management.

Kyriakides et al. (2014) proposed both generic and subject-specific aspects of instructional quality that may enhance student psychomotor learning. They achieved this by integrating generic elements from the Dynamic Model of Educational Effectiveness (DMEE) (Kyriakides et al, 2014) with subject-specific teaching practices derived from a modified version of the Task Structure System (TSS). Subject-specific frameworks are developed to analyse instructional quality within one specific subject and are directed by the subject demands of a particular discipline, uniquely designed for the teaching of such a discipline. This study operationally defines QCI as traits that teachers demonstrate during their instructional periods to create a conducive environment for learning, achieve objectives, and improve students' outcomes. The study focuses on traits (Modelling, Checking for Student Understanding, Response Time, Student Engagement, High Rate of Success, Encouraging Effort, Transitions, and Good Pacing) adapted from Gersten et al. (2005) for measuring QCI. The quality of a teacher's classroom instruction is influenced by some characteristics of the teacher.

According to Coenen et al. (2018), teacher characteristics are typically categorized into two dimensions: acquired characteristics and sociodemographic characteristics. This study focuses on acquired teacher characteristics, specifically the academic qualifications, professional qualifications, and teaching experience of RME teachers. Academic qualification (AQ) relates to the acquisition of relevant knowledge, skills, competence, and creativity needed for quality productive engagement in the teaching profession. The educational underpinning of educators, as reflected in their academic qualifications, stands out as a robust predictor of instructional excellence. Educators armed with advanced degrees and specialized expertise possess a profound comprehension of their subject matter, enabling them to navigate intricate concepts and captivate students with lucidity and sagacity. Teachers' AQ play a crucial role

in shaping the quality of classroom instruction. According to Schultz (as cited in Zhang et al., 2020), human capital, which includes AQ, is essential for achieving high productivity and gaining a competitive edge. For instance, Ruhela and Singh (as cited in Khurshid, 2008) argue that higher academic qualifications among teachers contribute significantly to the overall success of educational institutions. This suggests that RME teachers' academic qualification may influence their QCI.

Professional qualification (PQ) refers to the kind of professional education the teacher has received. PQ of teachers encompasses the certifications, credentials, and training that demonstrate their expertise in education and teaching. The extent and quality of the professional preparation a teacher receives will influence both the quality and the style of the teacher's instruction (Obun et al., 2023). The commitment of educators to refining their instructional practices is often indicated by their engagement in professional development and pursuit of qualifications (Day, 2017). Notably, the pursuit of professional growth significantly forecasts instructional quality, nurturing a dynamic and adaptable teaching environment that effectively addresses the evolving needs of students (Padillo et al., 2021). PQ also significantly affects the quality of classroom instruction. Sial (2005) argues that while academic credentials are important, professional education training is critical in enhancing teachers' effectiveness. Siaw-Marfo's (2011) study revealed that teachers with extensive professional training exhibit a higher level of self-efficacy in their instructional practices. This further means that teachers with extensive professional training are more confident in their ability to motivate students, manage classroom dynamics, and employ innovative teaching strategies that cater for individual student needs.

Teacher experience (TE) refers to the total number of years a teacher has spent in classroom teaching, rather than the years elapsed since graduation. Experienced teachers possess a wealth of background knowledge to draw from, allowing them to contribute valuable insights and ideas to the teaching and learning process (Kosgei et al, 2013). On the other hand, some experts think that, over time, most teachers develop instructional routines, learn what to expect from students, and settle into teaching patterns with confidence and a sense of having arrived (Feiman-Nemser, 2001). This metric is often used to gauge a teacher's level of expertise, familiarity with the educational environment, and potential impact on student learning. This wealth of experience cultivates an acute intuition for gauging student comprehension and engagement levels, leading to the creation of targeted and impactful lessons. The predictive potency of years spent in the teaching profession lies in the refined classroom management and pedagogical expertise that seasoned educators infuse into their instructional practices (Tantawy, 2020). This means that the teaching experiences of RME teachers can influence their QCI.

1.1 Statement of the Problem

In the teaching of RME, there is the demand for RME teachers to possess professional and academic qualifications coupled with teaching experience to navigate the complexities of religious, moral, and ethical issues. However, evidence from previous studies show that a significant number of RME teachers in Ghana do not possess the requisite qualifications (Owusu & Mensah, 2022; Mensah & Owusu, 2022; Mensah & Ampem, 2023). Owusu and Mensah (2023) and Mensah and Ampem (2023) postulated that, as a result of unemployment and lack of qualified teachers in Ghana, school administrators are forced to assign teachers who did not specialise in RME to teach the subject. Such teachers lack essential academic qualifications and the necessary professional training, which negatively impacts the quality of their classroom instruction. For instance, some teachers who specialized in mathematics education may be found teaching RME simply because they are class teachers. The absence of these qualifications for teachers who teach RME often leads to less students' engagement in lessons, minimal checking of students' understanding, poor response time, low rate of success, less encouraging efforts, poor pacing, which leads to lower academic performance, negative impact on student motivation, inadequate classroom management, and compromised curriculum delivery. The effects are very detrimental to the whole educational process and must be addressed urgently. A study conducted in Pakistan, found that there was no observable difference in quality between trained and untrained primary teachers. Additionally, given the very low salaries paid to teachers, there was generally little motivation among unqualified teachers to enhance their academic or professional qualifications (Kulshrestha & Pandey, 2013). To solve this problem, it is important to find out the level of RME teachers' qualifications and how it affects the quality of classroom instruction.

Previous studies have been conducted on this phenomenon. However, a review of the literature reveals a significant knowledge gap. Previous studies have not explored how the AQ, PQ, and TE of Ghanaian RME teachers influence their QCI. Previous research typically examined these teacher characteristics in isolation, with only Mensah and Ansah (2023) investigating their combined effect on CRS teachers' content knowledge in Ghana. Most studies have focused on these variables in Europe, Asia, America, or other African nations, while the few conducted in Ghana have primarily examined teachers in other subject areas. This situation underscores a substantial knowledge gap, as no research has examined the influence of AQ, PQ, and TE on the QCI of RME teachers in Ghana. In addition to this knowledge gap, the study addresses geographical and population gaps. There is a lack of research in Ghana on the



impact of RME teachers' AQ, PQ, and TE on QCI, as existing studies have concentrated on other subject areas and populations. Moreover, the empirical literature presents contradictory findings regarding the influence of AQ, PQ, and TE on teachers' QCI. While the majority of studies (Engida et al., 2024; Ntarmah & Yaro, 2024; Adhikari et al., 2024; Mibirizi & Ojok, 2024; Oteng et al., 2023; Inusah, 2020; Umar-ud-Din et al., 2010; Voss et al., 2022; Zhou et al., 2023; Kiani, 2023; Fitchett & Heafner, 2018; Ali & Khan, 2018; Ngabonziza & Oniye, 2024; Kini & Podolsky, 2016; Kosgei et al., 2013; Usifo, 2023; Yang & Gong, 2025; Bolanle Bello, 2022; Graham et al., 2020; Mageka & Ogochi, 2020; Ulfa et al., 2022; Stronge, 2018) have established a positive influence of teacher AQ, PQ, and TE on quality of classroom teaching and students' achievement, a few others (Mensah & Attachie, 2024; Nilsen et al., 2025; Lydia & Migosi, 2015; Mensah & Ansah, 2023; Zhang, 2008) have provided contrasting findings. These knowledge and context gaps further emphasize the need to examine the influence of RME teachers' AQ, PQ, and TE on their QCI within the Ghanaian context. This study aims to provide insights into how teacher AQ, PQ, and TE affect the QCI. The outcome will provide empirical evidence on how teachers' characteristics influence QCI. Heads of schools and the Ghana Education Service will make evidence-based decisions with regard to posting and assignment of subjects to teachers in schools.

1.2 Research Objectives

- i. Establishing differences in RME teachers' Quality Classroom Instruction based on their academic qualification
- ii. Establishing differences in RME teachers' Quality Classroom Instruction based on their professional qualification
- iii. Establishing differences in RME teachers' Quality Classroom Instruction based on their teaching experience

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Self-Determination Theory

Self-determination theory assumes that human beings are inherently active, with liberally evolved tendencies toward assimilation, seeking and mastering challenges, and the integration of new experiences. The basic psychological process through which this occurs is referred to as organismic integration, which is a manifestation of people's proactive, synthetic nature to become more differentiated and coherent in functioning. Self-determination theory (SDT) is a macro-theory that comprises six mini-theories that have been developed at different times to explain a circumscribed set of motivational phenomena emerging from programmes of research in the laboratory and applied settings. The first of the mini-theories is the cognitive evaluation theory, which was formulated to explain the effects of social contexts on intrinsic motivation. The second, organismic integration theory, explains phenomena concerned with the internalization and integration of extrinsic motivation. The third is the causality orientation theory, a theory of general individual differences in motivational orientations. The fourth, basic psychological needs theory, addresses the issue of psychological well-being and serves to tie together the first three mini-theories. The fifth is the goal content theory, which is concerned with the "what" or content of people's life goals and lifestyles, and the processes through which these develop. Finally, the sixth is the relationships motivation theory, which concerns the processes that promote high-quality close relationships. Although the six mini-theories together do not constitute the whole of SDT, most phenomena elucidated within this theoretical tradition can be located within one of these mini-theories (Ryan & Deci 2019).

In the educational setting, SDT posits that an internal feeling or perception of volition motivates individuals over their actions. For example, within a school setting, a motivated teacher may perceive a higher level of control over what can be taught within their classroom. According to Vallerand (2001), individual motivation, also termed as self-determination, has been categorized into three main concepts: intrinsic, extrinsic, and amotivation. Intrinsic forms of motivation are engaged in for internal reasons, such as enjoyment, pleasure, or the feeling of satisfaction (Ryan & Deci, 2000). Extrinsic motivations are influenced by external factors, such as earning a prize or feeling pressure to complete a task (Ryan & Deci, 2000). Finally, amotivation can be understood as an absence of drive or desire, exemplified by individuals who fail to engage in certain behaviours regardless of the number of external prompts presented to them (Ryan & Deci, 2000). Vallerand (2001) indicated that the three forms of motivation could be placed on a continuum, with extrinsic motivation placed between intrinsic and amotivation. Research has indicated that being more intrinsically motivated or self-determined within a work environment, such as teaching, is associated with a variety of positive outcomes (Ryan & Deci, 2019). For example, individuals who are intrinsically motivated are more likely to invest greater effort and engage actively in school activities and learning (Black & Deci, 2000; Shen et al, 2009).



Bieg et al, (2011) found that intrinsically motivated teachers provided an instructional setting that positively influenced the motivation of their students. On the other end of the spectrum, individuals with lower levels of self-determination tend to be less involved, derive little enjoyment from activities, and exhibit disengagement in learning tasks (Ntoumanis et al., 2004; Perlman, 2012). An extensive review of the literature identified three major themes regarding motivation and teacher education: the determinants of teacher motivation (Niemiec et al., 2006), interventions to modify teaching practices (Perlman, 2012; Perlman & Piletic, 2012; Perlman, 2011; Tessier et al., 2010), and the impact of motivationally-based instructional practices on student outcomes (Black & Deci, 2000). A summary of the aforementioned studies indicated that elements of the school environment, such as the inherent pressures of being a teacher, influence the motivational profiles of educators. Additionally, it is feasible to alter instructional practices to provide more motivationally supportive experiences for students (Perlman, 2012). Specific instructional behaviours, such as the manner in which lesson content is conveyed, can also influence student motivation (Perlman, 2012). All these findings point to teachers' demographics as a driving force (intrinsic motivation) behind self-determination, with these demographics being influenced by extrinsic motivations.

2.2 Empirical Review

2.2.1 Influence of Academic Qualification on Teachers' Quality Classroom Instruction

The quality of teachers' classroom instruction is an aspect of effective teaching. It refers to the effective and impactful delivery in educational settings. It involves a combination of pedagogical skills, content knowledge, classroom management, and the ability to create a positive and inclusive learning environment (Nilsen, 2016). In this study, QCI is used to represent traits that RME teachers demonstrate during their instructional periods that create a conducive atmosphere for learning. These traits include modelling, checking for students' understanding, response time, students' engagement, rate of success, encouraging efforts, transition, and good pacing (Gersten et al, 2005). Academic qualification refers to the acquisition of competence, skills, and knowledge relevant to a particular field. AQ relates to the educational trajectory or the level of education the teacher has acquired and ensures that teachers possess the knowledge and expertise necessary to effectively educate students in their assigned subjects or grade levels. In this study, AQ is used to represent the qualifications that RME teachers have acquired through training in teacher preparation institutions. These in the Ghanaian context include WASSCE, Diploma, Bachelor's degree, and Master's degree. Scholars agree that teachers' AQ play a crucial role in shaping the quality of classroom instruction (Zhang et al., 2020). Previous studies (Engida et al, 2024; Ntarmah & Yaro, 2024; Adhikari et al, 2024; Mbirizi & Ojok, 2024; Oteng et al, 2023; Inusah, 2020; Umar-ud-Din et al, 2010) have indicated a positive influence of teacher AQ on quality of classroom teaching and students' achievement, with higher qualifications significantly enhancing quality of classroom teaching compared to lower qualifications. Only a few studies (Mensah & Attachie, 2024; Nilsen et al, 2025; Lydia & Migosi, 2015; Mensah & Ansah, 2023) have indicated no or minimal significant effects or relationships between the two constructs. There is a need to provide evidence to clear this controversy in the literature. We therefore posit that:

H₀₁: Academic qualifications of RME teachers influence the quality of their classroom instruction

2.2.2 Influence of Professional Qualification on Teachers' Quality Classroom Instruction

Quality of classroom instruction is crucial for educational success. QCI, a vital element for students' success, refers to the effective and impactful delivery in educational settings. It involves a combination of pedagogical skills, content knowledge, classroom management, and the ability to create a positive and inclusive learning environment (Nilsen, 2016). In this study, QCI represents RME teachers' traits related to their instructional periods. These are traits that create a conducive atmosphere for learning. These traits include modelling, checking for students' understanding, response time, students' engagement, rate of success, encouraging efforts, transition, and good pacing (Gersten et al, 2005). Professional qualification refers to the kind of professional education the teacher has received. PQ of teachers encompasses the certifications, credentials, and training that demonstrate their expertise in education and teaching. This means that a teacher may have an AQ but may not be a professional teacher. In this study, PQ is used to represent the training and qualification that RME teachers have acquired to gain professional competence, whether they are professionally trained or not. In the Ghanaian context, these qualifications include Teacher Certificate A, Diploma in Education, Bachelor of Education, and Postgraduate Diploma in Education. Literature has established a relationship between PQ of teachers and the QCI. Sial (2005) argues that while academic credentials are important, professional education training is critical in enhancing teachers' effectiveness. They also serve as a way for individuals to demonstrate their competence, enhance their career prospects, and maintain high standards within their respective professions. They contribute to the overall quality and standards of education (Obun et al, 2023). Studies (Voss et al., 2022; Zhou, et al, 2023; Kiani, 2023; Fitchett & Heafner, 2018; Ali & Khan, 2018; Ngabonziza & Oniye, 2024) have established how crucial professional training is for the attainment of quality classroom teaching and students' achievement. These studies, individually, through their findings, showed that teacher PQs are a determinant of their



QCI. Only a few studies (Mensah & Attachie, 2024; Nilsen et al, 2025; Lydia & Migosi, 2015; Mensah & Ansah, 2023) have shown that teachers’ PQs do not influence their QCI. Due to the above review, we hypothesize that:

H₀₂: Professional qualifications of RME teachers influence the quality of their classroom instruction

2.2.3 Influence of Teaching Experience on Teachers’ Quality Classroom Instruction

The quality of classroom instruction has been established as a critical element in ensuring effective teaching. QCI has been conceptualised based on the model of three global dimensions of classroom process quality (Gustafsson & Nilsen, 2016). These are: cognitive activation, supportive climate, and classroom management. Cognitive activation refers to teachers’ ability to challenge students cognitively, and comprises instructional activities in which students have to evaluate, integrate, and apply knowledge in the context of problem solving (Klieme et al., 2009; Baumerte et al., 2010). In this study, QCI represents RME teachers’ traits related to their instructional periods. These are traits that create a conducive atmosphere for learning. These traits include modelling, checking for students’ understanding, response time, students’ engagement, rate of success, encouraging efforts, transition, and good pacing (Gersten et al, 2005). Teaching experience refers to the actual number of years a teacher has spent in classroom teaching, rather than the number of years since graduation. For example, if a teacher has been teaching in a school for five years, their “teaching experience” would be five years. It is expected that the more years RME teachers teach, the more their classroom instruction (QCI) becomes refined. This follows that the two constructs have a relationship. Previous studies (Podolsky & Kini, 2016; Engida et al., 2024; Kosgei et al, 2013; Usifo, 2023; Yang & Gong, 2025; Bolanle Bello, 2022; Graham et al, 2020; Mageka & Ogochi, 2020; Stronge, 2018) conducted in Europe, America, Asia, and Africa have established the fact that teachers’ teaching experience influences the quality of their classroom instruction. This means that experience and teacher quality are related, with more seasoned educators typically demonstrating higher observed instructional quality in the presence of academic and professional support. Meanwhile, other scholars (Mensah & Ansah, 2023; Zhang, 2008) found the opposite. In their respective studies, it was established that teaching experience (years of teaching) does not influence the QCI of teachers. These previous findings are contradictory, even though most of them indicate a significant relationship between the two constructs. This creates an evidence gap to be filled, and so the study posits that:

H₀₃: Teaching experience of RME teachers influence the quality of their classroom instruction

III. METHODOLOGY

3.1 Procedures

The cross-sectional survey design nested in the positivist paradigm to research was used to conduct this study. The design allows the collection of quantitative data from a large sample to understand their views, opinions, and characteristics. It also allows the establishment of effects and influences among variables (Creswell, 2021). The study sought to establish the influence of RME teachers’ academic qualifications, professional qualifications, and teaching experiences on the quality of their classroom instruction. Due to this, RME teachers in basic schools in the Komenda Edina Eguafo Abirem Municipality constituted the population for the study. Using the census method, all 170 RME teachers were involved in the study. The census technique guarantees a full and accurate representation of the whole population (Leavy, 2017). Additionally, the census approach does not need sampling and lowers the possibility of sampling error because it includes every member of the population. This helps the researchers to make valid conclusions about the entire population. Table 1 gives details of the demographics of the RME teachers.

Table 1
Demographic Characteristics of Teachers (n= 170)

Variable	Subscale	No	%
Educational Qualification	Diploma	75	44.1
	Bachelor's Degree	54	31.8
	Master's Degree	7	4.1
	WASSCE	34	20
Professional Qualification	Teaching certificate A	87	51.2
	Diploma in Education	50	29.4
	B.Ed.	33	19.4
Years of Teaching	1-5 years	96	56.5
	6-10 years	43	25.3
	11-15 years	19	11.2
	16-20 years	6	3.5
	More than 20 years	6	3.5



3.2 Measures

A structured observational checklist was adopted for the study. Creswell (2021) noted that an observation guide offers a consistent stimulus to large numbers of people simultaneously and facilitates the easy accumulation of data for the investigation. The instrument had two major sections. Section A solicited information on the demographic characteristics of the respondents. These included academic qualification, professional qualification, and teaching experience. Section B had eight adopted items measuring quality classroom instruction, developed by Gersten et al. (2005). The instrument was a 3-point-level scale indicating whether the teachers' QCI were either low, moderate, or high. The level was considered low if the teachers were observed to get low and vice versa.

3.3 Validity and Reliability

The instrument was subjected to content and face validity assessments conducted by experts and the researchers themselves. To ensure internal consistency, a pilot study was carried out with 75 teachers in the Cape Coast Metropolis, yielding a Cronbach's alpha value of .84 from the pilot-tested instrument. According to Schrepp (2020), a Cronbach Alpha value greater than 0.70 is excellent.

3.4 Quantitative Treatment of Data

The data collected were analysed quantitatively. The data were sorted, organized, and cleaned. This was not to alter responses to fit the researchers' needs, but to address any missing data and ensure accuracy. Analysis was conducted using descriptive and inferential statistical tools, with computations performed in Statistical Product and Service Solutions (SPSS version 27) to facilitate data input and visualization. Descriptive statistical measures, such as frequencies and percentages, were used to analyse demographic characteristics, while means and standard deviations were used to answer research question one. Additionally, a 3 Factorial ANOVA was employed to explore the influence of teachers' AQ, PQ, and TE on their QCI.

3.5 Ethical Consideration

Ensuring ethical considerations within any research endeavour is of paramount importance, and this particular study was no exception. An ethical clearance was sought from the Institutional Review Board at the University of Cape Coast. Possible avenues that could breed ethical tensions were taken care of by ensuring that the principles of anonymity, confidentiality, non-maleficence, and beneficence were not breached. Further, a letter of introduction was requested from the Department of Arts Education, University of Cape Coast, to get official permission from the school administration to interact with the teachers. Written informed consent was obtained from all participating teachers. The researchers emphasised voluntary participation and the right to withdraw. Teachers participated in the study voluntarily.

IV. FINDINGS & DISCUSSIONS

4.1 Descriptive Results

The teachers were observed on eight items on a 3-point Likert scale (level) to measure the level of R.M.E teachers' quality classroom instruction. The Observation was based on the scales: 1= low; 2 = moderate; 3 = high. The mean scores and overall mean were interpreted as 1-1.6 (low), 1.7 -2.3 (moderate), and 2.4-3.0 (High). Results are shown in Table 2.

Table 2
Level of R.M.E Teachers Quality Classroom Instruction (n= 170)

Statement	Low		moderate		High		M	SD
	No	%	No	%	No	%		
Modelling	14	8.2	63	37.1	93	54.7	2.46	.64
Checking for student understanding	9	5.3	75	44.1	86	50.6	2.45	.60
Response time	10	5.9	94	55.3	66	38.8	2.33	.58
Student engagement	18	10.6	54	31.8	98	57.0	2.47	.68
High rate of success	26	15.3	86	50.6	58	34.1	2.19	.67
Encouraging efforts	22	12.9	71	41.8	77	45.3	2.32	.69
Transitions	16	9.4	97	57.1	57	33.5	2.24	.61
Good pacing	12	7.1	79	46.5	79	46.5	2.39	.62
Average							2.4	.6



Results in Table 3 show that RME teachers had an average mean of 2.4 on QCI. More than half (98, 57.0%) of them were seen to moderately ensure students engagement (M= 2.47, SD= .68). Most (93, 54.7%) of them moderately practised modelling (M= 2.46, SD= .64). Half (86, 50.6%) of them moderately checked for student understanding (M= 2.45, SD= .60). Majority (158, 93%) were either found to moderately or highly practice good pacing (M= 2.39, SD=.62). Again, over half (94, 55.3%) of them moderately have a good response time (M= 2.33, SD=.58). Almost (148, 87.1%) all of them were moderately seen to be encouraging efforts (M= 2.32, SD= .69). Moreover, 97 (57.1%) were found to possess moderate transitions (M= 2.24, SD= .61). Finally, half (86, 50.6%) of them were seen to have a moderate rate of success (M= 2.19, SD= .67).

4.2 Hypotheses Testing Results

The analysis sought to investigate the composite influence of AQ, PQ and TE on RME teachers' QCI. To achieve this, a 3 Factorial ANOVA was used to analyse the data. The assumption of homogeneity of variances was tested and was not violated (sig= .074). The result is detailed in Table 3.

Table 3

Test of Between-Subjects Effects of RME Teachers' Demographic Characteristics on Teachers' Quality Classroom Instruction

Source	df	F	Sig.	Partial Eta Squared
Corrected Model	31	2.095	.002	.378
Intercept	1	2209.212	.000	.944
Academic Qualification	3	1.646	.182	.056
Professional Qualification	2	4.468	.013	.089
Teaching experience	4	0.853	.494	.051
Academic Qualification * Professional Qualification	6	1.641	.140	.093
Academic Qualification * Teaching experience	6	2.021	.067	.029
Professional Qualification * Teaching experience	7	1.297	.256	.087

Source: Field Data (2024); *Sig < .074

The results of the General Linear Model (GLM) corrected model showed a statistically significant effect of RME teachers' demographic characteristics (AQ, PQ, and TE) on their QCI, $F(31, 3) = 2.095, p = .002, \text{partial } \eta^2 = .378$. There was no statistically significant interaction between AQ and PQ, $F(6, 3) = 1.641, p = .140, \text{partial } \eta^2 = .093$, AQ and TE, $F(6, 3) = 2.021, p = .067, \text{partial } \eta^2 = .029$, PQ and TE, $F(7, 3) = 1.297, p = .256, \text{partial } \eta^2 = .087$.

4.2.1 There is no Statistically Significant Difference in RME Teachers' Quality Classroom Instruction Based on their Academic Qualifications

The results in Table 3 indicate that there was no statistically significant effect of AQ $F(3, 3) = 1.646, p = .182, \text{partial } \eta^2 = .056$ on RME teachers' QCI. This means that RME teachers' AQs do not bring differences in their QCI. Therefore, irrespective of the educational qualification of the teachers, they have the same level of QCI. A further analysis of variance in RME teachers' QCI showed the respective mean scores of the AQ categories. The results revealed that those who possess WASSCE had a mean of 2.19, Diploma had a mean of 2.23, Bachelors' degree had a mean of 2.42, Master's degree had a mean of 2.55 (See Table 4).

Table 4

Descriptive Statistics

Academic Qualifications	N	Mean	SD
WASSCE	34	2.19	0.30
Diploma	75	2.23	0.31
Bachelor's	54	2.41	0.26
Masters	7	2.55	0.27

Interestingly, when one-way ANOVA was used for further analysis of variance, the results showed that the effect of AQ of RME teachers' QCI was significant, $F(3, 164) = 6.891, p < 0.05$ (See Table 5).

Table 5*ANOVA for Academic Qualifications and Quality Classroom Instruction*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.850	3	.617	6.891	.000
Within Groups	14.853	166	.089		
Total	16.703	169			

Post hoc analyses using the Bonferroni post hoc criterion for significance indicated that QCI levels of RME teachers were significantly lower for those with WASSCE ($M=2.19$, $SD=0.30$) than those with a Bachelor's degree ($M=2.41$, $SD=0.26$) and those with Master's degree ($M=2.55$, $SD=0.27$). Again, the post hoc analyses using the Bonferroni post hoc criterion for significance indicated that QCI levels of RME teachers were significantly lower for those with a Diploma ($M=2.23$, $SD=0.31$) and those with a Bachelor's degree ($M=2.41$, $SD=0.26$).

4.2.2 There is no Statistically Significant Difference in RME Teachers' Quality Classroom Instruction Based on their Professional Qualifications

The results in Table 3 indicate that there was a statistically significant effect of PQ, $F(2, 3) = 4.468$, $p = .013$, partial $\eta^2 = .089$ on RME teachers' QCI. This means that RME teachers' PQs bring about differences in their QCI. Therefore, teacher training qualifications of the RME teachers influences their level of QCI. A further analysis of variance in RME teachers' QCI showed the respective mean scores of the PQ categories. The results revealed that those who possess Teacher Certificate A had a mean of 2.21, Diploma in Education had a mean of 2.46, and Bachelor of Education had a mean of 2.27 (See Table 6).

Table 6*Descriptive Statistics*

Professional Qualifications	N	Mean	SD
Teacher Certificate A	87	2.21	0.30
Diploma in Education	50	2.46	0.27
Bachelor of Education	33	2.27	0.31

Results of one-way ANOVA used for further analysis of variance showed that the effect of PQ of RME teachers on their QCI was significant, $F(2, 167) = 11.360$, $p < 0.05$ (See Table 7).

Table 7*ANOVA for Professional Qualifications and Quality Classroom Instruction*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.000	2	1.000	11.360	.000
Within Groups	14.703	167	.088		
Total	16.703	169			

Post hoc analyses using the Bonferroni post hoc criterion for significance indicated that QCI levels of RME teachers were significantly lower for those with Teacher certificate A ($M=2.21$, $SD=0.30$) than those with Diploma in Education ($M=2.46$, $SD=0.27$). Again, the post hoc analyses using the Bonferroni post hoc criterion for significance indicated that QCI levels of RME teachers were significantly lower for those with a Bachelor of Education ($M=2.27$, $SD=0.31$) than those with a Diploma in Education ($M=2.46$, $SD=0.27$).

4.2.3 There is no Statistically Significant Difference in RME Teachers' Quality Classroom Instruction Based on their Teaching Experience

The results in Table 3 indicate that there was no statistically significant effect of TE, $F(4, 3) = 0.853$, $p = .494$, partial $\eta^2 = .051$ on RME teachers' QCI. This means that RME teachers' TE does not bring about differences in their QCI. Therefore, irrespective of the number of years RME teachers have taught, they have the same level of QCI.

**Table 8***Descriptive Statistics*

Teaching Experience in years	N	Mean	SD
1-5 years	96	2.23	0.32
6-10 years	43	2.37	0.31
11-15 years	19	2.41	0.24
16-20 years	6	2.29	0.31
More than 20 years	6	2.43	0.33

A further analysis of variance in RME teachers' QCI showed the respective mean scores of the TE categories. The results revealed that those who had been teaching RME for 1-5 years had a mean of 2.23, 6-10 years had a mean of 2.37, 11-15 years had a mean of 2.41, 16-20 years had a mean of 2.29, and more than 20 years had a mean of 2.43 (See Table 8)

Table 9*ANOVA for Teaching Experience and Quality Classroom Instruction*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.909	4	.227	2.374	.054
Within Groups	15.794	165	.096		
Total	16.703	169			

Results of one-way ANOVA used for further analysis of variance showed that the effect of TE of RME teachers on their QCI was not significant, $F(4, 165) = 2.374, p > 0.05$ (See Table 9). Due to the non-significant effect, there was no need to run post hoc analyses of the variance in QCI between the TE groups.

4.3 Discussion

This study examined the influence of RME teachers' academic qualifications, professional qualifications, and teaching experience on the quality of their classroom instruction in basic schools within the KEEA Municipality. In this section, the enviable insights the study revealed are discussed. First, the study revealed that the overall level of QCI among RME teachers was moderate. From the data gathered, it was inferred that while teachers exhibit essential instructional traits such as modelling, checking for understanding, and maintaining good pacing, there remains room for improvement in areas like encouraging student efforts and ensuring high rates of success. Consequently, the moderate QCI implies that many teachers may possess the motivation to teach effectively; however, limited pedagogical preparation and constrained professional growth may hinder optimal classroom performance. From the perspective of SDT, this could reflect the teachers' partial internalisation of intrinsic motivation for teaching—where external pressures, such as curriculum constraints or inadequate resources, may impede the full exercise of autonomy and competence (Ryan & Deci, 2019).

Also, the study found that AQ did not have a statistically significant effect on QCI when considered in the general model. However, further one-way ANOVA analysis revealed significant differences. Teachers who possess higher academic qualifications, particularly bachelor's and master's degrees, exhibit superior instructional quality compared to those with only WASSCE or diploma certificates. This finding corroborates those of many scholars (Zhang et al, 2020; Engida et al, 2024; Ntarmah & Yaro, 2024; Adhikari et al, 2024; Mafirizi & Ojok, 2024; Oteng et al, 2023; Inusah, 2020; Umar-ud-Din et al, 2010). Zheng et al. (2020), for instance, mentioned that higher AQ enriches teachers' conceptual understanding and pedagogical clarity. Perhaps the observed subtle distinction suggests that while academic knowledge alone may not guarantee effective instruction, it enhances the depth and sophistication of teaching practices when coupled with reflective application. We make this assertion in light of similar findings reported by Mensah and Attachie (2024). In their study, they found that lecturers with higher degrees demonstrated stronger pedagogical content knowledge. Therefore, it will not be strange to argue that academic qualification contributes indirectly to QCI by equipping teachers with the intellectual resources necessary for effective cognitive activation.

Moreover, PQ emerged as a statistically significant determinant of RME teachers' QCI. Teachers holding a Diploma in Education were observed to perform better than those with a Teacher Certificate A or Bachelor of Education degree. It is worth noting that those with a Teachers Certificate A also performed relatively better than those with a Bachelor of Education degree. The understanding here is that Diploma in Education and even Teacher Certificate A programs are predominantly designed to provide comprehensive pedagogical training across all basic school subjects. Consequently, this equips teachers with broad instructional competence. In contrast, Bachelor of Education programs often prepare teachers for specific subject areas. This is to say that they focus on specialisation

rather than general teaching. As scholars like Owusu and Mensah (2022), Mensah and Owusu (2022), and Mensah and Ampem (2023) observed in their study on the realities of Ghanaian basic schools, many teachers with Bachelor of Education degrees are often assigned to teach subjects outside their area of specialisation. It is therefore possible that a significant proportion of the respondents with Bachelor's degrees in this study were not specifically trained to teach RME, which may account for their comparatively lower instructional quality. The foregoing affirms scholars' assertion that professional training enhances teachers' instructional competence, classroom management, and reflective practice (Day, 2017), and that pedagogical training shapes self-efficacy and instructional coherence (Voss et al, 2022; Zhou et al, 2023). Within the Ghanaian context, where out-of-field teaching remains prevalent (as aforementioned), these findings reinforce the importance of aligning teacher professional preparation with subject specialisation to achieve meaningful instructional outcomes in RME.

Lastly, TE was not found to significantly influence QCI, although teachers with more than ten years of experience showed slightly higher mean scores. This finding resonates with observations from previous studies (Mensah & Ansah, 2023; Zhang, 2008). These studies revealed that there is no substantial relationship between years of teaching and instructional quality. Although studies have shown that experienced teachers possess classroom routines and management skills (Feiman-Nemser, 2001), these seem not to necessarily translate into higher instructional quality. According to Kini and Podolsky (2016), teaching experience improves effectiveness primarily when teachers are exposed to supportive professional learning environments. Thus, it is in the right direction to argue in this current study that mere longevity in teaching, unless backed with continuous pedagogical upgrading, may not yield improvements in instructional quality. Within the framework of SDT, this implies that extrinsic factors such as institutional support and access to training mediate the extent to which experience fosters intrinsic motivation and pedagogical refinement.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The findings of this study have several important conclusions and implications for teacher education, policy, and classroom practice in Ghana. For instance, it was discovered that professional qualification has a significant influence on the quality of classroom instruction. These insights suggest that teacher education and professional development in RME must be approached holistically. It can also be concluded that, the perceived mismatch observed between teachers' academic specialisation and their assigned teaching subjects can undermine instructional quality. It appears that many Bachelors of Education graduates teach RME without specific preparation in the subject area, leading to lower QCI scores. Again, the study found that teaching experience alone does not significantly influence instructional quality. This suggests that mere longevity in the profession does not guarantee improvement. We conclude that continuous professional development as a means of translating experience into effective practice is required.

5.2 Recommendations

Based on the findings, conclusions and implications, we recommend that teacher education institutions in Ghana should ensure that pre-service training programmes emphasise both subject-specific pedagogy and reflective practice. In line with SDT, such training should aim to foster teachers' intrinsic motivation by developing their sense of competence, autonomy, and relatedness in instructional contexts. We also recommend that the Ghana Education Service (GES) should strengthen teacher deployment policies to ensure proper alignment between teachers' specialization and the subjects they teach. It is also recommended that regular in-service training and short courses in RME pedagogy should be provided for teachers who were not originally trained in the subject. Also, stakeholders are therefore called on to institutionalise structured programmes focusing on innovative RME pedagogy, classroom interaction, and student engagement strategies

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Stakeholder participation and project performance: Insights from the Soroti Catholic Diocese projects in Teso region of Uganda

Philomena Petronela Alako¹

Caleb Tamwesigire²

Benon Kyabarongo³

Alice Ngele Mwazuna⁴

¹alakopetro@gmail.com

²ctamwesigire@kab.ac.ug

³b.kyabarongo@kab.ac.ug

⁴anmwazuna@kab.ac.ug

^{1,2,3,4} Kabale University, Uganda

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ABSTRACT

The purpose of this study was to examine the influence of stakeholder participation on project performance in Soroti Catholic Diocese in Uganda. The study was guided by the stakeholder theory and adopted a cross-sectional survey research design that involved a purely quantitative approach. Using the Morgan table, a sample of 100 respondents was selected using stratified sampling from a population of 132. Quantitative data was collected using structured questionnaires and analyzed using SPSS Version 25.0. Quantitative results in the form of descriptive statistics, correlations, and regressions were presented using tables. The results indicated that stakeholder participation had a strong positive influence on project performance ($r = 0.721$ and $p = 0.00 \leq 0.01$). The study concluded that stakeholder participation significantly enhances project performance within the Soroti Catholic Diocese. When stakeholders are engaged throughout the project's planning, implementation, and monitoring phases, they contribute local knowledge, feedback, and innovative ideas, which enhances the quality of project outputs. The study recommends that the Diocese should strengthen and promote active stakeholder participation practices in order to achieve improved performance of the projects' outcomes.

Keywords: Project Performance, Stakeholder Participation, Soroti Catholic Diocese, Uganda

I. INTRODUCTION

Stakeholder participation means the active and meaningful involvement of stakeholders in a project's processes and decision making extending beyond mere consultation to deeper levels of engagement. This crucial aspect of stakeholder participation is fundamentally underpinned by the principles of empowerment, inclusiveness and representation (Tor & Gambo, 2024). Empowerment in stakeholder participation means equipping stakeholders with the capacity, information and influence to genuinely shape project outcomes fostering a sense of ownership which moves stakeholders from passive recipients to active contributors who can impact decisions that directly affect them. This is achieved by providing access to relevant knowledge, enhancing their ability to understand complex project issues and ensuring their voices carry weight in critical discussions (Laetitia & Amolo, 2025). Iyiola et al., (2025) affirms that stakeholder participation ensures that all relevant stakeholder groups particularly those who might typically be marginalized or underrepresented are actively invited and supported to participate in projects. It's based on the understanding that diverse perspectives lead to more robust, equitable and sustainable project outcomes.

Achieving true stakeholder participation requires deliberate efforts to dismantle barriers to participation such as language differences, cultural norms or socioeconomic disparities thereby guaranteeing that a wide spectrum of interests and needs are considered (Wall, 2021). Additionally, stakeholder participation refers to the effective presence and articulation of the interests, concerns and values of various stakeholder groups within project deliberations and decision making bodies (Lassiter & Campbell, 2023). It ensures that the voices of those affected by or affecting the project are authentically heard whether directly by individuals or through their designated representatives. Effective stakeholder participation is vital for a project's legitimacy and acceptance as it ensures that collective decisions reflect diverse viewpoints thereby strengthening collaboration and mitigating conflicts that could impede project performance (Funkhouser et al., 2025). When empowerment, inclusiveness and representation are effectively integrated,

stakeholder participation transcends a procedural requirement becoming a powerful driver for project success. This integrated approach fosters shared ownership, enhances decision quality and significantly improves a project's relevance and acceptance within its community (Haar, 2024).

Project Performance refers to the degree to which a project achieves its stated objectives and satisfies its stakeholders typically evaluated against a set of predefined criteria. While historical views often centered on the "iron triangle" of time, cost and quality (Atkinson et al., 2022); contemporary definitions acknowledge that true performance extends to delivering value, meeting stakeholder expectations and contributing to strategic goals (Serrador & Turner, 2015). For the purpose of this study, aligning with established project management principles project performance is defined as the overall effectiveness and success of a construction project in meeting its planned objectives concerning its schedule, budget and the quality of its deliverables alongside its ability to fulfill stakeholder requirements. The Project Management Institute consistently positions these elements scope, time, cost and quality as fundamental baselines against which project success is measured (Bassi, 2017).

According to Aguinis (2023), Project Performance is the overall measurement of whether a project has met the stated objectives and requirements of scope, cost and schedule. Project performance denotes the extent to which project outputs and outcomes satisfy budget goals, schedule goals, operational and technical specifications and ultimately the business needs of the client. Project performance is directly related to the project potential success. A project is considered to be successfully implemented if it is carried on schedule, realizes the purpose the project was designed through achieving the goals and objectives identified, the project is completed within the budgets and stipulated time (Maina & Kimutai, 2021). Project Performance is a multi-dimensional concept that reflects the degree to which a project achieves its stated objectives and satisfies its stakeholders. While it has evolved to encompass broader strategic and value-driven outcomes, its foundational assessment remains rooted in three critical constructs: Time, Cost and Quality (Atkinson et al., 2022).

1.1 Statement of the Problem

Effective stakeholder participation has increasingly become a critical determinant of project success particularly in developing countries such as Uganda where projects in sectors like infrastructure, education, health and community development often rely heavily on local participation and collaboration. A significant number of projects experience delays, cost overruns, community resistance or total abandonment largely due to inadequate involvement and participation of key stakeholders during planning, implementation and evaluation phases (Mwesigwa, 2022). In addition, construction projects in Uganda including those in the Soroti Catholic Diocese often experience frequent schedule overruns in project implementation. For example, only 11.8% of 85 public road projects in Uganda were completed on schedule (Nasaazi, 2022); and other public sector projects show 53% experienced delayed completion and similar cost overruns (Bagenda & Ndevu, 2024).

Projects commonly face significant delays, considerable cost overruns, and quality compromises. Specific examples within the Diocese include incomplete projects like the Soroti cathedral, Centenary House in Katakwi, and the priest's home for the sick and elderly. Despite the Diocese's commitment to community infrastructure, these projects are susceptible to systemic inefficiencies common in Uganda. Whereas there are many factors that affect project performance, there is scanty documented evidence regarding the cause for persistent underperformance of construction projects in Soroti Catholic Diocese in terms of time, cost and quality yet no study has been conducted in the recent past. It is against this background that the researcher sought to explore the specific dynamics between stakeholder participation and project performance within the Soroti Catholic Diocese, aiming to inform strategies for more efficient and sustainable infrastructure development.

1.2 Research Objective

To determine the relationship between stakeholder participation and Project Performance in Soroti Catholic Diocese.

1.3 Research Question

What is relationship between stakeholder participation and Project Performance in Soroti Catholic Diocese?

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Stakeholder Theory

Advanced by Robert Edward Freeman in the 1980s, Stakeholder Theory posits that organizations should consider the interests of all stakeholders not just shareholders in decision-making processes. This theory emphasizes the importance of engaging stakeholders to create value and achieve sustainable outcomes (Chrispeels et al., 1984). In

the context of this study, Stakeholder Theory provides a theoretical framework for understanding the significance of stakeholder engagement in project management and its relationship with project performance. The central idea is that an organization's success in its project initiatives is dependent on how well it manages the relationships with key groups such as customers, employees, suppliers, communities, financiers and others that can affect the realization of its purpose. Specifically, managers should understand that the success of the projects can be influenced greatly by the participation of various stakeholders. These stakeholders will participate depending on the relationship they foster with the top management and not junior workers acting on their behalf. If the top management supports the involvement of stakeholders in the procurement process, then they will be part of the decision making therefore ensuring that they take the products bought positively as opposed to products that have been imposed on them. Therefore, the stakeholders' theory helps in understanding the relationship between stakeholder engagement and project performance hence its significance to the study.

2.2 Empirical Review

2.2.1 Stakeholder Participation and Project Performance.

Contemporary project management literature widely acknowledges stakeholder participation as a core element of all-inclusive stakeholder engagement and a decisive influence on overall project performance including key aspects like on time completion, budget adherence and quality work (Bassi, 2017). Stakeholder participation refers to the active engagement of individuals, groups or organizations with a vested interest in a project. Participation can take many forms; from consultation and information sharing to inclusiveness and representation of all stakeholders and co-implementation (Barney et al., 2019). The importance of stakeholder involvement has been widely acknowledged in project management literature. According to El-Naway et al., (2015), their study emphasizes that projects are more likely to succeed when stakeholders are actively engaged as this helps manage expectations, reduce resistance and build ownership. The Project Management Institute as cited by Simard & Aubry (2025) also stresses that effective stakeholder engagement contributes significantly to delivering value and achieving project objective.

Engaging stakeholders in the planning phase ensures that their needs, interests and potential concerns are integrated into the project design. According to Yang et al., 2018, stakeholder participation at this stage leads to more accurate requirements, improved risk identification and better alignment with organizational and community needs, which enhances project viability and performance. Active stakeholder involvement during implementation and monitoring contributes to improved transparency, accountability and timely feedback. A study by Aaltonen and Kujala found that stakeholder engagement enhances adaptability, problem-solving and collaboration, leading to smoother project execution and higher levels of satisfaction among beneficiaries (Aaltonen & Kujala, 2016). Active stakeholder participation significantly enhances project time performance in construction. Scholars emphasize that early and continuous involvement from diverse groups leads to more realistic planning, proactive challenge identification and efficient decision making thus preventing delays (Karrer et al., 2024; Yang et al., 2018). This allows for upfront addressing of unforeseen local complexities with specific Ugandan research linking inadequate participation in planning to road construction project delays (Matsiko et al., 2024).

A study by signori and others shows that active stakeholder participation boosts project cost performance in a way that when diverse stakeholders, including financial partners and end-users are meaningfully involved, it leads to more accurate initial cost estimations, better resource use and effective cost control; this involvement helps uncover cost-saving innovations and minimizes expenses from rework or disputes (Baharuddin et al., 2017; Signori, 2017). Beyond just schedules and budgets, active stakeholder participation is crucial for enhancing project quality performance in construction. Genuine involvement from beneficiaries and end-users ensures deliverables precisely match their needs, expectations and functional standards extending to usability and contextual fit; this participation creates continuous feedback loops, enabling early identification and correction of quality issues, reducing rework, and improving the asset's overall fitness-for-purpose (Rajab, 2022). Despite its benefits, stakeholder participation can pose challenges. These include conflicting interests, power imbalances, time constraints and limited capacity of certain stakeholder groups. According to Reed et al., (2018), the success of participatory processes depends on effective facilitation, clear communication and inclusive structures that ensure equitable engagement.

Empirical studies show a strong correlation between stakeholder participation and project performance. For instance, Lalam (2018) reports that participatory projects in developing countries are more likely to be relevant, cost-effective and sustainable. Similarly, a study by Bahrami et al., (2018) found that high levels of stakeholder involvement contributed to improved schedule adherence, budget control and quality outcomes in construction projects. Despite a general understanding of stakeholder participation's positive impact on project performance significant literature gaps remain: a scarcity of context-specific research in developing countries like Uganda, limiting insights into cultural and socio-political nuances; a lack of robust methodologies for quantifying the degree of inclusiveness and empowerment and their precise impact; insufficient longitudinal studies to understand the long-term



effects of empowerment; limited exploration of “invisible” or hard-to-reach stakeholders and a shortage of practical empirically tested implementation frameworks for complex construction environments (Bobae, 2024; Fisher, 2023; Franklin & Franklin, 2020; Rajab, 2022; Reed et al., 2018; Sang et al. 2017; Signori, 2017; Wanyonyi et al., 2023).

III. METHODOLOGY

3.1 Research Design and Approach

This study utilized a cross-sectional Survey research design with a purely quantitative approach to investigate stakeholder engagement and its impact on project performance. This approach is well suited for systematically characterizing the phenomena, conditions and population relevant to the research problem

3.2 Study Population

The target population for this research encompassed key individuals directly involved in or significantly affected by the Diocese's construction projects totaling to 132, including diocesan administrators totaling to 12, project/technical team overseeing construction totaling to 16, and representatives of the Christian community, specifically members of the parish council totaling to 104. This selection ensures a comprehensive perspective from both the implementers and the primary beneficiaries and stakeholders within the Diocese's operational context.

3.3 Sample Size

Based on the Morgan table; a sample size of 100 respondents will be drawn from the total study population of 132 individuals. The Morgan table gives a sample size of 97 but the researcher rounds it up to 100.

3.4 Sampling Techniques

Sampling was conducted to choose specific elements from the total population to represent it. The stratified random sampling technique was used in this study.

3.5 Data Collection and Analysis

Structured questionnaires were used to collect the primary data which was then analyzed using descriptive statistical analysis and inferential statistics techniques.

Table 1

Population, Sample size and Sampling techniques

Category	Population	Sample size	Sampling technique
Christian community representatives	104	79	Stratified random sampling
Project Technical Team	16	12	Stratified random sampling
Diocesan administrators	12	9	Stratified random sampling
Total	132	100	

Source: Soroti Catholic Diocese Records

IV. FINDINGS & DISCUSSION

4.1 Socio-Demographic Characteristics of the Respondents

This section presents the findings on the respondents’ demographic characteristics including gender, age, education level and work experience. These characteristics are essential for understanding the background of the participants and how they may influence stakeholder engagement and project performance.

Table 1

Gender of the respondent

Gender	Frequency	Percent
Male	79	79.0
female	21	21.0
Total	100	100.0

Source: Field Data (2025)

The findings indicate that 79% of respondents were male, while 21% were female. This shows that the majority of participants in project activities within Soroti Catholic Diocese are men. This may reflect traditional

gender roles in the Teso Region where men often hold leadership and decision-making positions within religious and community-based institutions. However, the participation of women (21%) demonstrates a growing inclusivity trend in stakeholder participation, indicating efforts to involve women in project planning and implementation.

Table 2

Age of Respondents

Age	Frequency	Percent
20-30	20	20.0
31-40	32	32.0
41-50	25	25.0
51-60	18	18.0
70 and above	5	5.0
Total	100	100.0

Source: Field Data (2025)

The results show that the largest proportion of respondents (32%) was aged between 31–40 years, followed by 41–50 years at 25%. Those aged between 20–30 years accounted for 20%, while 51–60 years represented 18%. The smallest group was respondents were aged 70 and above at 5%. This distribution indicates that most project stakeholders are in their prime working years (31–50 years) representing a mature and active workforce. This group is likely to play a vital role in decision-making, leadership and sustainability of project activities. The younger respondents (20–30 years) bring energy and innovation, while the older group (51 years and above) contributes wisdom and experience. This balance across age groups ensures that project engagement benefits from diverse perspectives.

Table 3

Level of Education Attained by the Respondent

Level of education	Frequency	Percent
Primary	9	9.0
secondary	9	9.0
Certificate	11	11.0
Diploma	28	28.0
Bachelor's Degree	32	32.0
Post Graduate Diploma	5	5.0
Master Degree	6	6.0
Total	100	100.0

Source: Field Data (2025)

The majority of respondents had attained at least a Diploma (28.0%) or Bachelor's Degree (32.0%) showing that most stakeholders possess a relatively high level of education. This suggests that project activities are likely to benefit from informed decision-making and professional skills. However, a notable proportion of respondents had only primary education (9.0%) or secondary education (9.0%), indicating that some participants may require additional capacity-building initiatives to fully engage in technical aspects of project management. The presence of respondents with postgraduate qualifications cumulatively accounted for (11.0%) reflecting a skilled group capable of providing expert guidance, further enhancing project performance.

Table 4

Duration of Service

Duration of service	Frequency	Percent
Less than 1 Years	20	20.0
1-5 years	44	44.0
6-10 years	22	22.0
11-15 years	7	7.0
above 15 years	5	5.0
Total	100	100.0

Source: Field Data (2025)

The findings indicate that most respondents (44.0%) had served between 1–5 years, followed by those with 6–10 years of experience at 22.0%. This suggests that the majority of stakeholders are relatively experienced and



familiar with the diocese’s project operations which is crucial for sustaining continuity and institutional memory. A smaller group (20.0%) had less than one year of experience, reflecting recent recruits or newly involved stakeholders. The 11–15 years (7.0%) and above 15 years (5.0%) groups represent long-term members who bring deep institutional knowledge, which can guide strategic decisions.

4.2 Descriptive Results

The objective of the study was to determine the relationship between stakeholder participation and Project Performance in Soroti Catholic Diocese. The respondents were asked questions on stakeholder participation and the results are as presented on table 6 below as well as questions pertaining to project performance and the results were as presented on table 6 below.

Table 5
Summary of the Findings on Stakeholder Participation

Stakeholder Participation	Agree		Undecided		Disagree	
	F	%	F	%	F	%
Stakeholders were regularly given opportunities to provide input and feedback throughout the project.	82	83.7	5	5.1	11	11.2
My contributions and opinions as a stakeholder were valued and seriously considered by the project team.	77	78.6	11	11.2	10	10.2
Stakeholders were actively involved in key decision-making processes related to the project.	78	79.6	10	10.2	10	10.2
The project provided clear and accessible channels for stakeholders to participate (meetings, feedback forms).	84	85.8	5	5.1	9	9.2
There was sufficient transparency regarding how stakeholder input influenced project decisions.	73	74.5	16	16.3	9	9.2
All identified stakeholders were given equitable opportunities to participate, regardless of their background or influence.	83	84.7	7	7.1	8	8.2
Stakeholder meetings and engagement activities were well-organized and effective.	81	82.7	8	8.2	9	9.2
My participation helped the project team better understand the needs and expectations of the affected community/group.	82	83.7	10	10.2	6	6.1
The level of my involvement in the project was adequate for its successful execution.	84	85.7	10	10.2	4	4.1
The project team actively sought out diverse perspectives from all relevant stakeholder groups.	86	87.8	4	4.1	8	8.2

Source: Field Data (2025)

The respondents were asked whether stakeholders were regularly given opportunities to provide input and feedback throughout the project, 82 respondents (83.7%) agreed, 5 (5.1%) were undecided/Not Sure and 11 (11.2%) disagreed. This suggests that most stakeholders were consistently involved though a small percentage felt excluded from meaningful participation. On whether stakeholder contributions and opinions were valued and seriously considered by the project team, 77 respondents (78.6%) agreed, 11 (11.2%) were Not Sure/undecided and 10 (10.2%) disagreed. This indicates that while most stakeholders felt appreciated, there is a need to further enhance stakeholder trust and engagement. Regarding active involvement of stakeholders in key decision-making processes, 78 respondents (79.6%) agreed, while 10 (10.2%) were Not Sure/undecided and 10 (10.2%) disagreed, showing that stakeholder involvement was generally high but not universal. When asked whether clear and accessible participation channels such as meetings and feedback forms were provided, 84 respondents (85.8%) agreed, 5 (5.1%) were Not Sure/undecided, and 9 (9.2%) disagreed, reflecting strong accessibility and openness in the participation process.

With regards to transparency in showing how stakeholder input influenced project decisions, 73 respondents (74.5%) agreed, 16 (16.3%) were undecided and 9 (9.2%) disagreed. This suggests transparency was present but could be strengthened to ensure stakeholders see the impact of their contributions. When asked if all identified stakeholders were given equitable opportunities to participate, 83 respondents (84.7%) agreed, 7 (7.1%) were Not Sure/undecided and 8 (8.2%) disagreed, indicating that fairness and inclusivity were largely achieved. On whether stakeholder meetings and engagement activities were well-organized and effective, 81 respondents (82.7%) agreed, 8 (8.2%) were undecided, and 9 (9.2%) disagreed, showing general satisfaction with the quality of engagement processes.

Respondents were asked whether their participation helped the project team better understand community needs and expectations, and 82 respondents (83.7%) agreed, 10 (10.2%) were Not Sure/undecided, while 6 (6.1%) disagreed, demonstrating that stakeholder input was instrumental in aligning the project with community priorities. Regarding whether the level of stakeholder involvement was adequate for successful project execution, 84 respondents



(85.7%) agreed, 10 (10.2%) were undecided and 4 (4.1%) disagreed, indicating that most stakeholders felt meaningfully involved in the project. Lastly, when asked whether the project team actively sought diverse perspectives from all stakeholder groups, 86 respondents (87.8%) agreed, 4 (4.1%) were Not Sure/undecided, and 8 (8.2%) disagreed, showing strong inclusivity and commitment to gathering varied stakeholder views.

Table 7
Summary of the Findings on Project Performance

Project Performance	Agree		Not Sure		Disagree	
	(F)	(%)	(F)	(%)	(F)	(%)
The project was completed within or close to its initially planned schedule.	66	67.3	7	7.1	24	24.5
Key project milestones were consistently achieved on time.	71	72.5	9	9.2	18	18.4
The project experienced minimal delays beyond the planned completion date.	77	78.6	5	5.1	16	16.3
Unforeseen issues during the project were addressed swiftly, preventing significant schedule impacts.	66	67.3	14	14.3	18	18.4
The initial project schedule was realistic and achievable from the outset.	67	68.3	8	8.2	21	21.4
The project adhered strictly to its approved budget, avoiding significant cost overruns.	72	73.4	6	6.1	20	20.4
The project delivered its objectives without requiring substantial additional funding beyond the original allocation.	63	64.3	14	14.3	21	21.4
The project delivered excellent value for the money invested.	75	76.5	8	8.2	15	15.3
All cost variations during the project were well-managed and justified.	76	77.5	5	5.1	17	17.3
The completed project meets all specified technical and design requirements.	78	79.6	9	9.2	11	11.2
The quality of workmanship and materials used in the project was consistently high.	76	78.4	9	9.3	12	12.4
The completed project effectively serves its intended purpose and meets the needs of its beneficiaries.	77	78.6	14	14.3	7	7.1
Rework or significant rectifications due to quality issues were minimal throughout the project.	84	85.7	5	5.1	9	9.2
The final output of the project demonstrates long-term durability and structural integrity.	83	84.7	6	6.1	9	9.2

Source: Field data (2025)

The respondents were asked whether project were completed within or close to their initially planned schedule and 66 respondents (67.3%) agreed, indicating that most projects were delivered on time. However, 24 respondents (24.5%) disagreed, suggesting that a notable minority experienced delays. Regarding the achievement of key project milestones, 71 respondents (72.5%) agreed that milestones were consistently met, while 18 respondents (18.4%) disagreed, implying that some projects faced challenges in staying on track. Similarly, 77 respondents (78.6%) agreed that the project experienced minimal delays beyond the planned completion date, showing strong schedule adherence. On handling unforeseen issues, 66 respondents (67.3%) agreed that such issues were addressed swiftly to prevent major impacts, though 18 respondents (18.4%) disagreed, indicating room for improvement in crisis management. When asked about the realism of the initial schedule, 67 respondents (68.3%) agreed that it was practical and achievable, whereas 21 respondents (21.4%) disagreed, implying that some projects started with unrealistic timelines.

Concerning budget control, 72 respondents (73.4%) agreed that projects adhered to approved budgets without significant cost overruns. However, 20 respondents (20.4%) reported budgetary issues, suggesting occasional financial mismanagement. Additionally, 63 respondents (64.3%) agreed that projects delivered their objectives without requiring additional funding, while 21 respondents (21.4%) disagreed. On the value for money, 75 respondents (76.5%) agreed that projects delivered excellent value, while 15 respondents (15.3%) disagreed, indicating mixed perceptions of project efficiency. Regarding quality, 78 respondents (79.6%) agreed that completed projects met all technical and design requirements, and 76 respondents (78.4%) reported consistently high-quality workmanship and materials. However, a minority (12.4%) disagreed, showing some concerns about construction standards. When assessing whether projects met beneficiaries’ needs, 77 respondents (78.6%) agreed, reflecting strong project relevance and impact. Similarly, 84 respondents (85.7%) indicated minimal rework was needed due to quality issues, and 83 respondents (84.7%) reported that the final project output demonstrated durability and structural integrity.

4.3 Empirical Findings

This section presents correlation analysis and regression results based on questionnaire responses.



Table 8

Correlation Analysis for Stakeholder Participation and Project Performance

	Project Performance	Stakeholder Participation
Project Performance	Pearson Correlation Sig. (2-tailed) N	1 .000 100
Stakeholder Participation	Pearson Correlation Sig. (2-tailed) N	.721** .000 100

Note: Correlation is significant at the 0.01 level (2-tailed).

Source: Field Data (2025)

The table 8 above displays a correlation coefficient (r) of 0.721, indicating a strong positive relationship between stakeholder participation and project performance in Soroti Catholic Diocese, Teso Region. This implies that when stakeholders are actively involved in project planning, decision-making and monitoring, there is a higher likelihood of successful project implementation and sustainability. Further regression analysis was conducted to determine the strength and effect of stakeholder participation and project performance essentially, how much variance in the independent variable (stakeholder participation) influences the dependent variable (project performance).

Table 9

Model Summary for Stakeholder Participation and Project Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721a	.932	.930	.14822

a. Predictors: (Constant), Stakeholder Participation

Source: Field Data (2025)

The model summary in Table 9 shows that the correlation coefficient (R) is 0.721, indicating a strong positive relationship between stakeholder participation and project performance in Soroti Catholic Diocese. The R Square value of 0.932 suggests that 93.2% of the variation in project performance can be explained by stakeholder participation. After adjusting for the number of predictors, the Adjusted R Square is 0.930, indicating that the model remains highly reliable and robust even when accounting for additional variables. This finding implies that the more stakeholders including church leaders, parishioners, donors, government representatives and community members actively participate in the planning, decision-making and implementation processes, the higher the likelihood of achieving project goals and improving community welfare.

Table 10

Regression coefficients for Stakeholder Participation and Project Performance

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.	R²	Adjusted R²
(Constant)	0.365	0.130	-	2.808	0.006	0.932	0.930
Stakeholder Participation	0.927	0.031	0.721	29.903	0.000		

a. Dependent Variable: Project Performance

Source: Field data (2025)

The regression analysis reveals that stakeholder participation has a positive and statistically significant effect on project performance (p = 0.000). The standardized beta coefficient (β = 0.721) indicates that for every one-unit increase in stakeholder participation, project performance improves by 72.1%, holding other factors constant. The R Square value of 0.932 shows that stakeholder participation explains 93.2% of the variance in project performance; indicating a very strong predictive relationship. The Adjusted R Square of 0.930 accounts for model complexity and sample size, confirming that the model has high explanatory power and minimal overfitting. This suggests that effective involvement of stakeholders including church leaders, parishioners, donors, government representatives and community members directly contributes to the successful planning, implementation and sustainability of projects within the Soroti Catholic Diocese.

4.4 Discussion

The above results strongly align with the existing body of literature as noted by Bassi (2017) and Barney et al., (2019) who equally emphasized that stakeholder participation is a core component of project management and that

stakeholder participation directly influences time, cost and quality performance of projects. The findings also align with the findings of El-Naway et al., (2015) who found out that active involvement of stakeholders in projects fosters ownership, reduces resistance and improves project acceptance thereby enhancing project outcomes significantly. Simard & Aubry (2025) likewise stressed that effective stakeholder engagement delivers value and increases the likelihood of achieving project objectives, a finding clearly reflected in the Diocese context. Consistent with Yang et al. (2018), the present results highlight that stakeholder participation during the planning stage leads to better alignment of project activities with community needs, improved risk identification and further leads to higher project viability. In the Diocese projects, the inclusion of church leaders, parishioners, donors and government officials provided diverse perspectives that enhanced transparency, accountability and timely feedback in projects. This also aligns with Aaltonen and Kujala's (2016) conclusions that stakeholder involvement improves collaboration and adaptability during project execution.

Moreover, the findings also resonate with Karrer et al. (2024) and Matsiko et al. (2024), who linked early stakeholder involvement with reduced delays and enhanced time performance in construction projects. Similarly, studies by Baharuddin et al., (2017) and Signori (2017) noted that meaningful stakeholder participation especially financial partners and end-users results in more accurate cost estimations and efficient resource utilization in projects. In the Soroti Diocese, this appears to have contributed to both resource optimization and sustainable project outcomes. The present study further confirms the findings of Rajab (2022), who noted that engaging beneficiaries enhances the quality of project outputs by ensuring and meeting user needs and expectations. However, the study also echoes concerns raised in the literature about the challenges of stakeholder participation in projects. Reed et al., (2018) pointed out that power imbalances, conflicting interests and capacity limitations can hinder inclusive processes. While the Soroti Diocese projects benefitted from strong stakeholder engagement, ensuring equitable participation across all groups remains a critical consideration.

Empirical evidence from developing countries further corroborates the present findings. For instance, Lalam (2018) found out that participatory projects are more sustainable and cost-effective, while Bahrami et al., (2018) demonstrated improvements in time, budget and quality outcomes from active stakeholder involvement practices. The current study therefore contributes to filling the identified gap in literature (Bobae, 2024; Fisher, 2023) by providing context-specific evidence from Uganda. By showing that stakeholder participation explains over 90% of project performance in a faith-based organizational setting, this study adds new insights into the cultural and socio-political contexts influencing participation in Sub-Saharan Africa.

V. CONCLUSIONS & RECOMMENDATION

5.1 Conclusions

The findings establish that active stakeholder participation is essential for improved project outcomes. When stakeholders are engaged throughout planning, implementation and monitoring, they contribute local knowledge, feedback and innovative ideas, which enhance the relevance and quality of project outputs. Participation fosters ownership, reduces resistance to change and increases transparency, ensuring that projects meet the actual needs of the community. In the context of Soroti Catholic Diocese, participatory approaches empowered parishioners and community members to take part in decision-making, monitor progress and provide valuable input, which directly contributed to better project results.

5.2 Recommendations

Projects should prioritize regular stakeholder meetings, workshops and forums throughout the project lifecycle. These platforms allow for consultation, discussion and continuous feedback, ensuring that stakeholders are actively involved in shaping project activities and decisions. Regular engagement fosters a sense of ownership and strengthens the relevance of project interventions. Encouraging participatory planning and decision-making is also essential. Stakeholders, including community members and parishioners should be empowered to contribute to project design, implementation strategies and performance monitoring. Participation not only improves decision-making quality but also reduces resistance to project changes, promoting smoother execution. Furthermore, the development of community monitoring committees or feedback platforms is recommended. Such mechanisms enable local stakeholders to track project progress, report challenges, and actively contribute to solutions. This participatory approach enhances accountability, promotes transparency, and strengthens community trust in the project process.

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Moderating role of employee commitment on the relationship between talent management practices and employee performance in public universities in Western Uganda

Jolly Nyesigire Kakkayi¹
Alice Ngele Mwazuna²
Moses Agaba³
Ezra Munyambonera⁴

¹jnyesigire@kab.ac.ug

²anmwazuna@kab.ac.ug

³magaba@kab.ac.ug

⁴emunyambonera@kab.ac.ug

^{1,2,3,4}Kabale University, Uganda

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ABSTRACT

The study sought to examine the moderating effect of employee commitment on the relationship between talent management practices and employee performance in public universities in Western Uganda. The study was guided by the Egalitarian Theory of Talent Management, and a cross-sectional research design was adopted in the study. From a population of 1156, a sample size of 320 respondents was obtained in two phases: first, a census was used for the human resource directors and top management since the population was small (12 respondents); then secondly, the Yamane formula was used to calculate the sample size for the university council members and teaching and administrative staff, which yielded a sample of 308 respondents. The purposive sampling technique was used to select the human resource directors and top management, while simple random sampling was used for the council members and teaching and administrative staff. Using structured questionnaires, quantitative data was then collected from the 320 respondents of the two selected public universities (Mbarara University of Science and Technology and Kabale University). Data was then analyzed using structural modeling techniques. The findings revealed that the moderating effect of employee commitment on the relationship between talent management practices and employee performance was not statistically significant for either administrative or academic staff in Ugandan public universities. Specifically, for administrative staff, the interaction effect was not significant ($z = -0.268$, $p = 0.789$), although the direct effect of talent management on performance was statistically significant ($\beta = 0.348$, $z = 2.161$, $p = 0.031$), and the total effect remained strong ($\beta = 0.314$, $z = 3.684$, $p < 0.001$). This suggests that talent management practices such as attraction, development, retention, and motivation directly improved administrative staff performance, regardless of commitment levels. The study recommended that universities should focus on strengthening talent management initiatives directly, and while fostering employee commitment is important, efforts should prioritize implementing effective attraction, development, motivation, and retention strategies that independently drive performance improvements.

Keywords: Employee Commitment, Employees Performance, Public Universities, Talent Management Practices

I. INTRODUCTION

The concept of talent management was first introduced by McKinsey & Company through their 1997 study on the “war for talent,” which later culminated in the publication of one of the earliest books on the subject in 2001 (Handfield-Jones et al., 2001). Talent management is defined as the strategic process of getting the right talent at the right place and helping them grow to their optimal capabilities, keeping the organizational objectives in mind. It is the systematic process of identifying the vacant positions, hiring the suitable persons, developing their skills and expertise to match the positions and retaining them to achieve long-term business objectives (Kumar, 2022). Talent management plays an important role in the overall strategy of a business since it manages one of the important assets of the company; its people. Hence, leaders in any organization work very hard to attract, hire, develop and retain talent. Because they believe that people are the only assets that innovate in any organization and innovation is the only path to sustain performance, therefore, managing talent will give some advantage to their company.

Hiltrop (1999) highlights the use of effective human resource practices for attracting and retaining talent in an organization which helps to improve the competitiveness of the organization. He is of the view that in the new generation, people are highly educated professionals who demand more autonomy and flexibility in their jobs and at

the same time are looking for meaning work. Kimani and Waithaka (2013) asserts that an organization can maximize its performance only if it is able to manage its talent effectively and this can be done if an organization implements high-performance talent management practices. Ruddy and Anand (2010) believed that an organization must have the right people at the right job if it wants to survive and if companies don't give priority to succession planning or leadership development, then they may face high attrition rate of their talents or will only have people with outdated skills. According to (Babynina et al., 2021), the whole of a person's abilities, including their innate talents, knowledge, experience, intelligence, judgment, attitudes, character, and desires, is referred to as their talent. Talent management is the process of organizing, obtaining, preserving, developing, retaining and utilizing human resources to get a competitive advantage in the market.

According to Jyoti and Rani (2014) the goal of talent management systems and integrated methodologies is to improve workplace productivity by establishing processes for more effectively attracting, developing, hiring and retaining individuals who possess the aptitude and skills needed to meet current and future corporate requirements. Silzer and Dowell (2010) claims that in order to meet strategic goals and future business requirements, talent management is an integrated system of policies, practices and cultural norms created and implemented in an organisation. However, (Ahmed et al., 2013) explains talent management as an ongoing process that involves recruiting, selecting, training, developing, retaining and elevating employees while also meeting the demands of the company. Moreover, talent management is an essential function that ensures organizations have the quantity and quality of personnel required to meet their current and future business requirements (Chahal & Kumari, 2013). Meanwhile, through integrated talent acquisition, development and deployment procedures that align with business objectives, an organisation can deliver both short- and long-term benefits by enhancing its culture, engagement, capability and capacity. Moreover, a thorough method for maximising human capital is talent management (Wuim-Pam, 2014).

Employee performance is a systematic and integrated strategy to boosting an organization's effectiveness by enhancing employee performance and building the capacities of teams and individual contributors (Chien et al., 2020). Performance is correlated with output quality and timeliness, presence at work, effectiveness of work accomplished and efficiency of work completed (Otoo et al., 2019). It can also be described as the successful completion of a task as determined by previously established standards for correctness, completeness, cost and speed (Ezeanyim et al., 2019). Armstrong and Mitchell (2019) define employee performance as an organised, systematic and integrated approach to increasing productivity within an organisation through the development of individual and team contributors as well as improved employee performance. Performance is correlated with timeliness and quality of output, presence and attendance at work, productivity of finished work and effectiveness of completed work. However, Armstrong (2014) describe performance as the accomplishment of a work in relation to predetermined standards for correctness, completeness, cost and time. Results-based evaluations of employee performance are the norm.

In a university setting, the performance of academic staff members is evaluated on their contributions to teaching and learning, publishing, research and community involvement. In order to boost an organization's success, employee performance, as utilized in this study, refers to a methodical and integrated strategy to staff performance improvement and individual and team contributor abilities. Performance is defined as producing work in a timely and high-quality manner, arriving at work on time, and successfully and efficiently accomplishing assignments. The timely completion of tasks, excellent output, productivity, efficiency, and effectiveness, teaching and learning, research and publications, as well as community involvement, are all examples of how employee performance is operationalized in this study. Employee performance in this study refers to how efficiently and effectively employees contribute to the achievement of organizational goals and objectives. Employee performance could be assessed by considering the frequency of absences, the caliber of reports, and the times at which employees report for and leave duty (O'Donovan, 2019). Sahibzada et al. (2022) revealed that productivity, efficiency, and effectiveness, as well as quality output and punctuality, will be used to evaluate staff performance.

Employee commitment is defined as the workers' sense of obligation to stay with the company (Meyer *et al.*, 1990). According to Al Hakim et al. (2022), the attachment workers have to their employer is known as employee commitment. The same authors clarify that loyal employees usually experience a connection to their organisation, a sense of comprehension of its goals, and a sense of belonging, and these employees add value because they are more dedicated to their work, produce at a high rate, and offer help more proactively. Employee commitment is also defined as a psychological state that characterizes an employee's relationship with the organization, and it has implications for the decision to continue or discontinue membership in the organization. It consists of three components: affective, continuance, and normative commitment (Meyer et al, 2004). Furthermore, employee commitment refers to the emotional and psychological attachment an employee has toward their organization, which influences their intention to stay, performance, and overall engagement in organizational activities (Cohen, 2018).

Additionally, employee commitment can be understood as the dedication an employee demonstrates towards organizational goals, which drives their willingness to exert effort, stay loyal, and contribute positively to organizational outcomes (Mathe *et al.*, 2017). Moreover, employee commitment is a multidimensional concept that includes the individual's emotional connection to the organization, their recognition of the costs of leaving, and a sense of obligation to remain with the organization (Liou, 2021). The current study defines employee commitment as the emotional bond that forms between an individual and an organisation, motivating them to stay on staff and help the latter achieve its objectives. It is the sense of responsibility one has for the goals, purposes, and vision of the organisation to which they belong. Workers that are dedicated to their company are more likely to deliver quality work. Universities may encourage commitment by encouraging a feeling of community, offering chances for development, and praising staff members' efforts.

1.1 Research Objective

To examine the moderation effect of employee commitment on the relationship between talent management practices and employee performance.

1.2 Research Question

What is the moderation effect of employee commitment on the relationship between talent management practices and employee performance in Public Universities?

1.3 Research Hypothesis

H_{01} : Employee commitment does not have a significant moderation effect on the relationship between talent management practices and employee performance.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Egalitarian Theory of Talent Management

The study was guided by the Egalitarian Theory as originally conceptualized by Rawls John in 1971 in his seminal work *A Theory of Justice* which provides the philosophical foundation for fairness, equity and inclusion in social and organizational systems. Rawls (1971) emphasized the importance of fair distribution of opportunities and resources in a manner that benefits all members of society, especially the least advantaged. Central to his theory is the difference principle which posits that inequalities are only acceptable if they improve the situation of the most disadvantaged. Building on Rawls (1971) philosophical principles, Iles *et al.* (2010) introduced the Egalitarian Theory of Talent Management, challenging the traditional elitist model of talent development. They argued for an inclusive approach in which all employees are regarded as having potential that can be nurtured. This theory assumes that every worker, if given the right conditions, can contribute meaningfully to organizational performance. It advocates for equal access to development opportunities, career progression, recognition and participation in institutional growth.

2.2 Conceptual Review

2.2.1 Talent management practices

The organization's talented workers are its heart and soul, so it is imperative that the company endeavor to keep them on board. Talent management entails recruiting, inspiring, developing and keeping skilled individuals (Hendri, 2019). In this respect, the intentional process of identifying, developing and keeping employees who possess the knowledge and abilities to meet the organization's current and future demands is known as talent management. Also, Talent management is the methodical process of attracting, identifying, developing, engaging, maintaining, and deploying people who are especially valuable to a company, either because of their "high potential" for the future or because they are performing vital roles for the company's operations (Luna-Arocas *et al.*, 2020) citing the Chartered Institute of Personnel and Development (2019)). Talent management is the deliberate recruitment, assessment, development, retention and deployment of individuals who possess high potential and significantly contribute to an organisation, according to Mohammed (2015).

Talent management is an essential function that ensures organisations have the quantity and quality of personnel required to meet their current and future business requirements (Chahal & Kumari, 2013). Through integrated talent acquisition, development, and deployment procedures that align with business objectives, an organisation can deliver both short- and long-term benefits by enhancing its culture, engagement, capability, and capacity. A thorough method for maximizing human capital is talent management (Wuim-Pam, 2014). Additionally, making sure that the necessary skills are available when and where they are needed is the fundamental goal of talent

management, which helps the organisation achieve its strategic objectives. Employing integrated strategies or procedures to better draw in, nurture, and retain personnel possessing the abilities and drive to meet present and future organisational demands (Li & Wang, 2010). Thus, Organisational leaders' thinking about the importance of talent to corporate performance has a big impact on talent management, which operates at a strategic, integrative level (Abdul-Kareem, 2016).

2.2.2 Employee performance

Employee performance in this study refers to how efficiently and effectively people contribute to the achievement of organizational goals and objectives. Employee performance could be assessed by considering the frequency of absences, the caliber of reports, and the times at which employees report for and leave duty (O'Donovan, 2019). (Sahibzada et al., 2022) mentioned that productivity, efficiency, and effectiveness, as well as quality output and punctuality, will be used to evaluate staff performance. Furthermore, employee performance is the result or the contribution of workers towards achieving goals. It may also be used to describe the process, results relevancy, and success of an organisation (Rodriguez & Walters, 2017). According to Chams and García-Blandón (2019), Performance is the degree to which specific activities are completed in relation to predefined or established standards for accuracy, completeness, cost, and speed. Increased production, ease of use of new technologies, and highly motivated staff are indicators of strong employee performance.

When evaluating performance, a variety of factors can be considered, including productivity, efficiency, effectiveness, quality, and timeliness measurements (Jain & Ahuja, 2019), as cited in Nassazi (2013) and briefly explained hereafter. The ability of a product or service to satisfy stated or implied needs is referred to as quality (Armstrong & Kotler, 2003). The ultimate product's effectiveness, accuracy, and/or quality are all measured by the quality of the output. Qualities can include things like effectiveness, usefulness, appearance and accuracy. In the university context, employee performance directly influences institutional ranking, student attraction, student satisfaction, research impact, and stakeholder trust. High-performing academic staff enhance the university's intellectual capital, while efficient administrative teams support the operational backbone of institutional functions (Karuha, 2015). Performance is therefore not only a reflection of individual capability but also of organizational systems and culture.

2.2.3 Employee Commitment

According to Al Hakim et al. (2022) the attachment workers have to their employer is known as employee commitment. The same author go further to explain that loyal employees usually experience a connection to their organisation, a sense of comprehension of its goals, and a sense of belonging. These employees add value because they are more dedicated to their work, produce at a high rate, and offer help more proactively. The current study defines employee commitment as the emotional bond that forms between an individual and an organisation, motivating them to stay on staff and help the latter achieve its objectives. It is the sense of responsibility one has for the goals, purposes, and vision of the organisation to which they belong. Workers that are dedicated to their company are more likely to deliver quality work. Universities may encourage commitment by encouraging a feeling of community, offering chances for development, and praising staff members' efforts. Employee commitment is also defined as a psychological state that characterizes an employee's relationship with the organization, and it has implications for the decision to continue or discontinue membership in the organization.

Employee commitment consists of three components: affective, continuance and normative commitment (Meyer et al, 2020). Meyer and Allen (2004) suggested a three-dimensional attitudinal concept of organizational commitment: affective commitment, normative commitment and continuance commitment. Affective commitment refers to employees' psychological involvement and emotional attachment to the organization. Normative commitment mentions the ethical responsibility of employee to continue work for a longer period with the organization. Finally, continuance commitment refers to the recognition of employee for the expenditures related with quitting organization. Therefore, employees who have high levels of commitment to their organizations are expected to stay, for the reason that they wish to continue their affiliation, in direction to assist the goals of the organization (Meyer & Allen, 2004).

2.3 Empirical Review

Onyeka (2025) investigated the mediating role of employee commitment in bridging the relationship between talent management practices and academic staff performance within state-owned tertiary institutions in Bayelsa and Kogi States, Nigeria. Grounded in Human Capital Theory and Social Exchange Theory, the study employed proportionate stratified sampling, distributing 485 questionnaires with 408 valid responses analyzed via partial least squares structural equation modeling. Their findings indicated strong positive correlations between talent attraction,

development, retention and academic staff performance. Notably, employee commitment was found to significantly mediate the relationship between talent retention and academic staff performance. Similarly, Mokoena et al. (2022) conducted a quantitative study in a government department in South Africa to develop a framework linking talent management, organizational commitment and employee turnover intention. Using a non-probability sample of 372 participants, the study employed structural equation modeling to establish that talent management acted as a mediator between organizational commitment and turnover intention.

Ridwan et al. (2020) conducted a study in Indonesia to examine how employee performance at SPMI Private University in West Sumatra is influenced by perceived organizational support, organizational commitment and organizational citizenship behavior. The study adopted a purely quantitative approach and applied saturation sampling from a population of 241 employees, yielding a sample of 211. Data were analyzed using SPSS version 21.0 through path analysis, R-square determination, F-tests and t-tests. Hendri (2019) conducted research in Indonesia to investigate the influence of organizational commitment, multicultural competency and organizational fairness on employee job performance. The study employed an explanatory survey design and focused on civil servants across three administrative regions: Central Lampung Regency, East Lampung Regency, and Metro Municipality, with a sample of 350 employees. Data analysis was conducted using Structural Equation Modeling (SEM), preceded by tests of normality, linearity, and regression significance. The findings revealed that while organizational competence had no direct impact on job performance, organizational commitment and organizational fairness significantly influenced both commitment and performance.

Uddin et al. (2019) conducted a study to examine the significance of individual employee engagement for team performance, focusing particularly on the mediating effects of employee commitment and organizational citizenship behavior. The study employed a quantitative methodology and utilized a multi-level research design. Data were collected through a self-administered questionnaire using convenience and snowball sampling, and analysis was conducted using SPSS 20 and SmartPLS 2, incorporating descriptive statistics, bivariate correlation, and structural equation modeling. The findings indicated that employee engagement significantly enhances team productivity, with organizational commitment and citizenship behavior acting as mediators in this relationship. Gul (2015) conducted a study in Pakistan to examine how employee commitment influences organizational development, using middle-level managers from various telecom companies in the province of Khyber Pakhtunkhwa as respondents. The study collected data from 370 participants using a simple random sampling technique and employed questionnaires as the sole instrument for primary data collection. Data analysis was conducted using SPSS 20, and included regression and correlation analyses to determine the strength and significance of the relationship between employee commitment and organizational development. The results revealed that employee commitment significantly predicts organizational development.

Almeida et al. (2019) conducted a study in Southwest Europe to investigate how corporate reputation (CR), corporate image, and communication influence employee attitudes and behavior, particularly organizational commitment and individual performance, with corporate social responsibility (CSR) functioning as a moderating factor. The study utilized structural equation modeling (SEM) to test a theoretical model based on 473 valid questionnaires collected from employees of the largest cooperative dairy union in Iberia. The findings highlighted the significance of corporate image and reputation in strengthening employee attachment and improving performance, especially when CSR practices are perceived positively. Ridwan et al. (2020) used a quantitative survey design in Indonesian public universities, collecting data from 300 academic and administrative staff. Their structural equation modeling analysis revealed no significant moderating effect of employee commitment on the relationship between talent management and employee performance, despite a strong direct effect of talent management practices. The authors concluded that in public sector contexts, systemic HR frameworks may override individual attitudinal factors such as commitment. The following was the hypothesis of the current study:

H₀₅: Talent management does not significantly influence employee performance when moderated by employee commitment.

III. METHODOLOGY

3.1 Research Design and Approach

The study adopted a cross-sectional research design with a quantitative approach, underpinned by the pragmatic philosophical paradigm. This design and approach was adopted in the study because it allowed the researcher to collect data from many respondents at one specific point in time without influencing them making the study very objective and the findings reliable.



3.2 Target Population

The study targeted a population of 1,156 from the two selected public universities in Uganda. The target population included the Human Resource Directors, Council members, Top management, Teaching staff and Non-teaching staff of Kabale University and Mbarara University of Science and Technology (MUST).

3.3 Sample Size

The sample size was determined in two phases. The Human Resource directors and Top Management formed the first category and since their population was small (12), the researcher used census sampling to include all of them in the study. The second category consisted of the university council members, teaching staff and administrative staff which had a total population of 1144, researcher used the Yamane (1967) formulae to determine the sample size which yielded a sample of 308 respondents. Therefore the total sample size for the study was 320 respondents.

3.4 Sampling techniques:

Purposive sampling was used to select 12 respondents who were key informants in this study: Two (2) HR Directors and ten (10) senior management personnel. Additionally, simple random sampling was applied in order to categorize the rest of the responded and to ensure each one was given a chance to participate in the study; teaching staff, non-teaching staff, and University Council members.

3.5 Data Collection and Analysis

Closed ended questionnaire consisting of 5-point Likert scale questions were used to collect primary data from the respondents. Quantitative data was then analyzed using Jeffreys’s Amazing Statistics Program (JASP) software to conduct Structural Equation Modeling (SEM) which allowed for simultaneous estimation of multiple relationships between latent variables.

Table 1

Population, Sample Size and Sampling Procedures

Category of Respondents	Target Population	Sample Size	KAB	MUST	Sampling technique
HR Directors	2	2	1	1	Purposive Sampling
Top Management	10	10	5	5	Purposive Sampling
Council members	53	14	7	7	Simple Random Sampling
Teaching Staff	695	187	94	93	Simple Random Sampling
Non-teaching staff	396	107	54	53	Simple Random Sampling
Total	1156	320	161	159	

Source: Kabale University & MUST, HR Department Records, 2023; modified by the researcher.

IV. FINDINGS & DISCUSSION

4.1 Response Rate

A total of 320 questionnaires were distributed to the respondents across the two public universities in South Western Uganda and 320 were successfully completed and returned, yielding a 100% response rate for the intended sample size.

4.2 Quantitative Analysis

4.2.1 Structural Equation Model (SEM) and Hypothesis testing

Structural Equation Modeling (SEM) involves modeling the relationships between independent and dependent variables. In SEM, a hypothesized causal link from an independent variable to a dependent variable is depicted using a unidirectional arrow. Conversely, correlations among independent variables are illustrated with a double-headed arrow. The structural model, a key component of SEM, outlines the network of relationships among the constructs under investigation.

4.2.2 Testing the Structural Model for Talent Management and Employee Performance Model fit:

The summary of fit indices for the academic staff model shows excellent fit with CFI = 1.000, TLI = 1.015, RMSEA = 0.000 (90% CI [0.000, 0.019]), and NFI = 0.935, though SRMR = 0.108 is slightly elevated. For administrative staff, the model demonstrates good fit with CFI = 0.963, TLI = 0.954, NFI = 0.931, and RMSEA = 0.090 (90%), CI [0.071, 0.108]), with SRMR = 0.124 exceeding ideal thresholds. Compared to established



benchmarks, both models show strong incremental fit indices that exceed conventional thresholds (CFI/TLI > 0.90), with the academic staff model showing particularly strong absolute fit. With reference to accepted threshold values, both proposed models demonstrate good fit to the data, allowing us to proceed with evaluating the models' proposed relationships.

Discriminant validity: In this study, heterotrait-monotrait (HTMT) ratio was used to test for discriminant validity. HTMT is used to check whether constructs in the model are truly distinct from each other (not measuring the same thing). For academic staff, HTMT values ranged from 0.572 to 0.935, with the highest correlation observed between Talent Management (TM) and Talent Retention (TR) at 0.935, followed by Talent Attractiveness (TA) and Employee Performance (EPc) at 0.900. For administrative staff, HTMT values ranged from 0.727 to 0.989, with the highest correlation between Talent Management (TM) and Talent Retention (TR) at 0.989, followed by Employee Commitment (EC) and Talent Retention (TR) at 0.959. While all values remain below the threshold of 1.0, indicating discriminant validity is established for both groups, the administrative staff model shows higher HTMT ratios overall, suggesting constructs are more closely related in this group. The academic staff model demonstrates better discriminant validity, particularly between Talent Development (TD) and other constructs, with values as low as 0.572 (TD-TA).

Table 2

Testing the Structural Model for Talent Management and Employee Performance - Academic staff Heterotrait-Monotrait Ratio

TA	TM	TD	TR	EC	EPc
1.000					
0.891	1.000				
0.572	0.732	1.000			
0.841	0.935	0.913	1.000		
0.876	0.812	0.636	0.869	1.000	
0.900	0.662	0.766	0.774	0.638	1.000

Table 3

Testing the Structural Model for Talent Management and Employee Performance - Administrative staff Heterotrait-Monotrait Ratio

TA	TM	TD	TR	EC	EPd
1.000					
0.931	1.000				
0.861	0.924	1.000			
0.912	0.989	0.916	1.000		
0.885	0.941	0.812	0.959	1.000	
0.906	0.857	0.727	0.760	0.888	1.000

The heterotrait-monotrait analysis from tables 2 and 3 above reveals that all ratio values fall below the critical threshold of 1.0 for both academic and administrative staff models. This confirms satisfactory discriminant validity between the constructs under investigation.

4.2.3 Structural Model

The structural models for the Talent Management and Employee performance for academic and administrative staff are shown in Figure 1 and 2 below.

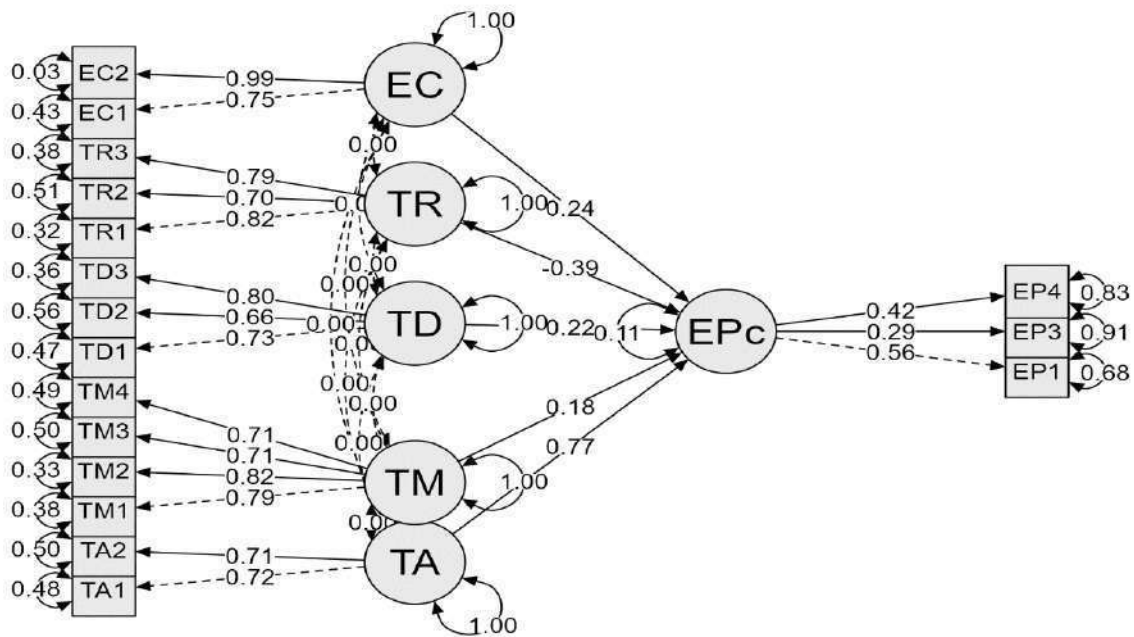


Figure 1
The Structural Model for Academic staff -Talent Management Practices and Employee Performance.

Table 4
Total effects of the structural model for academic staff - Talent Management Practices and Employee Performance

	Estimate	Std. Error	z-value	p	95% Confidence interval	
					Lower	Upper
TA → EPc	0.77	0.071	6.107	< .001	0.296	0.576
TM → EPc	0.18	0.047	1.783	0.075	-0.008	0.176
TD → EPc	0.22	0.042	2.082	0.037	0.005	0.168
TR → EPc	-0.39	0.042	-3.695	< .001	-0.237	-0.073
EC → EPc	0.24	0.036	2.485	0.013	0.019	0.159

The total effects from the structural model for academic staff revealed that talent attractiveness ($\beta = 0.77, p < .001$) had a strong and statistically significant influence on employee performance, indicating that the ability of universities to attract talent substantially improved performance outcomes. Talent motivation ($\beta = 0.18, p = 0.075$) showed a positive but statistically insignificant relationship, suggesting that motivational initiatives alone were not sufficient to drive significant improvements in performance among academic staff. Talent development ($\beta = 0.22, p = 0.037$) was found to significantly enhance performance, underscoring the importance of continuous professional growth opportunities. Interestingly, talent retention ($\beta = -0.39, p < .001$) had a significant negative effect, implying that retention challenges, such as high turnover intentions or dissatisfaction, undermined performance. Lastly, employee commitment ($\beta = 0.24, p = 0.013$) demonstrated a significant positive contribution, emphasizing that higher commitment levels among academic staff translated into better performance. Conclusively, Effective performance of academic staff in public universities is largely driven by how attractive the institutions are, how well they support development, and how committed staff feel. However, weak motivation systems and problematic retention strategies may undermine performance despite other gains.



Table 5

Fit indices for academic staff - Talent Management Practices and Employee Performance

Index	Value
Comparative Fit Index (CFI)	0.995
Tucker-Lewis Index (TLI)	0.985
Bentler-Bonett Non-normed Fit Index (NNFI)	0.985
Bentler-Bonett Normed Fit Index (NFI)	0.988
Parsimony Normed Fit Index (PNFI)	0.329
Bollen's Relative Fit Index (RFI)	0.965
Bollen's Incremental Fit Index (IFI)	0.995
Relative Noncentrality Index (RNI)	0.995
Root mean square error of approximation (RMSEA)	0.044
RMSEA 90% CI lower bound	0.000
RMSEA 90% CI upper bound	0.172
RMSEA p-value	0.308
Standardized root mean square residual (SRMR)	0.019
Hoelter's critical N ($\alpha = .05$)	318.704
Hoelter's critical N ($\alpha = .01$)	489.388
Goodness of fit index (GFI)	0.990
McDonald fit index (MFI)	0.996
Expected cross validation index (ECVI)	0.104
Log-likelihood	-639.915
Number of free parameters	8.000
Akaike (AIC)	1295.830
Bayesian (BIC)	1321.679
Sample-size adjusted Bayesian (SSABIC)	1296.339

Path diagram

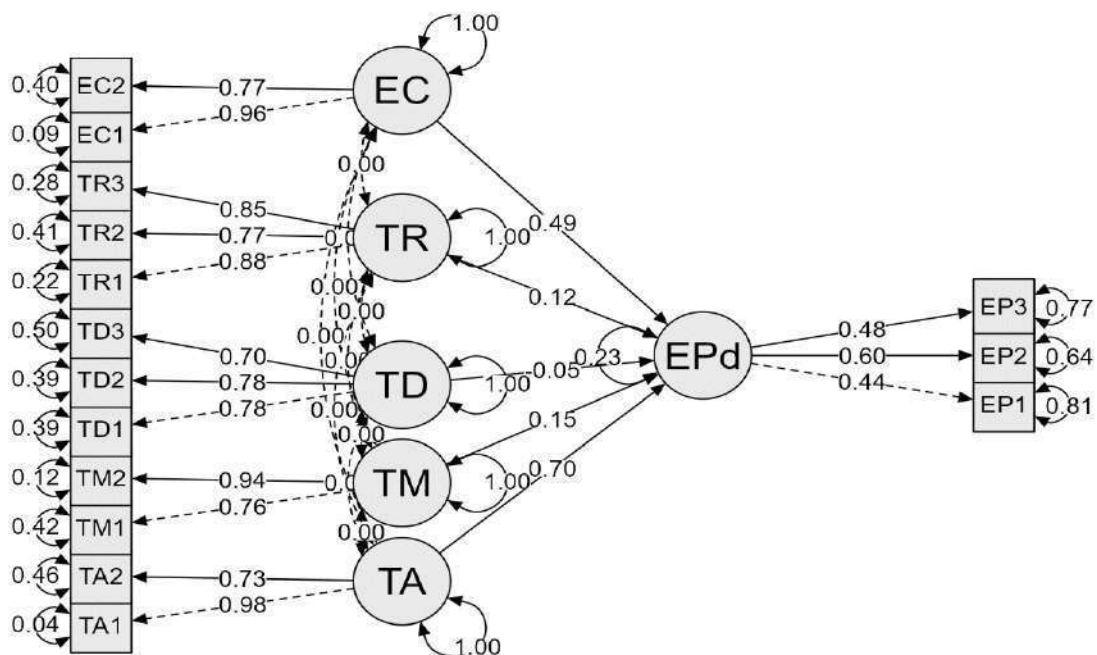


Figure 2

The Structural Model for Administrative Staff Talent Management and Employee Performance



Table 6

Total effects of the structural model for administrative staff- Talent Management Practices and Employee Performance

	Std. Estimate	Std. Error	z-value	p	95% Confidence interval	
					Lower	Upper
TA → EPd	0.702	0.091	7.687	< .001	0.523	0.881
TM → EPd	0.150	0.100	1.501	0.133	-0.046	0.346
TD → EPd	-0.054	0.105	-0.511	0.609	-0.260	0.153
TR → EPd	0.123	0.100	1.228	0.219	-0.074	0.320
EC → EPd	0.489	0.098	5.010	< .001	0.298	0.681

Table 7

Model Fit indices for administrative staff- Talent Management Practices and Employee Performance

Index	Value
Comparative Fit Index (CFI)	0.963
Tucker-Lewis Index (TLI)	0.954
Bentler-Bonett Non-normed Fit Index (NNFI)	0.954
Bentler-Bonett Normed Fit Index (NFI)	0.931
Parsimony Normed Fit Index (PNFI)	0.745
Bollen's Relative Fit Index (RFI)	0.914
Bollen's Incremental Fit Index (IFI)	0.963
Relative Noncentrality Index (RNI)	0.963
Root mean square error of approximation (RMSEA)	0.070
RMSEA 90% CI lower bound	0.071
RMSEA 90% CI upper bound	0.108
RMSEA p-value	6.484×10 ⁻⁴
Standardized root mean square residual (SRMR)	0.032
Hoelter's critical N (α = .05)	82.209
Hoelter's critical N (α = .01)	90.347
Goodness of fit index (GFI)	0.996
McDonald fit index (MFI)	0.714
Expected cross validation index (ECVI)	2.083

4.2.4 Path Coefficients for the Direct Hypothesized Relationships

The path coefficients for the direct hypothesized relationships within the proposed study model are shown in Table 8 and 8 below.

Table 8:

Path Coefficients for the Direct Hypothesized Relationships within the Proposed Study Model - Academic Staff

Hypothesis	Relationship	Path coefficient/Std. estimate	p-value	Decision
H ₀₁	TA → EP	0.774	0.045	Reject H ₀₁
H ₀₂	TM → EP	0.182	0.075	Reject H ₀₂
H ₀₃	TD → EP	0.221	0.037	Reject H ₀₃
H ₀₄	TR → EP	-0.386	< .001	Reject H ₀₄
H ₀₅	EC → EP	0.240	0.013	Reject H ₀₅

Table 9

Path Coefficients for the Direct Hypothesized Relationships within the Proposed Study Model - Administrative Staff

Hypothesis	Relationship	Path coefficient/Std. estimate	p-value	Decision
H ₀₁	TA → EP	0.702	<.001	Reject H ₀₁
H ₀₂	TM → EP	0.150	0.133	Failed to reject H ₀₂
H ₀₃	TD → EP	-0.054	0.609	Failed to reject H ₀₃
H ₀₄	TR → EP	0.412	0.219	Failed to reject H ₀₄
H ₀₅	EC → EP	0.489	<.001	Reject H ₀₅

Note: TA = Talent Attractiveness; TM = Talent Management; TD = Talent Development; TR = Talent Retention; EP = Employee Performance; EC= Employee Commitment

4.3 To Examine the Moderation Effect of Employee Commitment on the Relationship between Talent Management Practices and Employee Performance.

The moderation effect analysis of employee commitment on the relationship between talent management practices and employee performance shows a clear difference between academic and administrative staff. The results are as presented in the tables below:

4.3.1 Moderation Effect of Employee Commitment for Administrative Staff

Findings on the moderation effect of employee commitment on the relationship between talent management practices and employee performance for administrative staff are presented in the Table below.

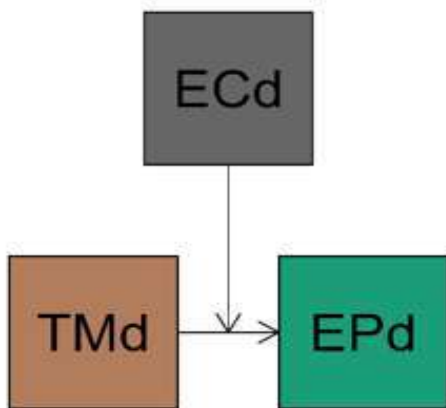
Table 10

Moderation Effect of Employee Commitment for Administrative Staff Model Summary

	Hayes number ^a	AIC	AIC weight	BIC	BIC weight	Log-likelihood	n	R ²
Model 1	1	892.411	1.000	921.314	1.000	-436.205	133	0.501

^a Model configuration number defined by Hayes (2022)

Path plot



Statistical path plot

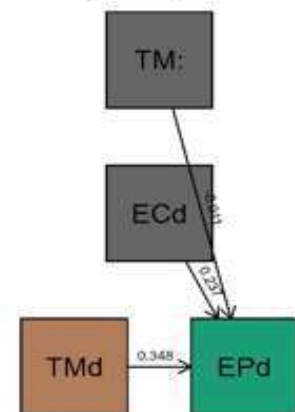


Figure 1

Moderation Effect of Employee Commitment for Administrative Staff

Table 11

Moderation Effect of Employee Commitment for Administrative Staff Path Coefficients

	Estimate	Std. Error	z-value	p	95% Confidence interval		Std. Estimate
					Lower	Upper	
TMd → EPd	0.348	0.161	2.161	0.031	0.032	0.663	0.459
ECd → EPd	0.237	0.148	1.595	0.111	-0.054	0.527	0.386
TMd:ECd → EPd	-0.011	0.040	-0.268	0.789	-0.089	0.068	-0.012

Results from the table above, indicated that talent management significantly improved administrative staff performance ($\beta = 0.348$, $p = 0.031$), with a moderate standardized effect (0.459). In contrast, employee commitment alone did not significantly influence performance ($\beta = 0.237$, $p = 0.111$), as its confidence interval crossed zero. Furthermore, the interaction term (TMd × ECd → EPd) was insignificant ($\beta = -0.011$, $p = 0.789$), suggesting that employee commitment did not moderate the relationship between talent management and employee performance. These findings imply that, for administrative staff, the effect of talent management on performance is direct and robust, independent of employee commitment levels.



Table 12

Moderation Effect of Employee Commitment for Administrative Staff Direct and Indirect Effects

	ECd	Estimate	Std. Error	z-value	p	95% Confidence interval		Std. Estimate
						Lower	Upper	
TMd → EPd	16	0.314	0.085	3.684	< .001	0.147	0.482	0.415
TMd → EPd	50	0.306	0.086	3.537	< .001	0.136	0.475	0.404
TMd → EPd	84	0.298	0.097	3.074	0.002	0.108	0.488	0.393

From the table above; Direct Effect of Talent Management Practices on Performance (TMd → EPd): Across all levels of employee commitment (16, 50, 84), the estimates are positive (0.298–0.314), showing that talent management consistently improves administrative staff performance. All effects are statistically significant ($z = 3.074–3.684$, $p < 0.01$). Confidence intervals (0.108–0.488) do not cross zero, confirming robustness. Moderation by Employee Commitment: The effect size decreases slightly as employee commitment levels rise (0.415 → 0.393 standardized estimates). This means employee commitment does not strengthen or weaken the effect in any meaningful way; the relationship remains positive and significant at all commitment levels.

The implication of the above results is that; for administrative staff, talent management is a strong and direct driver of performance. Employee commitment has minimal moderating influence, suggesting that even with different levels of commitment, talent management still significantly enhances performance. “Talent management had a significant positive effect on administrative staff performance ($\beta \approx 0.30–0.31$, $p < .01$), with employee commitment showing little to no moderating influence.” The indirect effect shows how the strength of TMd → EPd changes when employee commitment (ECd) interacts with TMd. Here, we see that the conditional direct effects remain positive and significant across all ECd levels ($\beta = 0.314 \rightarrow 0.298$). The indirect/moderated effect is minimal, because the estimates barely change (0.415 → 0.393).

Interpretation of Indirect Effects: The indirect effects through moderation are very small, meaning that employee commitment does not significantly alter the impact of talent management on performance. Whether employee commitment is low, moderate, or high, talent management has a direct, positive, and significant impact on administrative staff performance. “The indirect effects of employee commitment were negligible, as talent management consistently and significantly improved administrative staff performance across all levels of commitment.”

4.3.2 Moderation Effect of Employee Commitment for Academic Staff

Findings on the moderation effect of employee commitment on the relationship between talent management practices and employee performance for academic staff are presented in Table 13 below.

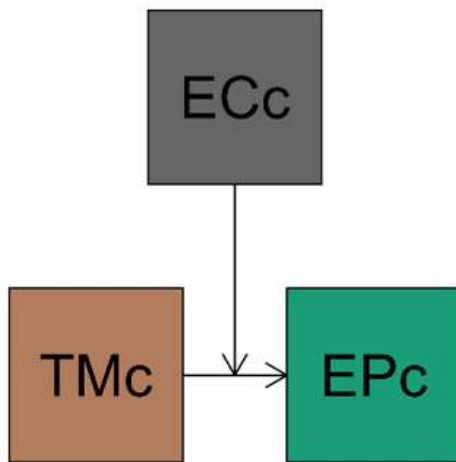
Table 13

Moderation Effect of Employee Commitment for Academic Staff Model Summary

	Hayes number ^a	AIC	AIC weight	BIC	BIC weight	Log-likelihood	n	R ²
Model 1	1	920.988	1.000	953.299	1.000	-450.494	187	0.159

^a Model configuration number defined by Hayes (2022)

Model Plot



Statistical path plot

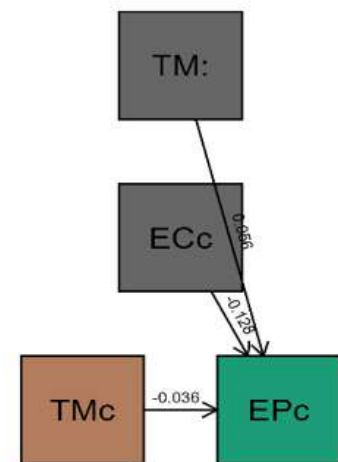


Figure 4
Moderation Effect of Employee Commitment for Academic Staff

Table 14
Moderation Effect of Employee Commitment for Academic Staff Path Coefficients

	Estimate	Std. Error	z-value	p	95% Confidence interval	
					Lower	Upper
TMc → EPc	-0.036	0.212	-0.171	0.864	-0.452	0.379
ECc → EPc	-0.128	0.168	-0.765	0.445	-0.458	0.201
TMc:ECc→ EPc	0.056	0.049	1.138	0.255	-0.041	0.153

The path coefficient results showed that talent management had no significant effect on academic staff performance ($\beta = -0.036$, $p = 0.864$), and employee commitment also showed no significant direct influence ($\beta = -0.128$, $p = 0.445$). Furthermore, the interaction between talent management and employee commitment was statistically insignificant ($\beta = 0.056$, $p = 0.255$), with the confidence intervals including zero in all cases. These findings suggest that, unlike administrative staff, the relationship between talent management and performance for academic staff is not moderated by employee commitment.

Table 15
Moderation Effect of Employee Commitment for Academic Staff Direct and indirect effects

	ECc	Estimate	Std. Error	z-value	p	95% Confidence interval	
						Lower	Upper
TMc → EPc	16	0.151	0.075	1.996	0.046	0.003	0.298
TMc → EPc	50	0.189	0.066	2.873	0.004	0.060	0.318
TMc → EPc	84	0.224	0.071	3.151	0.002	0.085	0.363

From the table above; at low levels of commitment (16th percentile): The effect of talent management on performance is positive and significant (Estimate = 0.151, $p = 0.046$; CI = 0.003–0.298). At moderate levels of commitment (50th percentile/median): The effect remains positive and stronger (Estimate = 0.189, $p = 0.004$; CI = 0.060–0.318). At high levels of commitment (84th percentile): The effect is even stronger and highly significant (Estimate = 0.224, $p = 0.002$; CI = 0.085–0.363). This shows that employee commitment strengthens the positive effect of talent management on performance.

The findings revealed that employee commitment significantly moderated the relationship between talent management practices and the performance of academic staff in public universities. Specifically, at low levels of commitment, the effect of talent management on performance was positive but relatively weak, while at moderate and high levels of commitment, the effect became progressively stronger and highly significant. This implies that

employee commitment amplifies the effectiveness of talent management initiatives in enhancing academic staff performance. In practical terms, universities that cultivate high levels of commitment among staff are likely to realize greater returns from their talent management investments.

4.4 Discussion

The null hypothesis stated that employee commitment does not significantly moderate the relationship between talent management practices and employee performance. The results from this study support this hypothesis for both academic and administrative staff in public universities. The quantitative results of this study revealed that the moderating effect of employee commitment on the relationship between talent management practices and employee performance was not statistically significant for either administrative or academic staff in Ugandan public universities. Specifically, for administrative staff, the interaction effect was not significant ($z = -0.268$, $p = 0.789$), although the direct effect of talent management on performance was statistically significant ($\beta = 0.348$, $z = 2.161$, $p = 0.031$), and the total effect remained strong ($\beta = 0.314$, $z = 3.684$, $p < 0.001$). This suggests that talent management practices such as attraction, development, retention, and motivation directly improved administrative staff performance, regardless of commitment levels.

Similarly, for academic staff, the moderation effect was also statistically insignificant ($z = 1.138$, $p = 0.255$). However, the total effect of talent management on performance appeared stronger at higher levels of employee commitment, indicating that although commitment did not significantly moderate the relationship, it may have enhanced the effectiveness of talent management in improving academic staff performance.

These findings challenge common assumptions in existing literature, which frequently position employee commitment as a key moderating or mediating variable. For example, Ridwan et al. (2020) and Hendri (2019) found that commitment significantly enhanced job performance, while Uddin et al. (2019) emphasized its mediating role between engagement and team productivity. Gul (2015) established a strong link between commitment and organizational development, and Otoo et al. (2019) noted that engagement in talent management initiatives promoted commitment. However, in the current study, such effects were not supported in the context of Ugandan public universities.

The results can be understood through the lens of two theoretical frameworks: Maslow's Hierarchy of Needs (1943) and the Egalitarian Theory of Talent Management (Iles et al., 2010). According to Maslow, employees are more committed and perform better when institutions address needs across all five levels physiological, safety, social, esteem, and self-actualization (Otoo et al., 2019). Therefore, talent management practices that provide fair compensation, recognition, job security, and opportunities for growth may directly lead to improved performance, even in the absence of strong commitment. Likewise, the Egalitarian Theory posits that all employees possess talent and deserve equal opportunities for development. In public universities, where equitable treatment is emphasized, inclusive and systemic HR practices may have a more immediate and universal impact on performance than individual attitudinal variables like commitment.

Supporting this interpretation, Onyeka (2025) argued that in bureaucratic institutions such as public universities, performance is more likely to be influenced by organizational structures and systems than by individual motivations. Mokoena et al. (2022) further asserted that effective talent management could drive productivity even in low-commitment environments. These perspectives align with the current findings, indicating that institutional frameworks may exert a stronger influence than personal commitment in the Ugandan public sector context. Contrastingly, the findings deviate from those of Ridwan et al. (2022), Hendri (2019), and Uddin et al. (2019), who consistently identified significant moderating or mediating roles for commitment. For example, Ridwan et al. (2022) emphasized that commitment enhanced motivation and engagement, while Hendri (2019) linked commitment to job effectiveness and citizenship behavior. These contradictions may be attributable to contextual differences. As Almeida et al. (2019) noted, commitment played a more prominent role in private or competitive sectors where individual agency and motivation are critical to performance outcomes. In resource-constrained or highly structured public universities, however, institutional policies and equitable talent management frameworks may overshadow individual attitudes.

To conclude, while employee commitment remains an important variable in the broader HR-performance framework, this study found no statistically significant moderating effect in the context of Ugandan public universities. The direct implementation of comprehensive, fair, and inclusive talent management practices appeared to be a more consistent and reliable driver of employee performance. This suggests that for performance outcomes to improve, especially in the public sector, institutions should focus on strengthening systemic HR practices that meet employees' core needs. Commitment, although valuable, cannot substitute for structural support, recognition, and institutional fairness.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The results showed that employee commitment did not significantly moderate the relationship between talent management practices and employee performance for both academic staff and administrative staff. However, the direct effect of talent management remained strong. This suggests that commitment, while conceptually important, may not currently be robust enough in these institutions to influence performance outcomes meaningfully. This could stem from low morale, inadequate recognition or lack of participatory decision-making. The study concludes that employee commitment does not significantly moderate the relationship between talent management practices and employee performance for both academic and administrative staff. However, the direct effects of talent management practices on performance remain strong, particularly for administrative staff.

This implies that while commitment is important, its role as a moderator may be less pronounced in this context. Employee commitment does not significantly moderate the relationship between talent management practices and employee performance for either academic or administrative staff in public universities. The direct effect of talent management on performance remains the primary driver of outcomes in both groups. Commitment alone, without robust and equitable talent management, is not enough to drive substantial performance gains. Qualitative evidence indicates that staff view commitment as important for engagement and output, but structural barriers and inconsistent support can limit its impact. Employee commitment is valuable but does not significantly alter the effect of talent management on performance. Direct, inclusive, and well-implemented talent management strategies remain the most effective way to improve employee performance in public universities.

5.2 Recommendations

Since employee commitment did not significantly moderate the relationship between talent management practices and employee performance, universities should focus on strengthening talent management initiatives directly. While fostering employee commitment remains important, efforts should prioritize implementing effective attraction, development, motivation and retention strategies that independently drive performance improvements. Public universities should focus on creating a supportive environment where staff feel appreciated, involved and respected. This can be done through fair recognition, open communication, leadership support and including staff in making decisions that affect their growth. When employees feel that their needs and contributions matter, they are more likely to commit and perform better.

Therefore, building strong commitment should be a planned part of managing talent, not something we assume is already there. While employee commitment does not significantly moderate the relationship between talent management and performance, fostering commitment remains important for engagement and morale. Strengthen talent management practices such as fair recruitment, recognition, and professional development to directly enhance performance and indirectly support higher commitment. Apply all talent management strategies inclusively, ensuring that both academic and administrative staff have equal opportunities to develop commitment and contribute to institutional goals. Address structural and resource-related barriers that can undermine commitment, such as inadequate funding, heavy workloads, and limited recognition. Use regular staff engagement surveys to monitor levels of commitment and identify areas for improvement in talent management practices.

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Exploring the challenges of university council independence in Ghana's higher education architecture

Enoch Danso Okyere¹
Emmanuel Erastus Yamoah²
Francis Ansah³
Hinneh Kusi⁴

^{1*}edokyere@uew.edu.gh

^{1,2,4}University of Education, Winneba, ³University of Cape Coast, Ghana

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ABSTRACT

This study explores the challenges of university council independence in Ghana's public universities, prompted by proposed legislative reforms increasing government oversight. The study is anchored on the principal-agent theory. Using an exploratory qualitative design, semi-structured interviews were conducted with 30 key informants, including government, faculty members, non-faculty members, and student representatives from Ghana's five oldest public universities. Thematic and document analysis revealed that government influence, through regulatory constraints, financial control, and appointment powers, restricts council autonomy. It is proposed that independent funding boards must be created to monitor the flow of funding, which will lessen dependency on government subsidies. Public-private partnership initiatives, which encourage industrial partnerships to finance infrastructure and research, should be promoted. To ensure fair representation and diminish political influence, public universities must set clear guidelines for council appointees. Additionally, efforts should be made to implement fee regulation mechanisms, such as limiting tuition hikes and expanding student scholarship opportunities, particularly under increased university autonomy. By highlighting the necessity of striking a balance between autonomy and accountability, these findings contribute to the global discourse on higher education governance.

Keywords: Autonomy, Academic Freedom, Government Influence, Higher Education Governance, New Public Management, Public University, University Council Independence

I. INTRODUCTION

The power of governing councils to make decisions without outside interference, especially from the government or other stakeholders, is known as university council independence. Academic freedom, the privilege granted to faculty and students to pursue knowledge without undue interference, and universities' capacity to self-regulate in academic, administrative, and financial matters are closely linked to this independence, which is a crucial component of effective higher education governance (Kudal & Dawar, 2020; Thenmozhi & Sasidharan, 2020). These interconnected concepts are crucial for encouraging innovation, guaranteeing academic achievement, and empowering universities to adjust to local and international trends.

Independent councils enhance institutional performance worldwide by providing unbiased oversight, reducing conflicts of interest, and guiding strategic decisions that promote long-term sustainability (Thakolwiroj & Sithipolvanichgul, 2021). Universities that value autonomy and use market-oriented governance systems, like the University of Oxford, are more flexible and competitive on a worldwide scale (Hudayberdiyev, 2024).

However, there are significant barriers to the independence of Ghanaian public university councils due to interference from the government, especially in the areas of budget management and council member nominations. Between 70 and 80 percent of public university budgets are funded by government subsidies, and the government appoints 36 percent of council members, including the chairperson (Appiagyei-Atuah, 2021). Their capacity to pursue autonomous intellectual and strategic objectives is restricted by this framework, which frequently synchronises council decisions with political agendas. By advocating for greater government involvement on councils, the 2020 Public University Bill, which the erstwhile government made an attempt to introduce, exacerbated these reservations by potentially giving the state more authority over employment, admissions, and outside partnerships (Appiagyei-Atuah, 2021). Excessive interference can restrict academic freedom, impede innovation, and decrease institutional adaptability, even though government oversight can guarantee accountability and align universities with national development goals, such as increasing Science, Technology, Engineering and Mathematics (STEM) enrolment to support economic growth (Westerheijden, 2018).



1.1 Statement of the Problem

Although government meddling in university governance is not exclusive to Ghana, it is more noticeable in underdeveloped countries where state-centered governance frameworks are more common (Arikewuyo & Ilusanya, 2010). However, wealthy nations like the Netherlands and the United Kingdom frequently use hybrid models that strike a balance between consultative government functions and a high degree of institutional autonomy, enabling universities to flourish in tough international settings (Westerheijden, 2018).

Ghana should take inspiration from South Africa's governance model, which combines a variety of endowment and industrial partnership funding sources (Mzenzi, 2022). Ghanaian university councils desire autonomy to advance academic and institutional objectives, but the government expects them to maximise public funds. These disputes are made worse by government appointments and financial reliance, which restrict council autonomy.

Few studies have examined the unique difficulties of council independence in African contexts, despite earlier research concentrating on governance in wealthier countries. This is especially true in light of recent legal reforms (Appiagyei-Atuah, 2021; David, et al., 2018). The challenges of university council independence, particularly the ramifications of the 2020 Public University Bill, are the primary focus of this paper.

The findings support governance models that seek to increase council autonomy while preserving accountability in order to guide policy improvements in Ghana. The study also contributes to our understanding of how to foster innovative, autonomous, and successful higher education systems by providing suggestions to other developing countries dealing with comparable issues.

1.2 Research Objective

The study sought to explore the challenges of university council independence in Ghana.

II. LITERATURE REVIEW

2.1 Theoretical Review

A solid framework for analysing governance concerns at Ghanaian public universities, particularly the disputes over university council authority, is provided by Jensen and Meckling's (1976) Principal-Agent Theory. The theory holds that there are conflicts of interest between principals (like the government or stakeholders that support institutions) and agents (like university councils and management in charge of institutional operations).

Principals strive for efficient resource utilisation and alignment with national ambitions like expanding STEM enrolment or infrastructure development, whereas agents prioritise institutional goals like academic innovation or faculty welfare. These competing objectives could lead to agency problems, where agents act against the principals' expectations, like breaking regulations meant to safeguard academic freedom (Muhanguzi, 2019).

The government, as the principal, has a major influence in Ghana through a number of means, including financial control (70 to 80 percent of university budgets), regulatory mandates through the Ghana Tertiary Education Commission (GTEC), and the appointment of council members (36 percent of council seats, including the chairperson) (Education Regulatory Bodies Act, of 2020). Given that they force councils (agents) to obey state agendas, these procedures result in agency conflicts by limiting their capacity to prioritise institutional needs or innovate. For example, GTEC's enrolment limitations limit councils' ability to align student enrolment to institutional capability, and according to council minutes, government appointees initiated 40% of policy proposals between 2020 and 2024. Choices about national priorities may also be influenced by these chairpersons.

Empirical evidence lends credit to the fact that the conflict between the agent and principal can be reduced through the adoption of Corporate Governance Practices (CGPs). Sopta, et al. (2017) found that board independence in Croatian public institutions reduced agency expenses by aligning agent behaviours with principal aims. Similarly, Vargas-Hernandez and Teodoro Cruz (2018) demonstrated how effective monitoring by CGPs at Megacable, Mexico, decreased agency expenses. Muhanguzi (2019) showed how principal-agent conflicts were lessened in Ugandan savings and credit cooperatives through performance review. These conclusions hold for Ghanaian universities, where CGPs such as independent funding boards, open selection processes, and performance-based evaluations could increase council autonomy, reduce governmental control, and align institutional goals with stakeholder expectations.

2.2 Empirical Review

2.2.1 Models of Governance in Higher Education Institutions

The three most prominent university governance models are the market-oriented, self-governance, and state-centered approaches (Abdeldayem & Aldulaimi, 2018; Ramírez & Tejada, 2018). The market-oriented model, also known as the entrepreneurial school, emphasises efficient resource management through professional leadership and corporate strategies (Abdeldayem & Aldulaimi, 2018; Ramírez & Tejada, 2018; Tohidyan Far et al., 2024;



Hudayberdiyev, 2024). While it promotes operational effectiveness, careful oversight is necessary to prevent over-commercialisation and protect academic standards (Lavanya, 2024).

The self-governance model entrusts academic staff with institutional leadership, emphasising academic autonomy, peer review, truth-seeking, and societal contribution (Hudayberdiyev, 2024). In the state-centered model, the government exercises control over university management while allowing limited autonomy. This model is prevalent in Ghana and much of Africa, where the state's role has evolved from direct control to ensuring responsible university operations through intermediary agencies (Tohidyan Far et al., 2024; Nabaho, 2022). Given the strengths and weaknesses of each model, a hybrid governance approach is recommended to balance autonomy, accountability, and educational quality across institutions (Lavanya, 2024).

2.2.2 Council Autonomy and Academic Freedom in Higher Education Institutions

Academic freedom and institutional autonomy are intrinsically linked, often described as Siamese twins, with academic freedom being deeply embedded in autonomous institutions (Hao, 2025; Edmore, 2016). Academic freedom fosters creativity and independent thinking, enabling students, academics, and researchers to generate new knowledge without external interference (Bakaradze, 2023). In universities, this freedom must be protected to allow intellectuals to operate without censorship, particularly from government entities (Bakaradze, 2023; Hasan, 2025).

Institutional autonomy refers to the extent to which universities can govern themselves, especially in relation to government regulation, external funding, and partnerships with industry and international bodies (Quyet, et al., 2023; Matei & Iwinska, 2014). A key structure supporting autonomy is the university council, which oversees institutional management, including assets, finances, and policy decisions (Mzenzi, 2022). Councils typically include both internal members (academic staff, students, administrators) and external members (government and private sector representatives, and sometimes international experts) to enhance governance perspectives (Mzenzi, 2022; Westerheijden, 2018).

Globally, influenced by New Public Management (NPM) principles, there is a trend toward increasing the number of external members in university councils. This approach aligns with corporate governance ideals, promoting objectivity and strategic oversight (Kohtamaki & Balbachevsky, 2018; Mzenzi, 2022). Autonomy enables universities to manage their internal affairs such as staffing, academic programmes, infrastructure, and research without excessive state control, thereby improving the quality of education (Quyet et al., 2023; David et al., 2018). Balanced autonomy ensures shared governance among stakeholders, including government, faculty, students, and councils, enhancing institutional effectiveness (Hao, 2025). Despite these ideals, many African universities still face limited autonomy due to strong government influence. State authorities often retain control over critical aspects such as council appointments, tuition regulation, quality assurance, and enrolment targets, thus undermining independent governance (Arikewuyo & Ilusanya, 2010; Mzenzi, 2022; Hao, 2025).

2.2.3 University Council Independence Context in Ghana

In Ghana, public universities are governed by councils responsible for legislative, administrative, and oversight functions, as outlined in university acts (Appiagyei-Atuah, 2021; Effah & Mensah-Bonsu, 2001). A typical council comprises the Vice-Chancellor, two convocation representatives, one representative each from alumni, organised labour, academic staff, and the Students' Representative Council, and four government appointees, including the chairperson. Approximately 36% of council members are government-appointed, giving the state significant influence despite not holding a numerical majority (Appiagyei-Atuah, 2021). This composition aims to balance internal and external perspectives, with government appointees often including business and industry representatives to enhance strategic decision-making.

Historically, Ghana's university autonomy has evolved. Pre-1992, the President appointed Vice-Chancellors and served as Chancellor, exerting direct control. The 1992 Constitution shifted authority to councils, but government influence persists through appointee selection and policy directives on tuition, enrollment, and quality assurance (Arikewuyo & Ilusanya, 2010). The government appoints the chairpersons of state corporations, including public universities, thereby undermining the independence of university governing bodies. Public universities' financial independence is threatened by the current legal framework, which prevents them from autonomously determining and setting academic programme fees (Ayam, 2019; Faakye, 2020).

Again, the 2020 Public University Bill, which was put on hold by the previous government, proposed increasing government representation, potentially amplifying control over admissions, appointments, and external partnerships (Appiagyei-Atuah, 2021). This context underscores the tension between government oversight and council autonomy, which undermines fiscal responsibility and academic innovation. Unlike models in developed nations, such as the market-oriented governance at the University of Oxford, Ghana's state-centered approach limits institutional flexibility (Hudayberdiyev, 2024).

III.METHODOLOGY

3.1 Research Design and Approach

This study employed an exploratory qualitative design (EQD) to investigate the complexities of university council autonomy in Ghana's public higher education system. The research team ensured a comprehensive analysis of governance dynamics in a context where government actions have a substantial impact by using EQD's flexibility to iteratively refine the study as new information became available (Saunders et al., 2016).

This approach is particularly well-suited for gathering the complex, situation-specific perspectives of council members and producing rich, qualitative data on the challenges of council autonomy, claim Bradshaw, et al. (2017). By prioritising the opinions of participants, EQD made it possible to gain a comprehensive understanding of how government influence affects university governance, which is consistent with the study's objective of guiding policy improvements.

Throughout the investigation, the research team used reflexivity to address potential researcher bias. The researchers admitted that, as scholars connected to Ghanaian universities, they might have preconceived notions about the role of the government in higher education. Regular team meetings and reflective notes, which documented how individual viewpoints might affect data gathering or interpretation, helped to sustain reflexivity. During data analysis, these notes were examined to make sure the conclusions were based on participant responses rather than assumptions.

Furthermore, semi-structured interviews were combined with document analysis of university acts and the 2020 Public University Bill draft as part of triangulation to increase objectivity. This allowed for cross-verification of findings and decreased the possibility of bias (Lincoln & Guba, 1985).

3.2 Data Collection Methods and Procedures

Data was collected through semi-structured interviews with 30 council members from Ghana's five oldest public universities: the University of Ghana (UG), Kwame Nkrumah University of Science and Technology (KNUST), University of Cape Coast (UCC), University of Education, Winneba (UEW), and University for Development Studies (UDS). These institutions were chosen due to their well-established governance structures, which guarantee representativeness by being comparable to those of other public universities in Ghana.

The sample consisted of six people from each university: two government representatives, two convocation faculty representatives, one non-academic staff person, and one student representative. This composition ensured a variety of perspectives from key stakeholders in university governance.

To ensure their competence and relevance to the study's goals, participants who were actively involved in university council operations were chosen through the use of purposeful sampling (Patton, 2018). A transparent procedure was used to identify participants in order to reduce selection bias: lists of current council members were obtained from university registries, and selection criteria gave preference to those who had served on the council for at least two years in order to guarantee familiarity with governance procedures.

Although they were taken into consideration, alternative sampling techniques like snowball sampling were judged less suitable because of the possibility of over-representing coupled networks. Purposive sampling, on the other hand, made it possible to purposefully include a variety of roles (government, academic, staff, and students), thereby capturing a wide range of perspectives.

After reaching data saturation, when no new themes or insights surfaced from further interviews, a sample size of 30 individuals was established (Braun & Clarke, 2021). Iterative transcript evaluations conducted during data gathering served as confirmation of this. A strong representation of viewpoints throughout Ghana's public university system was guaranteed by the inclusion of six delegates from each university, each of whom represented a different stakeholder group.

A thorough understanding of council dynamics was made possible by the variety of roles played by government officials with policy influence, academically trained faculty, operationally savvy personnel, and students as beneficiaries. This methodology is in line with the principles of qualitative research, where the richness and depth of data, rather than just the quantity, are used to determine the appropriate sample size (Patton, 2018).

Open-ended questions like "How does government influence impact council decision-making?" and "What are the primary challenges to achieving council autonomy?" were included in the interview guide. Five council members (one from each university, not in the final sample) participated in a pilot test to improve the guide, resolve any ambiguities in the question wording, and make sure it was in line with the goals of the study.

Overly general questions were reworded to produce more focused responses in light of pilot feedback. One example was the simplification of "Describe governance challenges" to "What specific barriers hinder council autonomy?" With the consent of the participants, audio recordings of the approximately 60-minute interviews were made. Depending on their preferences, interviews were conducted via Zoom or in person. The 2020 Public University



Bill draft and document analysis of university acts supplemented the interview data with contextual evidence of legal and policy consequences on governance.

3.3 Ethical Consideration

Careful attention was paid to ethical issues. The Institutional Review Board (IRB) at the University of Cape Coast granted ethical approval. After being fully told about the study's objectives, confidentiality procedures, and withdrawal rights, participants gave their signed informed consent.

Pseudonyms were used to preserve privacy, and specific institutional or regional information was removed from study locations to de-identify them. In order to build trust and promote candid communication, interview dates were modified to take into account participants' availability.

The trustworthiness of this qualitative study was ensured by employing strategies to address credibility, transferability, dependability, and confirmability in line with Lincoln and Guba (1985). Credibility was raised using triangulation, which paired semi-structured interviews with document analysis to bolster findings. For instance, the participants' reports of government influence were contrasted with provisions in university acts and the 2020 Public University Bill draft. Member checking was done by giving participants interview summaries in order to confirm interpretations and make sure the findings reflected their opinions.

Thick description was used to facilitate transferability, including thorough explanations of the five universities' governance structures, participant roles, and research background. This makes it possible for readers to evaluate how well the results translate to different contexts, such as other university systems in Africa. By keeping a thorough audit trail that documented all research stages, interview protocols, coding systems, and thematic analysis procedures, reliability was guaranteed. These documents were examined by an outside qualitative researcher to ensure methodological coherence.

The research team used reflexivity to address confirmability, recording their presumptions and possible biases in reflective notes. The team's academic ties, for instance, were seen as a possible source of bias, and measures like peer debriefing and triangulation were employed to preserve objectivity. Thematic analysis using NVivo software further guaranteed a methodical and open coding process, improving confirmability.

3.4 Data Analysis and Presentation

To find trends and aspects pertaining to university council autonomy, thematic analysis was used to examine the data. To fully comprehend the facts, the approach started by reading the interview transcripts several times.

The study topics and preliminary themes found during transcript evaluations served as the basis for the development of a coding scheme. The codes were categorised into four sub-themes: financial control, appointment influence, regulatory restrictions, and council interference in management, as well as the core issue of "external influence." To keep the study's goals at the forefront, sub-themes were honed by comparing and contrasting codes, and superfluous codes were eliminated.

Transparency and consistency were ensured by the systematic coding and theme development made possible by the NVivo software. Data extracts were examined in light of the study's goal of comprehending the impact of the government on council autonomy once the primary theme and sub-themes had been established.

Direct quotes from participants were used to anchor the analysis in their experiences, and the results were presented in a succinct report. With practical insights for policy reform, our analytical approach guaranteed a comprehensive and nuanced investigation of the elements influencing university council autonomy in Ghana.

IV. FINDINGS & DISCUSSION

4.1 Findings

Based on the thematic analysis of semi-structured interviews with 30 council members from Ghana's five oldest public universities (University of Ghana, Kwame Nkrumah University of Science and Technology, University of Cape Coast, University of Education, Winneba, and University for Development Studies), the main theme influencing university council autonomy is "external influence."

Four sub-themes surfaced: council meddling in management, appointment influence, financial control, and regulatory restrictions. These conclusions were supported by the 2020 Public University Bill draft and document analysis of university acts, which demonstrated the influence of structural government. A wide range of viewpoints was guaranteed by the participation of different individuals, including two government representatives, two faculty members, one non-academic staff member, and one student representative from every university. This helped to minimise any potential prejudice.



4.1.1 Regulatory Constraints

The Ghana Tertiary Education Commission (GTEC) enforces government policies that severely restrict council autonomy by setting operational priorities. For example, the council's strategic objectives are frequently superseded by GTEC requirements on infrastructure development and student enrolment caps. "Government directives on admissions limit our ability to align student intake with institutional capacity," said a non-academic official.

Analysis of the documents revealed that GTEC's 2023 policy guidelines limited council flexibility by requiring institutions to give priority to particular programmes that were in line with national development goals. Based on the studied university reports, GTEC regulations influenced almost 60 per cent of council decisions during the last five years.

4.1.2 Financial Control

One major obstacle to autonomy has been identified as financial reliance on government subsidies. According to financial documents from the sampled universities, 70 to 80 per cent of the operating budgets of public universities are funded by the government. Because of this reliance, the government can influence council choices, especially when it comes to infrastructure and budget distribution. "Funding comes with strings attached, shaping council priorities," a student representative said. "We feel pressure to align with government agendas to secure funding," a faculty member continued.

One university (KNUST) indicated that 25 per cent of its budget came from non-government sources, indicating that universities with diverse revenue streams, such as those with strong alumni donations or industrial partnerships, reported having more freedom to make decisions.

4.1.3 Appointment Influence

The chairperson and four of the council's eleven members, or 36 per cent of the council, are government appointees, giving them disproportionate authority. The chairperson, who is chosen by the president, usually aligns council choices with the goals of the administration. According to a non-academic staff member, "the chairperson's influence sways critical votes even when government nominees are a minority."

An examination of minutes from council meetings revealed that 40 per cent of policy ideas between 2020 and 2024 came from government officials. The 2020 Public University Bill draft proposed increasing the number of government appointees to 50 per cent, further eroding autonomy. A government representative defended this influence by saying, "Our role ensures universities align with national development goals."

4.1.4 Council Interference in Management

Councils typically concentrate on oversight and policy, but their choices have an indirect impact on day-to-day operations. Operational priorities are shaped, for instance, by council regulations regarding budget approvals and personnel promotions. "Council policies on promotions influence staff morale and academic priorities," a faculty member clarified.

However, as one senior member who is not academic pointed out, "Councils advise strategically, leaving day-to-day management to us," there is very little direct influence in day-to-day operations. Minutes of council meetings revealed that 90 per cent of council decisions were on strategic issues rather than operational ones, a distinction that held true across universities.

4.1.5 Stakeholder Perspectives

Depending on the stakeholder group, opinions varied. Senior council members, including government representatives, felt that external influence was crucial to accountability; one of them stated, "Government oversight ensures fiscal responsibility." "We have a voice," asserted student delegates, "but government influence overshadows it." Students and non-academic staff felt constrained as junior members.

Faculty members underlined difficulties in academic programme approval, pointing out that government goals often marginalised creative curriculum. Non-academic staff emphasised the need for councils to prioritise personnel welfare to increase institutional efficiency. These divergent viewpoints draw attention to the complex interrelationship between autonomy and external authority.

4.1.6 Financial Independence and Autonomy

A clear correlation between financial independence and perceived autonomy was discovered. More strategic planning flexibility was seen at higher education institutions with less government support (such as KNUST, which receives 25 per cent from business and alumni). However, stricter regulations applied to universities that relied on government funding.



One convocation delegate put up the idea that "financial independence allows us to innovate without government pressure." Document analysis supported this conclusion, showing that universities with diversified funding implemented 30 per cent more independent policies (e.g., new academic programmes) than universities with 100 per cent government funding.

4.1.7 Tensions in Council Dynamics

When talking about government-funded projects or policy compliance, council sessions were frequently heated. The environment is "navigating a delicate balance between compliance and asserting our vision," according to a non-academic staff member. One student said, "Absolute autonomy could lead to unaffordable fees, limiting access to education," in reference to possible fee increases under more autonomy. Council minutes, where fee regulation was a frequent topic of discussion, reflected this anxiety. "Our involvement ensures public funds are used effectively," government representatives said, highlighting accountability.

4.2 Discussion

A strong framework for analysing the results is offered by the Principal-Agent Theory, which demonstrates how government interference limits university council autonomy in Ghana. The theory specifically emphasises the conflicting interests that drive agency between the government (principal) and university councils (agents). The principal has authority over the agent's strategic priorities, as demonstrated by regulatory restrictions like the Ghana Tertiary Education Commission's (GTEC) enrolment requirements. For example, GTEC's 2023 rules restricted councils' freedom to customise academic offerings to institutional strengths, including research-focused or speciality programmes, by requiring institutions to align their programmes with national development goals. In line with Jensen and Meckling's (1976) claim that principals impose practices to align agents with their interests, this control limits councils' agency by compelling them to prioritise state agendas over institutional innovation.

In a similar vein, appointment influence poses a serious agency issue. Council choices frequently mirror state interests because 36 per cent of council members are government appointments, including the president's chairperson. From 2020 to 2024, government appointees spearheaded 40 per cent of policy ideas, according to document analysis, highlighting their disproportionate impact. "The chairperson sways votes towards government priorities," as noted by a non-academic staff member, demonstrates how the principal's authority over appointments misaligns the agent's incentives and compromises council autonomy. The situation would have been made worse by the proposed 2020 Public University Bill, which sought to boost the number of government appointees to 50 per cent and solidify principal dominance. According to Sopta et al. (2017), the Principal-Agent Theory presents this as a governance dilemma in which the agent's autonomy is subordinated to the principal's appointment authority, hence restricting strategic decision-making.

Financial control reinforces this trend even further since the government enforces compliance through its funding hegemony, which accounts for 70 to 80 per cent of university budgets. A student spokesperson claims that in order to meet official objectives, universities that rely on government funding are under pressure to give priority to STEM programmes or infrastructure projects: "Funding comes with government expectations." Conversely, universities like KNUST, which rely on alumni and industry partnerships for 25 per cent of their non-government income, reported having more autonomy and implementing 30 per cent more autonomous policies. The Principal-Agent Theory explains this as a power imbalance: the principal's enhanced capacity to dictate terms, due to financial reliance, limits the council's ability to innovate independently. In line with the findings of Kudal and Dawar (2020), independent boards enhance strategic decision-making by reducing external control. Therefore, public universities must progressively wean themselves off of government financial support for their governing councils to become increasingly autonomous.

These results stand in stark contrast to governance arrangements in industrialised countries such as the Netherlands, where universities enjoy considerable autonomy and government functions are largely consultative (Westerheijden, 2018). Councils in the Netherlands are able to prioritise academic innovation and global competitiveness, as they operate with minimal direct involvement. However, Ghana's state-centered approach reflects those in other African countries, such as Nigeria, where government positions and financial reliance restrict individual freedom (Arikewuyo & Ilusanya, 2010). In order to reduce agency conflicts, this comparison emphasises Ghana's need to implement a hybrid governance model, as proposed by Lavanya (2024), which combines market-oriented autonomy with state control.

This study is further enhanced by the divergent viewpoints of the stakeholders. In line with the principal's desire for effective resource use, senior council members, including government representatives, see oversight as a "political reality" required for accountability. This viewpoint is reflected in the statement made by a government official, "Our involvement ensures public funds are used effectively." Junior members, such as students and non-academic personnel, on the other hand, feel limited; one student observed, "Our voice is overshadowed by government



nominees." An agency conflict is highlighted by this tension: junior members want more agent autonomy, while senior members accept principal control. Councils might solve this by creating stakeholder advisory panels to give junior perspectives more weight and guarantee inclusive decision-making without sacrificing power.

The hybrid governance model of South Africa provides an acceptable remedy. South African universities attain increased autonomy while upholding responsibility by striking a balance between governmental supervision and varied funding sources (such as corporate collaborations and endowments) (Mzenzi, 2022). Ghana might follow suit by encouraging alumni-driven endowments or public-private partnerships, which would lessen the need for government subsidies. Another example is the multi-level funding structure in China, where industries and local governments pay into university budgets (David et al., 2018). As demonstrated by KNUST's capacity to enact independent policies, such diversification would erode the principal's financial authority and allow councils to give institutional aims top priority.

Given Nigeria's experience with higher fees, student fears about fee spikes under more autonomy are legitimate and call for safeguards (Arikewuyo & Ilusanya, 2010). The University of Cape Town in South Africa offers a replicable approach by capping fee increases and providing needs-based help (Mzenzi, 2022). Ghanaian institutions could pursue autonomy while ensuring fair access by implementing controlled pricing structures and growing their scholarship programmes. The University Teachers Association of Ghana rejected the delayed 2020 Public University Bill, which emphasises how urgent these reforms are. This study offers a solid basis for promoting policy reforms, such as cutting government appointees to 20 per cent or creating independent funding boards, by measuring government influence (e.g., 36 per cent of decisions affected by GTEC, 60 per cent of decisions affected by GTEC).

By emphasising how external political and financial pressures intensify agency conflicts in university governance, the findings expand on the Principal-Agent Theory. Ghana's state-centered approach limits council autonomy and reinforces principal domination, in contrast to corporate contexts where governance measures reduce principal-agent conflicts (Sopta et al., 2017). This implies that the theory needs to be modified to take into consideration outside influences in non-corporate settings, such as higher education. These tensions might be lessened by a hybrid governance approach that combines market-oriented autonomy with governmental monitoring, promoting financial independence and open appointment procedures. By increasing council autonomy, these changes will allow Ghanaian higher education institutions to compete internationally, innovate, and strike a balance between accountability and fair access.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study emphasises how government involvement weakens university council independence in Ghana through appointment powers, financial control, and regulatory restrictions. These issues are made worse by the 2020 Public University Bill, which is presently being reviewed and would increase state power. This study adds to international conversations on higher education governance by drawing attention to Ghana's distinct legislative setting and promoting changes that will increase council autonomy while preserving accountability. Fostering academic innovation and institutional competitiveness requires decentralising finance and restricting government functions to oversight.

5.2 Recommendations

The paper recommends legislative changes to improve council autonomy in light of the aforementioned findings. One such change is the creation of independent Funding Boards to oversee a variety of sources of fund and lessen dependency on government subsidies. Once more, it is important to support public-private partnerships, which encourage industrial partnerships to finance infrastructure and research, as is the case in China. Public universities must also create clear standards for council appointments in order to reduce political influence and guarantee diverse representation.

Furthermore, it is important to support fee regulation mechanisms that meet students' concerns about access under increased autonomy, such as capping tuition increases and increasing scholarships. Lastly, by showing how outside political and economic forces influence university governance dynamics, the results broaden the scope of the Principal-Agent Theory. The theory should take into consideration the government as a dominant principal, whose power can supersede agent autonomy and call for adaptive governance models that strike a balance between independence and control.

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Factors accounting for senior high school students' learning of English language in the Techiman metropolis, Ghana

Roland Adatuu¹

¹rolandadatuu125@yahoo.co.uk

¹Simon Diedong Dombo University, Ghana

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ABSTRACT

The research examined the factors accounting for senior high school students' learning of the English language in the Techiman Metropolis. Theoretically, the study was guided by the theory of behaviorism, while methodologically, it employed a cross-sectional design. Purposive and simple random sampling techniques were used to select respondents, while a questionnaire and key informant interview guide were used to collect the empirical data from the sampled population consisting of 20 students from each of the three schools, making a total of 60 students. Ten teachers of English language and heads of departments were selected from each of the three senior high schools in the Techiman Metropolis, for a total of 30. In all, 90 respondents took part in the study. The quantitative data was coded, counted, grouped into tables, and processed to provide frequency tables and charts, using SPSS version 16.0. The qualitative data depended on descriptions and explanations. The qualitative analysis involved putting the data (the views of the teachers and heads of departments) under thematic areas followed by descriptions and explanations. The research revealed that the factors accounting for SHS students' learning of the English language included motivation, the quality of teachers of the English language, the availability of teaching and learning materials (TLMs), teachers of the English language's continuous professional development, students' engagement in classroom activities, and the timely assessment of students. Despite these, the study discovered that there are no adequate textbooks in the schools, and there is also the notion among the students that the English language is not their mother tongue, which impeded progress toward helping them to learn the language. The conclusion is that there are some students who see the need to learn the language; hence, they need to be given attention to excel. The implication is that the government will need to provide adequate/more textbooks to senior high schools in the metropolis. Also, sensitization among parents and students about the importance of learning the English language in a technologized 21st century will craft ways for progress in learning the language.

Keywords: Education, English Language, Motivation, Students, TLMs

I. INTRODUCTION

In an ever-changing globalized world, English language has become an important language in the communication field and has been the instructional medium in schools globally (Anokye, 2022). Kadau (2022) stated that teaching of English language in Africa commenced with the coming of the colonialists. Tosuncuoğlu (2021) noted that aside being used in international trade, English language is also the medium through which most scientific journals are published. Thus, English is now considered as a global language! Tosuncuoğlu (2021) further explains that to call a language global means it has assumed a level where public authorities in many countries use it. Also, it is given prominence and is used as a medium of instruction where it is not officially originated or has no official status. The author concludes that English is spoken widely throughout the universe and that is why it is given prominence in the instructional architecture in many countries.

In Ghana, Djorbua et al. (2021), Frimpong (2021) and Anokye (2022) observed that despite the fact that Ghana is rich with indigenous languages, none of them play the onerous role of being an official or national language of the country. To this effect, English language has taken the centre stage as the official or national language since the inception of colonialism. English language thus, forms the fulcrum of government business, governance, trade, law and education as a lingua franca (Djorbua et al, 2021).

Anokye (2022) admitted that based on the importance of English language in the Ghanaian fabric, all Senior High Schools in Ghana use the English language with reference to the syllabus as a guide. Therefore, the expectation is that all students will acquire the same level of proficiency in the field to meet the demands of the Senior High School level and subsequent levels.

As Anokye (2022) noted, the SHS level in Ghana represent a decisive stage of life. However, as the author observed, at present, the proficiency of many students at the SHS level in the English language is very questionable and



this may affect their performance at the tertiary level. The author continued that, there are several complaints by teachers about students' poor outcomes in the final examination at the SHS level due to students' inability to acquire skills in the language. Some of such complaints emanate from some of the big associations in Ghana such as associations of teachers of English language. There is a general framing of thought, therefore, among various schools in Ghana that some SHS learners have proficiency challenges with the language (Anokye, 2022).

Similarly, Anokye (2022), Gyan (2022) and Kpornu (2019) also lamented that observing the results of some SHS students in the country rather portray an abysmal performance in the final examination. This may be due to certain factors like poor teaching, inadequate TLMs or resources, inattentive nature of parents toward their children, little or no motivation for teachers and students as well as the attitude of learners with regards to learning of the language (Anokye, 2022). Yet, another school of thought is that perhaps the challenge is due to large class sizes, overuse of mother tongue as well as the poor background of teachers of English language (Kadau, 2022).

A plethora of the literature (Anokye, 2022; Gyan, 2022; Frimpong, 2021; Kpornu, 2019) in Ghana suggests that there is only a paucity of data on the factors accounting for students' learning of English language in the country. The contentions are that little is known about what accounts for learning English language in the SHS and how these factors motivate students to perform creditably in their final examination. Thus, there is the need to investigate the ins-and-outs of the factors that inspire students to learn and their performance thereof in the subject in SHS. The begging need is therefore, to examine the factors accounting for the learning of English language in SHS in Ghana.

1.1 Research Objectives

- i. To examine the perceptions of students toward the learning of English language.
- ii. To investigate the factors accounting for the learning of English language in the Techiman Metropolis.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Self-Determination Theory

Through a psychological research, Deci and Ryan (1985) are by far the proponents of the self-determination theory of motivation on language learning. They contend that by nature, people have the personal interest and drive to learn and know things by themselves. The authors called this the "intrinsic motivation," The reward for this is the enjoyment and pleasure that comes with the learning process. The intrinsic motivation fulfils three main psychological needs. These are competence, relatedness as well as autonomy. Through the enjoyment of these psychological needs, people are able to engage in the learning of the English language through their own learning activities (Chanjavanakul, 2012; Doley, 2024).

Chanjavanakul (2012:4) and Doley (2024) noted further that conversely, another form of motivation is known as "extrinsic motivation." These are "external regulation, introjected regulation, identified regulation and integrated regulation." The external regulation is a situation where a learner has to learn English language because he or she is being controlled by an external force such as being punished for poor performance. The introjected regulation means learner takes up the mantle of learning the language otherwise he or she will feel guilty of not learning it. Here, there is no external force or control. The identified regulation occurs when the learner feels that learning the language is important and has good value for him or her while the integrated regulation is a combination of the above regulations (Chanjavanakul, 2012; Doley, 2024).

This theory is relevant in studying the factors that account for the learning of English language in SHS because as the authors suggested, the theory allows teachers to apply both the intrinsic and extrinsic motivations that are relevant in teaching learners. In this way, the learner is able to understand concepts easily.

2.2 Empirical Review

2.2.1 Learning of English Language in Ghana

The literature in the field of SHS students' learning of English language has waxed and waned for the past decades globally. From Ghana to Nigeria, Tanzania to Malawi, there are a bourgeoned literature on learning English language. In Ghana, Anokye (2022) and Kpornu (2019) examined the issue very closely and made some cogent contributions to the debates surrounding pre-tertiary students' learning of English language. The two authors interrogated the issues of the quality of teachers and teaching procedures, the available TLMs or resources for teaching, the school climate or environment as well as the socioeconomic background of learners as the benchmarks for students' performance in English language (Kpornu, 2019; Anokye, 2022).

Despite the changes in the Ghanaian educational system over the years, Frimpong (2021) argued that learners are deemed to meet the demands of the SHS standard in order to qualify to proceed to the tertiary level. However, as noticed by Kpornu (2019) and Anokye (2022), majority of these students are incapable of meeting these demands. The



proposition therefore, in Ghana is that every student needs an English requirement in order to be successful academically and to go beyond the threshold of academics. This accounts for using English as a means of instructing schools in Ghana (Frimpong, 2021; Anokye, 2022).

In the current Ghanaian educational architecture, in the initial three years, that is, from Basic One to Basic Three, pupils are instructed using the local dialect of the school community, and the English language is only taught as a subject. Basic Four onwards is instructed purely using the English language (Kpornu, 2019; Anokye, 2022; Ghyan, 2022; Bnasah & Lamudi, 2025).

Summarily therefore, there is a nexus between teaching and learning. The purpose of teaching is to set the environment conducive and then facilitating, guiding and encouraging the students to learn. The teacher being the facilitator must have a good understanding of what is supposed to be learned and must employ the appropriate methods, techniques and teaching styles to deliver a very good lesson. This is because, every successful teaching is dependent on the learning that takes place in the Ghanaian classroom (Kadau, 2022).

In the Ghanaian classroom as observed above, there are two active participants. These are the teachers and the learners. Thus, the learning of English language does not rest entirely on the teacher. It takes two to tango, so goes the adage! The student in the Ghanaian classroom must assume a certain level of responsibility in learning. It is through the interactions of both teachers and students that learning takes place in the classroom based on certain underlying principles. The argument is that "...when I hear, I forget, when I see, I remember and when I do, I learn" (Kpornu, 2019:11).

2.3 Perceptions of SHS Students on the Learning of English Language

As Sahin et al. (2016) agreed, there is a general impression and a profusion of confusion by many students that "English language" belongs to the English people. In Ghana, among many Akans and Asantes, there is a saying that "brofo enye me krom kasa" meaning literally that "English language is not my mother tongue." This perception can influence some SHS students to disregard English as an important language.

Kpornu (2019:14) corroborates the above example in Ghana in the following lines "There are some students who also simply parade with the excuse that the English language is not their mother tongue and hence, do not see the need to take it serious." She continued that there are also some students who cogitate that they are knowledgeable in English because they are able to communicate and are understood among their peers. However, this does not stand to suggest that being understood means what is said is right.

2.4 Factors accounting for SHS students' Learning of English Language

2.4.1 Motivation

Dwinalida and Siateji (2022) identified motivation as the first factor that accounts for the learning of English language by SHS students. This is because motivation has a magic wand when it comes to language learning especially English language. They advanced that there is a correlation between an individual's desire for achievement and motivation. That is to say that motivation influences achievement in learning a foreign language.

Dwinalida and Siateji (2022) went further to say that motivation is the orientation that is given to students in the course of learning a language such as English. Motivation combines the student's efforts, the attitudes and the burning desire of the student to achieve success in learning the language. Thus, motivation must be a component of the process of achieving a goal which is to learn a language. As Dwinalida and Siateji (2022) and Bnasah and Lamudi (2025) keenly noted, there is hardly any success without motivation.

Just as above, Frimpong (2021) and Kpornu (2019) earlier found in the Ghanaian situation that motivation is a predicting factor for high results in learning English. They realized that motivation serves as a catalyst to influence attitudes. And the attitudes of students in the direction of their learning could best serve a predicting factor for good outcomes in grasping the subject. Attitudes here, refer to those beliefs that a student holds with regards to the whole target and his or her own culture. They concluded that attitudes correlate positively with high performance because they enable the learner to be motivated to learn the language.

2.4.2 Quality Teachers of English Language

Bheemappa (2017) stated that a quality teacher of English language should be one that is able to teach the five areas of the language well. These five areas are reading, writing, viewing, listening, and speaking. He or she should be able to master the content, methods and techniques. Teachers should know how to employ variety in teaching as well as flexibility in trying varied ways of applying the techniques of teaching (Bheemappa, 2017; Gyan, 2022).

Similar to the above, Al-Issa (2017) also noted that a definition of a quality teacher of English language should be that the teacher has a firm grasp of the content of teaching, a formidable knowledge and discipline in the pedagogy. That is to say that he or she should be able to design and implement a good instruction. Further to that he or she should

have the capacity to organize the right teaching and learning resources duly needed for a lesson and use them appropriately (Al-Issa, 2017).

Bnasah and Lumadi (2025) also established in the Ghanaian context that there is a nexus between the quality of teachers of English language and students learning outcomes. They noted that research shows that learning outcomes in English language depends upon the quality of teachers that teach the subject. It is therefore, hoped that if there are quality teachers who are able to assemble their content, the learning objectives and the use of appropriate teaching methods alongside the availability of TLMs, there will be good outcomes in the subject (Gyan, 2022).

2.4.3 Availability of TLMs

Frimpong (2021) studied the Ghanaian situation and defined teaching materials as things that afford learners the chance to have practical experience on what they learn in the classroom which increases their understanding and knowledge. These definitions are the bedrock of this study. This is because, teaching and learning materials or resources make a lesson appear very pleasant among the students.

Lessons are presented in a real manner for easy comprehension by the students. TLMs allow for engagement in self-activity and in the end, they learn by doing it themselves. TLMs are therefore, empowering tools for students to take up the mantle of learning by themselves through self-activity (Frimpong, 2021).

2.4.4 Engagement in School Work

Anani and Nyamekye (2024) noted with deep concern that in Ghana, another factor which accounts for SHS students' learning of English language is engagement. Engagement is the intrinsic interest and level of participation of students in their school work. It is said that students tend to learn more and more when the teacher employs a three-dimensional and high-quality pedagogy like "active teaching strategies", "making connections", extensions and allowing "student-to-student interactions". Active teaching refers to the process of pairing students or putting them in small groups so they can write, discuss and manipulate the teaching and learning resources by themselves.

"Making connections and extensions" means the level at which learners are able to take part in activities and are able to relate these with the real-world issues around them. Student-to-student interactions refers to the level at which learners are able to relate to each other during group activities meant to promote their learning (Amua-Sekyi & Ntim, 2015).

2.4.5 Assessment

Undoubtedly, Bnasah and Lumadi (2025) and Kpornu (2019) have argued that perhaps in Ghana, one best factor accounting for SHS learners' learning of English is their assessment for learning. Assessment, as stated by the authors, is part of teaching and learning and perhaps, one most single and effective factor that accounts for the learning of English by students.

Bnasah and Lumadi (2025) further realized that giving feedback to students on the work that they do enables them to adjust to meet the requirements of the subject they are learning. Kpornu (2019) also mentioned that feedback ignites the interest of the students to learn and correct the mistakes that they have made. It inspires them to take immediate action on what is needed to be done immediately (see Gyan, 2022).

2.4.6 Teachers' professional development

UCLES (2021:2) defined teachers' continuous professional development to mean "continuous process of reflection, learning and action to further a teacher's knowledge and skills, leading to enhanced teaching practices that positively impact on students' learning." The intention is to help the teacher with a continuous means of learning so that the teacher continuous to have relevant knowledge using the appropriate teaching methods, techniques as well as the right TLMs in the delivery of lessons.

This factor also accounts for SHS students' learning of English language. Teachers' professional development impacts positively on students' learning of a language (Amua-Sekyi & Ntim, 2015) in Ghana. The researchers intimated that in recent times, a body of scholarly works by academics suggest that there is a nexus between teachers' professional development and the learning outcomes of students. Amua-Sekyi and Ntim (2015:3) made the argument that programmes should aim at adding teachers' "knowledge of the subject, the curriculum, or how students learn the subject" positively helps students to learn a language faster.

III. METHODOLOGY

The study was carried out in the Techiman Metropolis to which Techiman is the capital. The metropolis is one of the 11 Municipal and District Assemblies in the area. There are six (6) public Senior High Schools out of which three (3) were selected for the study (Republic of Ghana, 2024). The schools selected were Techiman SHS, Mount Carmel



Girls’ SHS and Abrafi SHS. The research participants comprised of students, HODs and teachers of English language. These schools were chosen for a number of reasons: geographical proximity and limited resources (human, finance and transportation).

A cross-sectional design was adopted and used. It is a flexible tool which allows for the collection of both quantitative and qualitative information (Douglas et al, 2019). Manheim and Rich (1991) stated that cross-sectional surveys give you “a snap shot of a moving target.” Bhattacharjee (2012:48) has observed that “Field surveys capture snapshots of practices, beliefs, or situations from a random sample of subjects in field settings...The strengths of field surveys are their external validity (since data is collected in field settings), their ability to capture and control for a large number of variables, and their ability to study a problem from multiple perspectives or using multiple theories.”

First, a purposive sampling technique was used to Senior High Schools and teachers and HODs of English language. Second, a simple random sampling technique which is in line with cross-sectional designs was used to select ten (10) teachers and heads of departments in each of the three schools. All these were in the English language department. They were randomly selected making a total of 30 teachers for the study regardless of the year and class they teach. This was done first to allow each school to have an equal number of participants and second, to ensure that each teacher and head of department had an equal chance of being part of the study. Again, 20 students from each school were randomly selected from any of the departments who opted to be part of the study. This was also done to make sure that each student in each of the schools was not skewed out of the research. All students from first to third year were randomly chosen. Those who accepted to take part in the research formed part of the respondents. Sixty students were recruited for the study. In all, 90 respondents were drawn to take part in the research. For data collection, questionnaires were administered to the students to solicit information on the issues that fell within the purview of this study while KII interview guide was used to collect information from heads of departments and teachers of English language to complement what was obtained from the students. The Statistical Package for Social Sciences (SPSS) software version 16 was used to generate tables for the data collected from the students. Descriptions and explanations were carried based on the information from the tables generated. The information from the KIIs was analysed thematically using narrations.

IV. FINDINGS & DISCUSSION

4.1 Perceptions of Students toward the Learning of English language in SHS

This section sought to understand the perception of students toward the learning of English language by SHS students in the Techiman Metropolis. When the students were asked whether they did not want to learn the English language because it is not their “mother tongue,” there was unanimity. Table 1 indicates the responses of the respondents. This was done on 5-point liker scale where: Where SD = strongly disagree, FD = fairly disagree, D = disagree, A = agree, SA = strongly agree.

Table 1
Perception of Students about English language learning

S/N	Item	SD	FD	D	A	SA
1.	English is not my mother tongue	60 100%	0 0%	0 0%	0 0%	0 0%
2.	I can read and write so I do not need to learn	0 0%	0 0%	0 0%	0 0%	60 100%
3.	When I communicate, my colleagues understand me so no need to learn.	0 0%	0 0%	60 100%	0 0%	0 0%
4.	English is a difficult subject, there is no need to waste time learning it.	0 0%	0 0%	60 100%	0 0%	0 0%
5.	English teachers do no deliver their lessons well	5 8.3%	5 8.3%	10 17.7%	15 25%	25 25%
6.	I do not need English language in the future for anything	0 0%	0 0%	40 66.7%	0 0%	20 33.3%

From Table 1, all of the students, 60 (100%), strongly agreed that they do not want to learn English language because it is not their mother tongue. The responses of the respondents indicated that English language is a foreign language to them and hence, no need to study it. By implication, students of Techiman SHS, Mount Carmel Girls’ SHS and Abrafi SHS do not see the need to learn English language because they think the language is not their mother tongue. This finding is in tandem with research by Kpornu (2019:14). The author captured this succinctly in the following words: “There are some students who also simply parade with the excuse that the English language is not their mother tongue and hence, do not see the need to take it serious.”



When the respondents were asked whether because when they communicate in the English language, they are understood by their colleagues therefore, there is no need for them to learn the English language, all of them, 60 (100%) disagreed. Equally, all the respondents, 60 (100%) disagreed that English language is a difficult subject that is why they would not want to learn it. None of them strongly agreed, agreed, strongly disagreed or fairly disagreed. This indicated that communicating and being understood did not serve as a factor for which they would not learn the English language. This finding contradicts the studies of other authors. For instance, it contradicts the findings of Kpornu (2019). Kpornu (2019) found out that there are also some students who cogitate that they are knowledgeable in English because they are able to communicate and are understood among their peers. However, this does not stand to say that being understood means what is said is right or appropriate.

From the above, it is clear that on the issue of perception, while some of the literature agrees with these findings, there are some contradictions in the literature against the findings. The findings of Kpornu (2019) for instance, contradicts the finding that students do not want to learn English because when they communicate, they are understood by their colleague students. And hence, there is no need for them to learn English language.

4.2 Factors Accounting for the Learning of English Language in SHS

This section examined the factors that account for the learning of English language in the Techiman Metropolis of the Bono East Region. The students were unanimous that motivation is a factor for their learning of English. The students gave their responses on issues that motivated them for learning English language. Table 2 shows motivation as a factor that accounts for the learning of English language in SHS.

Table 2

Motivation Factors that Account for the Learning of English language in SHS

S/N	Motivating factor	SD	FD	D	A	SA
1.	Orientation of students about the subject.	0 0%	0 0%	0 0%	30 50%	30 50%
2.	Attitude of teachers during lessons.	0 0%	0 0%	0 0%	30 50%	30 50%
3.	Use of appropriate TLMs.	0 0%	0 0%	0 0%	0 0%	60 100%
4.	Professional conduct of the teachers in class.	0 0%	0 0%	0 0%	20 33.3%	40 66.7%
5.	School environment or climate	0 0%	0 0%	10 17.7%	50 83.3%	0 0%

The responses on table 2 indicate that about 30 (50%) agreed and another 30 (50%) strongly agreed that their orientation to the subject motivated them for learning while none of the students mentioned strongly disagreed, fairly disagreed and disagreed. The students were also asked for their responses in terms of the attitude of teachers of English language during lessons.

From table 2, it was realized that about 30 (50%) agreed and 30 (50%) strongly agreed that the attitude of the teacher motivated them from learning the language while none mentioned strongly disagreed, fairly agreed or disagreed. When the students were asked whether a teacher's use of TLMs motivated them to learn English language, all the students, 60 (100%), indicated that they agreed that use of TLMs motivated them greatly from learning the language. None of them mentioned strongly agreed, strongly disagreed, fairly agreed or disagreed. This shows that the availability and use of TLMs motivated students of Techiman SHS, Mount Carmel Girls' SHS and Abrafi SHS in Techiman to learn English. The students also showed that the professional conduct of teachers of English language in the classroom motivated them from learning the language. This was demonstrated by their responses. About 40 (66.7%) of them strongly agreed that teachers' professional conduct in class motivated them to learn. About 20 (33.3%) of them answered that they agreed while none of them stated that the strongly disagreed, fairly disagreed or disagreed. When it comes to the school environment, the students who agreed that the school environment motivated them from learning the English language were 50 (83.3%), those who disagreed were 10 (17.7%). None of the students strongly agreed, strongly disagreed or fairly disagreed. This shows clearly that the school environment is a motivational factor for the learning of English language. This is because, majority of them, 83.3% agreed that it influenced their learning.

The findings show that motivation is one of the factors that account for students' learning of English language in the Techiman Metropolis. Bnasah and Lamudi (2025) and Gyan (2022) also found motivation as a strong factor that accounted for the learning of English language. Motivation combines the student's efforts, their attitudes and the burning desire to achieve success in learning the language. Thus, motivation must be a component of the process of achieving a goal which is to learn a language. Thus, there is hardly any success without motivation!



Another factor that accounted for the learning of English language in SHS is the quality of teachers of English language. Table 3 displays the quality of teachers of English language as a factor that accounts for the learning of English language in the Senior High School.

Table 3

Quality of Teachers of English Language as a Factor that Accounts for the Learning of English Language in Senior High Schools

S/N	Attributes of a good teacher	SD	FD	D	A	SA
1.	Teacher is trained /professional	0 0%	0 0%	0 0%	50 83.3%	10 17.7%
2.	Able to set the tone for type of activities	0 0%	0 0%	0 0%	50 83.3%	10 17.7%
3.	Knows appropriate use of TLMs	0 0%	0 0%	10 17.7%	50 83.3%	0 0%
4.	Knowledgeable in the subject area	0 0%	0 0%	20 33.3%	25 41.7%	15 25%
5.	Communicates clearly	0 0%	0 0%	0 0%	50 83.3%	10 17.7%
6.	Able to give attention to every student	0 0%	0 0%	0 0%	50 83.3%	10 17.7%

From table 3, 50 (83.3%) of the students agreed that a trained or professional teacher increases their desire to learn the language, 10 (17.7%) of them strongly agreed while none of them mentioned strongly disagreed, fairly disagreed or disagreed. By implication, it means that quality or professional teachers motivated students to learn English in SHS in the Techiman Metropolis. Further to the above, 50 students representing 83.3% stated that they agreed that teachers of English language who are able to set the tone for the type of activities required for a lesson inspire them to learn the language. About 10 (17.7%) strongly agreed while none of them mentioned strongly disagreed, fairly agreed or disagreed. Ultimately, the responses show that teachers' ability to set the tone for the type of activities required for a lesson gives them the urge to learn the English language.

Table 3 shows that about 50 (83.3%) of them agreed that this pushes them to learn the language while 10 (17.7%) disagreed that knowledge in the use of TLMs is a factor that inspired them to learn the language. None of the students mentioned strongly agreed, strongly disagreed, fairly agreed or disagreed. This is an indicator that a teacher's knowledge in the appropriate or application of TLMs actually pushes them to learn the language as majority of them, 83.3% attested to the fact that it is a factor that increases their desire to learn the language. A teacher's ability to communicate clearly on what is supposed to be done in the classroom increases the desire of SHS students to learn English in the Metropolis. This is because an overwhelming majority, 50 (83.3%) of them agreed that it does, 10 (17.7%) strongly agreed while none of them mentioned strongly disagreed, fairly disagreed or disagreed. This demonstrated that teachers' ability to communicate clearly to students in class on what to do or what not to do urges them to learn the language.

Similar to the above, about 50 (83.3%) of the students agreed that a teachers' capacity to attend to each student in the class motivates them to learn the language. About 10 (17.7%) strongly agreed while none of them strongly disagreed, fairly disagreed or disagreed. This makes it clear that a teacher's ability to give attention to each student in the class influences students in Senior High Schools in the Techiman to learn English language.

Equally, another factor according to the findings is the quality of teachers of English language. Gyan (2022) and Bheemappa (2017) found a nexus between quality teachers of English language and students' desire to learn the language. Kadau (2022), also found quality of teachers of English language as a factor accounting for effective SHS students' learning of English in Ghana. Kadau (2022) stated that the teacher of English language is the one who determines the type of activities that will be carried out. Since teaching is communicating, the teacher must be apprised with the language and show competence during the delivery of the lesson while Amua-Sekyi and Ntim (2015), said that good outcomes among students in English language depends much on the quality of teachers that teach the subject.

The respondents gave their views on the availability of textbooks and whether these influenced their interest in learning English language. Table 4 presents the availability of TLMs as a factor that accounts for the learning of English language in the SHS.

**Table 4**

The Availability of TLMs as a Factor that Accounts for the Learning of English Language in the SHS

S/N	Availability of TLMs	SD	FD	D	A	SA
1.	Textbooks are available for every student	0 0%	0 0%	30 50%	30 50%	0 0%
2.	There are revision books for all students	0 0%	0 0%	20 33.3%	40 66.7%	0 0%
3.	There a good and many reading books	60 100%	0 0%	0 0%	0 0%	0 0%
4.	There are many reading set of books for the school	0 0%	0 0%	0 0%	60 100%	0 0%
5.	We are able to bring our own TLMS to complement	60 100%	0 0%	0 0%	0 0%	0 0%
6.	We are able to make good use of the available books all the time	30 50%	0 0%	10 17.7	20 33.3%	0 0%

Their responses on table 4 indicates that about 30 (50%) disagreed that textbooks influenced their interest while another 30 (50%) agreed that textbooks available to them urged them to learn the language. None of the students mentioned strongly disagreed, fairly disagreed or strongly agreed. This indicates that to some students, textbooks are not the primary concern. The possibility is that these students depend much on their teachers while those who agreed complement what they obtained from their teachers with the textbooks they have. When asked whether the availability of revision books urged their interest in learning English, 20 (33.3%) of the respondents disagreed while 40 (66.7%) of them agreed that the availability of revision books inspired them to learn the language. None of the students strongly disagreed, fairly disagreed or strongly agreed. By an overwhelming majority of 66.7%, it shows that the availability of textbooks for revision had an influence on Senior High School students in the Techiman Metropolis to like to learn English language. All the students strongly disagreed that there are good reading books for them in their schools. That is to say that all the 60 (100%) respondents do not support the issue of having good reading books in their schools. This indicates that none of them strongly agreed, fairly disagreed or agreed. By implication, the responses indicate that there are no good reading books in the SHS in the Techiman Metropolis where the research was conducted. It was unanimous by all, 60 (100%) who strongly agreed that they are allowed to bring their own teaching and learning materials or resources to school for learning. That is to say that all the students strongly agreed that they are allowed to bring their own teaching and learning materials to the classroom. None of them strongly disagreed, agreed, fairly disagreed or disagreed. It is therefore, obvious that students of Senior High Schools in Techiman are allowed to bring their own TLMs to class for learning activities to complement what is provided by the Government of Ghana.

Frimpong (2021) identified the availability of TLMs as a motivator for the learning of English language just as above. The author found as observed in this research that another factor that precipitates the SHS students' learning of English language is the availability of TLMs. She also noted that this is also applicable to any subject. This is because, teaching and learning materials or resources make a lesson appear very pleasant among the students. Lessons are presented in a real manner for easy comprehension by the students. TLMs allow for self-activity and in the end, they learn by doing it themselves. TLMS are therefore, empowering tools for students to take up the mantle of learning by themselves through self-activity.

The students were able to give their views about whether they are engaged in classroom activities in the school for the first six weeks. Table 5 shows the engagement of students in classroom activities for the first six weeks in school.

Table 5

Engagement of Students in Classroom Activities for the First Six Weeks in School

S/N	English lesson	SD	FD	D	A	SA
1.	Week 1	0 0%	0 0%	0 0%	0 0%	60 100%
2.	Week 2	0 0%	0 0%	0 0%	0 0%	60 100%
3.	Week 3	0 0%	0 0%	0 0%	0 0%	60 100%
4.	Week 4	0 0%	0 0%	0 0%	0 0%	60 100%
5.	Week 5	0 0%	0 0%	0 0%	0 0%	0 0%
6.	Week 6	0 0%	0 0%	10 17.7%	0 0%	50 83.3%



For the first five weeks according to table 5 all the respondents, 60 (100%) strongly agreed that they were engaged in school activities or work. None of them mentioned agreed, strongly disagreed, fairly disagreed or disagreed. However, for the sixth week, while 50 (83.3%) strongly agreed that they were involved or engaged in classroom work, 10 (17.7%) disagreed that they engaged in classroom work. This shows that the students are engaged in classroom work because, majority of them, 83.3% stated that they are engaged.

Similar to the findings of this study, Amua-Sekyi and Ntim (2015) and Bnasah and Lamudi (2025) found in the case of Ghana that students' engagement in school work leads them to learn English language. The authors demonstrated that another factor which accounts for SHS students' learning of English language is engagement. Engagement heretofore, refers to the intrinsic interest and level of participation of students in their school work. It is said that students tend to learn more and more when the teacher employs a three-dimensional and high-quality pedagogy such as "active teaching strategies", "making connections, extensions" and allowing "student-to-student interactions."

The students were asked of their opinions of how often their teachers assessed them in the classroom for the first six weeks of school. Table 6 indicates the assessment of students for the first six weeks.

Table 6

Assessment of Students for the First Six Weeks

S/N	English assessment	SD	FD	D	A	SA
1.	Week 1	0 0%	0 0%	0 0%	0 0%	60 100%
2.	Week 2	0 0%	0 0%	0 0%	0 0%	60 100%
3.	Week 3	0 0%	0 0%	0 0%	0 0%	60 100%
4.	Week 4	0 0%	0 0%	0 0%	0 0%	60 100%
5.	Week 5	0 0%	0 0%	0 0%	0 0%	60 100%
6.	Week 6	0 0%	0 0%	0 0%	0 0%	60 100%

For all the six weeks on table 6, all the respondents, 60 representing 100% strongly agreed that they were assessed. None of the respondents mentioned agreed, strongly disagreed, fairly disagreed or disagreed. This implies that in the participating schools, their teachers assessed them for the first six weeks.

The findings indicated that the regular assessment of students leads them to learn English language. Authors such as Amua-Sekyi and Ntim (2015) and Gyan (2022) also found a connection between students' learning English language and their regular assessment on the subject. They argued that perhaps, one of the best factors accounting for SHS students' learning of English language is their assessment for learning. Assessment, as stated by the authors, is part of the process and perhaps it is the most single and effective factor that accounts for the learning of English by students. Giving students feedback on the work that they do enables them to be able to adjust themselves to meet the requirements of the subject that they are learning.

Finally, the respondents were asked whether their teachers go for professional development weekly, monthly, quarterly, yearly and every three years. On table 7, the professional development of teachers is presented.

Table 7

Professional Development of Teachers

S/N	Teachers' professional development	SD	FD	D	A	SA
1.	Weekly	0 0%	0 0%	0 0%	0 0%	0 0%
2.	Monthly	0 0%	0 0%	0 0%	0 0%	0 0%
3.	Quarterly	0 0%	0 0%	0 0%	0 0%	0 0%
4.	Yearly	0 0%	0 0%	0 0%	0 0%	0 0%
5.	Every 3 years	0 0%	0 0%	0 0%	10 17.7%	0 0%

On table 7, 50 (83.3%) of the respondents declined in providing an answer because they indicated that they did not know. The 10 (17.7%) who responded to this question agreed that every three years, their teachers go for professional



development. This indicated that students are not put into the known when their teachers go for workshops, seminars, etc as an overwhelming majority, 83.3% responded that they did not know.

Despite the fact that majority of the students could not tell whether or not their teachers do go for professional development, the responses of the few, attests to the fact that professional development is a key component that inspire them to learn English language. The findings of authors such as UCLES (2021) proved that teachers' continuous professional development is associated or is a precipitating factor for students' learning a subject such as English language. UCLES (2021) and Bnasah and Lamudi (2025) noted that in recent times, a body of scholarly works by academics suggest that there is a nexus between teachers' professional development and the learning outcomes of students. They went on to submit that there is acceptance that teachers' professional development impacts positively on students' learning of a language.

In the Key Informant interviews with teachers of English language and heads of departments in the three Senior High Schools, they stated some of the factors that accounted for the learning of English language by their students. They noted just as above that:

Teachers' motivation of students to learn, using the appropriate teaching and learning materials for the right lessons, teachers' punctuality to class and appearance, the professional conduct of the teacher in and outside the classroom, engagement of learners in class and school work, assessment and evaluation of learners promptly, and whether the teacher is up-to-date with the curriculum served as motivation for students to learn the English language.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The research makes a conclusion that the factors that really account for SHS students' learning of English language are motivation, quality of teachers of English language, the availability of TLMs, teachers' continuous professional development, students' engagement in classroom activities and the regular assessment of students. The research further concludes that there are no adequate textbooks in the schools studied and there is also the notion among the students that English language is not their mother tongue which impeded progress toward helping them to learn the language. Yet, in the midst of this is the fact that there are some students who see the need to learn the language and hence, the need to be given the necessary attention to excel.

5.2 Recommendations

The implication of the above setbacks is that government will need to provide adequate/more textbooks to Senior High Schools in the Metropolis and other SHS throughout the country for the desirable outcomes to occur in the final examination of the English language subject. Additionally, there is an urgent need for the sensitization of parents and students in the Metropolis and throughout the country about the importance of learning English language in a technologized 21st Century. This is because English language has become the fulcrum for government business, the media, law, politics, education, commerce, among others.

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Barriers to effective community policing: A case study of Kizingitini in Lamu County, Kenya

Martin Mwaka Mwanza RCrim (K)

martinmwaka65@gmail.com

<https://orcid.org/0000-0003-2191-8593>

Egerton University, Kenya

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ABSTRACT

This study focused on the barriers to effective community policing in Kizingitini, Lamu County, Kenya. It was informed by the need to examine and address challenges in community policing, identify implementation constraints, assess public perception to inform future strategies, and ensure successful community involvement and security. Although numerous studies have been conducted on community policing, this study provides a detailed breakdown of barriers facing community policing specific to the Kizingitini area. The study sought to examine four major thematic areas: the image of the police and the trust between the community and the police, barriers to reporting crime, understanding and training in community policing, and extremist influence. The study adopted a case study research design anchored on the broken windows theory. The target population was the residents of Kizingitini area aged 18 years and above. The respondents were police officers, chiefs, community policing committee members, and Kizingitini residents who had been randomly selected from three villages in Kizingitini. The total sample size was seventy-three (73) respondents. Interview schedules and key informant interviews were used to gather data from the respondents. Quantitative data was analysed using the Statistical Package for Social Sciences (SPSS), while qualitative data was analysed by interpreting the responses and aligning them with the four thematic areas. The findings indicated that barriers to community policing in Kizingitini included poor police image and public mistrust, lack of crime reporting, lack of training, poor understanding of community policing, and the influence of terrorist extremists. The study recommends training community policing committee members and police officers in community policing. It also recommends targeted police and community engagement activities, such as meetings and symposiums to discuss community issues and to find common solutions, as well as budgetary allocation from the national government to support community policing activities.

Key words: Barriers to Reporting Crime, Extremist Influence, Community Partnership, Community Policing, Lamu, Police Image

I. INTRODUCTION

The police are no longer the sole custodians of law and order. All members of the community have become an integral part of the policing ecosystem to enhance the security, safety, and quality of neighbourhoods. According to Kappeler et al. (2020), community policing is a collaboration between the police and the community that identifies and solves community problems. They add that this broad outlook on crime prevention and control emphasises on the need to place community members as active participants in the process of community problem-solving. Awoyemi et al. (2025), posit that police officers also play a pivotal role, with an extended demand for organisational changes to facilitate and accommodate this working relationship with the community. Community policing emphasises preventing crime and social ills and enhancing safety and security, with the ultimate goal of improving the quality of life in the community (Awoyemi et al., 2025).

By changing the way the police think and act, community policing was lauded as the first major reform in policing in the last half a century. This policing model broadens the police mandate beyond a narrow focus on fighting crime to include efforts that address the fear of crime, social and physical disorder, and neighbourhood decay (Brown, 2012). The community policing philosophy provides an organisational strategy that challenges police officers to solve community problems in new ways. Police must form partnerships with people in the community, allowing average citizens to have input into the police process in exchange for their support and participation. Community policing rests on the belief that contemporary community problems require a new decentralised and personalised police approach that draws citizens into the process of policing themselves (Kappeler et al., 2020).

Most African nations have domesticated community policing as practised in developed countries like the United States and Britain; however, the strategy differs from nation to nation depending on the country's historical background (Yegon, 2020). Community policing in Kenya was launched as a national programme by President Mwai Kibaki on 27th

April 2005, at the Ruai Police Station. Kibaki averred that existing community policing initiatives had succeeded in reducing crime and directed that lessons learnt and experiences gathered in these pilot programmes “be vigorously and systematically rolled out to other parts of the country” (Government of Kenya, 2005). Since then, community policing initiatives have been introduced in various parts of the country, and some police officers have subsequently been trained in community policing. In 2005, the National Police Service adopted community policing through an initiative aimed at enhancing security for the citizens (National Police Service, 2014). It was meant to improve relationships, raise the level of trust among the practitioners, promote accountability, and appeal for partnerships and collaboration between the police and the community in the management of the local security (Henry & Mackenzie, 2009).

To create a society free from crime, the police and the public must work together. In the past, the relationship between the two has been strained and distant, making it difficult for them to support each other. Kizingitini is no exception to this poor relationship. Scholars have written extensively on community policing. The most perplexing topic is: What obstacles do community policing efforts in Kizingitini face in detecting and preventing crime? Thus, this study is necessary to address this gap.

1.1 Statement of the Problem

Community policing has substantially impacted policing in different parts of the world. Kenya has had both success stories and failures. The challenges that have plagued the implementation of community policing have been constant. Kizingitini is located on Patte Island in Lamu East Constituency, Lamu County, in the coastal region of Kenya. As one of the administrative areas in the constituency, community policing here faces several obstacles. According to Kibunja (2013), there is a negative perception of the police, which emanates from issues of arbitrary arrests, alleged police brutality, and allegations of disrespect for religious beliefs. Most community policing committee members are elderly people with no formal education and limited capacity to understand their roles and responsibilities. They are also not trained on what is expected of them, thereby hampering their effectiveness (Oenga, 2015). They face accusations of being betrayers by the community and are then isolated or even loathed by the residents. Residents dislike them and rarely report incidents to them or the police. Kiprono (2007) avers that the poor public image of the police and perceived poor customer service procedures also discourage the community from reporting crimes, creating opportunities for criminal activity to flourish. Those suspects who are reported to the police are known to threaten reporters with severe consequences. According to Nyaga et al. (2017) Lamu County has suffered several terror attacks, mainly from the Al-Shabaab terrorist group in Somalia. This group is known to have terror cells used to recruit gullible, idle and unemployed youths from areas of Kizingitini, Bwajumwali, Tchundwa and Siyu (Nyaga et al., 2017). This is exacerbated by grievances of unemployment and marginalisation, which also fuel violent extremism and radicalisation, creating fear in those people seen to be working with the police. The Al-Shabaab terror group is known to exploit these grievances to gain support. Police officers and other government security-related organs struggle to gain the trust of the local population, which hinders their ability to gather intelligence and implement effective policing and counter-terrorism measures. Together, these barriers significantly hinder community cooperation, making it difficult for residents to report crimes or work with the police. In Kenya, most studies on community policing have focused on its role in the prevention and/or reduction of crime, e.g. Muchira (2016) and Wanjohi (2014). While studying the challenges facing the implementation of community policing in Kibera, Kiprono (2007) focused on police resources, police culture, lack of legislative and administrative reforms, and confidentiality as major bottlenecks in the implementation of community policing. This study, therefore, expands the view on barriers to community policing within the broader context of marginalisation, poor understanding of community policing, and extremism, while considering the unique location of the area of study and how, together with other adjoining factors, hinders the effective implementation of community policing in Kizingitini, Lamu County.

1.2 Research Objectives

- i. Examine the challenges in community policing in Kizingitini, Lamu County.
- ii. Identify community policing implementation constraints in Kizingitini, Lamu County.
- iii. Assess public perception on community policing in Kizingitini, Lamu County, to promote effective community engagement and security.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Broken Windows Theory

This study is grounded in the broken windows theory, which emphasises the importance of addressing signs of social disorder to deter more serious criminal activity. Introduced by Wilson and Kelling in 1982, this theory posits that

observable signs of disorder and neglect—such as broken windows, graffiti, and antisocial behaviour—can foster an environment that is conducive to increased crime and social disorder. In policing, this theory proposes the aggressive targeting of minor offenses as a strategy to mitigate the prevalence of major crimes. The theory suggests that concentrating police efforts in high-crime areas and arresting individuals for low-level infractions can maintain social order and address minor issues to prevent the escalation of criminal behaviour. This theory has been instrumental in shaping law enforcement strategies and policies, particularly within the framework of community policing, since it translates to police and community working together to clean up neighbourhoods, share information on hotspot areas, and address minor issues before they escalate (Muniz, 2012).

According to Jose and Josukutty (2018), this theory can be integrated into the framework of community policing as a strategy to target minor offences that lead to the deterioration of neighbourhoods. They add that by employing proactive measures to deal with visible signs of disorder in partnership with the community, police can uphold social order and cultivate an environment where criminal activities are less likely to flourish. Community policing provides an effective platform for implementing the principles of the broken windows theory, as it emphasises community engagement, collaborative problem-solving, and a focus on preventive measures (Jose & Josukutty, 2018). This aligns seamlessly with the proactive approach to community policing advocated by the broken windows theory, which emphasises the importance of collaboration between the police and residents in managing and preventing disorder. Such partnerships not only strengthen social control but also serve to restore the communal fabric of neighbourhoods.

2.1.2 The Concept of Community Policing

Community policing is often referred to as both a philosophy (a way of thinking) and a strategy (a method of implementing the philosophy) that enables the police and the community to collaborate in addressing problems of crime and disorder (Kappeler et al., 2020). The philosophy component is explained as the promotion of a problem-solving approach to public safety involving partnerships with the community. In contrast, the strategy component refers to the practical involvement of community members in public safety (Olabisi, 2013). The Office of Community-Oriented Policing Services (2012) defines community policing as a philosophy that promotes organisational strategies that support the systemic use of partnerships and problem-solving techniques to proactively address the immediate conditions that give rise to public safety issues, such as crime, social disorder, and fear of crime. Community policing also emphasises preventive proactive policing. It calls for the police to concentrate on solving the problems of crime and disorder in neighbourhoods rather than simply responding to calls for service. This model considerably expands the scope of policing activities because the targets of interest are not only crimes but also sources of physical and social disorder (Kappeler et al., 2020).

Among the many law enforcement agencies, community policing has emerged as the most popular and demanding policing strategy, and it is currently employed in many nations to combat insecurity in society. According to Gill et al. (2014), the number one facilitator of enhanced security is the public, who, through community policing, are encouraged to take requisite measures to prevent themselves from becoming victims of crimes. They further argue that police officers cannot be in all places all the time, thus the need for community members to embrace community policing. At the heart of community policing is the redefinition of the relationship between the police and the community, whereby the two collaborate to identify and address community problems. Through this relationship, the community becomes a “co-producer” of public safety, allowing the problem-solving process to draw on citizen expertise in identifying and understanding social issues that contribute to crime, disorder, and fear within the community (Gill et al., 2014).

According to Kappeler et al., (2020), community policing is a philosophy and not a specific tactic. They posit that community policing is a proactive, decentralised approach designed to reduce crime, disorder, and by extension, fear of crime, by intensely involving the same police officers in the same community on a long-term basis, so that residents will develop trust to cooperate with police by providing information and assistance to achieve those three crucial goals. Community policing employs a variety of tactics, ranging from park and walk to foot patrol, to immerse police officers in the community and encourage two-way information sharing so that members of the community become the officer’s eyes and ears on the streets, helping to set police priorities and policies. Additionally, the police officers then carry this information back to the rest of the officers so that problems can be solved and the quality of life of the community is improved. Improved police and community relations are a welcome by-product of this approach, not its primary goal (Kappeler et al., 2020).

In 2013, largely impelled by the Westgate mall attack, the country-wide ‘Nyumba Kumi’ initiative was launched. Mainly imported from a Tanzanian experiment, the system brings security to the level of the ‘household’ by creating clusters of 10 houses (as the name implies in Kiswahili—‘nyumba’ [house] ‘kumi’ [ten]) that consist of local residents and stakeholders. The idea is that these clusters meet regularly (twice a month), share information, and, when needed, provide this information to the relevant levels of the national administration. For many, it is seen as a form of local

surveillance by the state (Brankamp, 2020; Kioko, 2017). Interestingly, Nyumba Kumi has only been practised in a few places, both in urban and rural settings; however, it largely exists in lower-income neighbourhoods and poor urban settlements that face high-terror-related incidents or threats. Ultimately, Nyumba Kumi never really took off as intended (Andhoga & Mavole, 2017).

In May 2016, three key booklets were launched to provide direction on community policing to police officers: (1) the Community Policing Inspector General's Guidelines to Police Officers; (2) The Handbook on Community Policing Forums and Committees; and (3) the Community Policing Information Booklet (National Police Service, 2016a, 2016b). Once handed out across the country, police officers would possess clear instructions on how to apply community policing as a way of 'Building Safer Communities Together.' Consequently, all community policing activities were brought under one framework, including 'Nyumba Kumi'. The "Nyumba Kumi" structures have since been incorporated into the community policing programme and were structured to operate as committees at the police station level. Essentially, the community policing guidelines highlight the centrality of the police and the state. As the bedrock of democratic policing, community policing is also seen as a vessel to enhance relationships between the police and the community, improve state legitimacy, reduce crime, and, more recently, combat terrorism. However, the success of community policing has been limited due to some hindrances.

2.2 Empirical Review

2.2.1 Challenges in Community Policing

Community policing challenges are broad problems, obstacles or situational difficulties that hinder community policing efforts, such as lack of public trust, social disorganisation, lack of public participation and community beliefs about crime. Mutahi et al. (2024) acknowledged that a lack of trust is a major challenge in community policing, noting that trust involves the confidence of the citizens in individual police officers and the police service as an institution. They posit that public loss of trust and confidence in the police service by the members of the public is a serious concern that hampers community policing. It is even more pronounced in areas characterised by insecurity, violence, and conflict. Trust does not develop easily, and its current status is limited in terms of who is to be trusted, to what extent, and the areas to which it is extended amongst the police. This study, however, did not investigate whether the police have trust in the public, who they are supposed to partner in community policing, as the owners of community concerns that ought to be addressed in partnership.

Diphoorn & van Stapele (2021) identified social disorganisation as a challenge in community policing. They averred that weak community bonds and a lack of informal social control can make it difficult for communities to work together with police. They posit that in socially disorganised communities, residents have weaker social networks since there is no sense of shared obligations. They are therefore less interested in their neighbourhoods, making them unlikely to intervene in situations that may lead to disorder or crime, such as supervising neighbourhood children, sharing information, and reporting crimes. When community members lack strong social ties, their willingness to share information or cooperate with the police tends to diminish. This study, however, fails to talk about homogenous communities such as Kizingitini residents, who are deeply religious and close-knit yet still lukewarm to community policing.

Albrecht (2019) identified a lack of public participation as a challenge in community policing. He posits that communities may have lost trust and be unwilling or unable to get involved in community policing because of a history of poor relationship, corruption, and misconduct by police and other government agencies. Others have a sense of exclusion and a lack of ownership and may view community policing as a sole responsibility of the police. In areas with high poverty levels, social inequality and unemployment are significant barriers to participation in community policing. When community members are concentrated on immediate survival needs, engaging in community policing initiatives may not be a priority. Additionally, marginalised groups may feel that their concerns are undervalued by decision-makers (Oenga, 2015).

In some areas, residents may view crime as a source of income, which creates a challenge to community policing efforts. This has been alluded to by Gill et al. (2014), who affirmed that viewing crime as a source of income, especially in marginalised communities, presents a significant obstacle to successful community policing efforts. This perspective stems from economic and social factors that can make illegal activities seem like a rational choice for survival or financial gain. In other contexts, some communities may not see community policing as a priority, or they may see it as being opposed to their interests. In some poor neighbourhoods, crime can be an integral part of the local economy, and many residents benefit from the proceeds of these illicit activities. Consequently, there may be a tolerance for their continuation and in more tranquil settings, the community may not see crime as a problem and in other circumstances, community policing may simply be one issue along with many others with which the community is concerned (Grabosky, 2009).



2.2.2 Community Policing Implementation Constraints

Community policing constraints are more specific barriers or limitations on action that are often practical or systemic, which prevent the implementation of community policing, such as insufficient funding, lack of understanding of community policing and training, police ineffectiveness and structural and administrative weaknesses. Research by Mammus (2010) established that in Nigeria, the major implementation constraint in community policing was a shortage of manpower, inadequate funding, poor conditions of service of the average policeman, inadequate logistical and material support and infrastructure to cover all the areas of the country. These findings resonate well with the situation in Kenya. In a study by Oenga (2015), it was revealed that historically, community policing was failing because of a lack of funding. The participation of the community and the police in community policing activities is often constrained by limited resources. For a long period, the police have lacked facilities in ensuring the enhancement of community policing. Dilapidated structures, including a lack of facilities in police stations, are the order of the day. Therefore, the public may lack interest in community policing due to the lack of these resources, including cash expenditures on meetings and stationery.

Ambiguity and lack of understanding of community policing were identified by Kiprono (2007) as a constraint in community policing. He argues that community policing means different things in various contexts, not only due to variances in policymaking and the design of the programme, but also due to the larger social, cultural, and political environments in which it is implemented. He argues that the lack of understanding is prevalent in both law enforcement and community policing committee members. The lack of training for both the police officers and the community policing committee members was a key contributor to the lack of comprehension. The study did not mention the need for the citizen to have an understanding of community policing.

Mutahi et al. (2024) posit that police ineffectiveness is a challenge in community policing. They assert that there is a widely held perception of the police as ineffective, which many citizens cite as a primary reason for not reporting suspected criminal activity. The police are accused of slow response to incidents, failing or being slow in making arrests, and responding only if they are given financial incentives (bribes). These perceptions of police ineffectiveness, bribery and corruption and selective enforcement of the law derail communal support and hence affect community policing.

According to Mutahi et al. (2024), structural and administrative weaknesses have also hampered community policing. They point to an institutionalized culture of impunity, politicisation of the police service and usage by the state for repressive purposes, poor deployment of police officers, a rigid police organizational structure, allegations of extrajudicial killings, insincere police reforms that are framed as tactical concessions or gestures to donors on the part of political elites, and logistical inadequacies, including understaffed stations and lack of equipment, all hamper effective community policing. Most of the aforementioned studies have not captured the constraints of community policing in the context of marginalisation, radicalisation and extremism, a gap that is intended to be addressed by this study.

2.2.3 Public Perception on Community Policing

This is the collective view, opinion, or understanding that citizens hold about community policing. It is shaped by various factors like perceived benefits, awareness, and impact. It may be influenced by indirect and direct association with community policing, community policing committee members, the Kenya Police Service and police officers.

The perception of the public on community policing in Kenya is largely negative due to a number of interconnected factors. However, various positive views on community policing also emanate from areas where its implementation has had a positive impact on the security of the community. Mwaura (2014) argues that a poor police image leads to a perception that the police are corrupt, brutal, ineffective, and malicious, which directly undermines community policing efforts. He adds that because of persistent mistrust between the community and the police, more so in the handling of information that is given to them, few people report incidents to them. The effect is that even in community policing, the public perceives that the police do not serve their best interests. However, the study leaves a gap on whether the police have trust in the citizen who are supposed to be their partners in community policing. The study does not show the nexus between community policing and reporting of crime.

In a study by Kiprono (2007), he cited a lack of genuine involvement by the citizens, where they complained of not feeling adequately involved in community policing and that it only served the interests of the police, where the citizens are perceived as a tool for information extraction. Thus, for them, community policing is a way for the police to extract information, while community members who participate are seen as informants and face suspicion. Accusations of bribery, corruption, police misconduct, arbitrary arrests, harassment, and alleged extrajudicial killings also erode public trust and taint community policing efforts (Oenga, 2015).

There is a general misunderstanding of community policing among the public. This is largely exacerbated by a failure of the government to adequately incorporate civic education. The term community policing is popular within the citizenry, but the actual meaning and implementation remain a mystery to most members of the public (Mutahi et al., 2024). Some members of the public have complained about the misuse of power by community policing committee

members, whom they accuse of using their roles for personal gain, leading to extortion and harassment (Diphorn & van Stapele, 2021).

According to Wanjohi (2014), a key motivation for citizens in community policing is the belief that it will lead to improved police effectiveness, reduce crime and ease response to distress calls. Even though some citizens may not fully understand community policing, they associate it with collaboration and information sharing, which promise better response times and improved police effectiveness. In a study conducted in Nakuru county, Mutahi et al. (2024), concluded that even though citizens have little institutional trust, some citizens express trust in individual police officers based on their behaviour and cooperate with them to ensure some aspects of community policing are fulfilled. These positive individual encounters have a major impact on the perception of the public towards community policing. While studying factors affecting the implementation of community policing in Kajiado, Mwaura (2014) expressed that some citizens are willing to work with the police if they perceive it will lead to better security outcomes within their area. He pointed out that the community policing platform can become a valuable communication hub where citizens who fear reporting directly to the police can share information. This is born out of the desire for collaboration and the willingness of citizens to have a stake in the policing of their area.

III. METHODOLOGY

3.1 Research Design

This study used a case study research design to examine the barriers to community policing in Kizingitini, Lamu County. The method was best suited to enable the researcher to gain an in-depth, comprehensive understanding of the issues under study within their real-world context.

3.2. Target Population

The target population was the residents of Kizingitini aged 18 years and above.

3.3 Sampling and Sample Size

The study was carried out amongst Kizingitini residents, police officers, area chiefs and community policing committee members in Kizingitini area in Lamu East constituency. Police officers and chiefs were randomly selected from the nearest police station and administrative areas, respectively. Kizingitini is generally divided into three areas (villages) locally named as: Kwa chini/Nyangwani, Kwa kati/Kengewani, and Kwa juu/Sarigoi. A sample of 10 randomly selected people from each of the three villages was selected, making a total of 30 residents. 30 police officers from Kizingitini police station, Bwajumwali police patrol base, and Tchundwa police post were randomly selected, and 3 chiefs were also randomly selected. 10 community policing committee members were randomly selected, representing the three villages. The total sample size was 73 respondents.

3.4 Data Collection Methods

The study used interviews to collect data from the respondents. Interviews yield rich, qualitative data and enable follow-up while capturing the nuanced personal emotions, attitudes, and experiences of respondents through one-on-one interaction and flexible questioning.

An interview schedule was used to solicit data from the residents aged 18 years and above. The interview schedule contained both open-ended and closed-ended questions. Gender balance was also considered in conducting the interviews. Key informant interviews were conducted with the police officers, area chiefs and community policing committee members. The interviews aimed at obtaining information on four thematic areas, namely: police image and trust between the community and the police, barriers to reporting crime, understanding of community policing and extremist influence.

3.5 Data Analysis

The study produced both quantitative and qualitative data. Quantitative data was organised, cleaned, coded and analysed using the Statistical Package for Social Sciences (SPSS). Qualitative data was analysed by interpreting the responses and aligning them with the four thematic areas. Data was well studied to achieve the most cogent conclusions possible to enhance the credibility, reliability, and quality of the analysis made by the study. Data was interpreted through percentages, tables and bar charts.

3.6 Ethical Considerations

All respondents were guaranteed secrecy and anonymity before and after the study. They all gave their informed consent and participated willfully.



IV. FINDINGS & DISCUSSION

4.1 Background Information

The study established that educational levels were relatively low in Kizingitini. Only 3% of those interviewed had university degrees, and none of them were permanent residents. 7% were attending a polytechnic or some other educational institution, 43% had completed their secondary school education, 12% had only completed primary level education, 24% had dropped out of school due to various challenges (mostly a lack of school fees) and 11% had never attended school at all. The primary occupation of the majority of Kizingitini residents was fishing, accounting for 74% of the sampled residents, 16% indicated that they were small-scale farmers, and 10% were students in the local county and national polytechnic. Other respondents were community policing committee members (village elders), and police and chiefs (civil servants). It is important to note that some community policing committee members were also fishermen, while others were also small-scale farmers. Although the study did not ask about the personal income of the respondents, which is a sensitive issue, it can be inferred from their education and employment that most residents had low and inconsistent income due to the type of employment they had. These findings are crucial in establishing the integrity of the overall findings of the study.

Table 1
Background Information (Level of Education)

Respondents	Level of education					
	Degree	Polytechnic or other institution	Secondary school education	Primary school education	School dropout (Secondary & Primary)	Never been to school
Kizingitini residents	1	1	2	8	12	6
Police officers	1	3	26	0	0	0
Area chiefs	0	1	2	0	0	0
Community policing committee members	0	0	0	1	7	2
Total Percentage	3%	7%	43%	12%	24%	11%

According to Table 1 above, the level of education of the various respondents who were involved in the study is shown. The highest number of respondents (43%) had obtained a secondary school level of education, while only 3% had a university degree.

Table 2
Background information (Occupation)

Respondents	Occupation				
	Civil servants	Fishermen	Village elders	Small-scale farmers	Students
Kizingitini residents	0	22	0	5	3
Police officers	30	0	0	0	0
Area chiefs	3	0	0	0	0
Community policing committee members	0	0	10	0	0
Total Percentage	45%	30%	13%	7%	5%

Table 2 above presents the occupations of the respondents as of the time of this study. Most of the respondents (45%) were working as civil servants (Police officers and chiefs), while the least were students in local national and county polytechnics.

4.2 The Image of the Police and Trust Between the Community and the Police

The study found that public perception of the police in Kizingitini is largely negative. It was characterised by widespread mistrust, largely anchored on concerns about police brutality and misconduct, use of excessive force, insensitivity, bribery and corruption, disregard for citizens' rights, and a perceived lack of willingness to serve the public. The respondents were also concerned with the reliability and consistency of the police in serving the public and fighting crime. Respondents argued that this perception negatively affects the image of the police service as an organisation, and any actions or efforts to engage the community or even the community policing committee members are viewed as a



one-sided approach that is only meant to benefit the interests of the police and not for the greater good of Kizingitini residents. It also makes community members unwilling to trust or cooperate with police officers. This is therefore a significant barrier to community policing.

The police do not trust the community, and vice versa. Despite the creation of a community policing committee, its activities and effect on the ground are weak and lack vigour. This was a result of mistrust not only from the community but also from members of the community policing committee, who accused the police of disclosing information when they entrust them with policing intelligence, thereby exposing them to revenge and backlash from criminals. There was also a perception of a historical legacy of repressive policing still etched in the minds of the respondents. Having a history rooted in colonial-era policing, where it was often used as an instrument for control and state repression and rather than public service, the police service still carries this tag, especially in urban informal settlements, and areas where profiling and excessive force are common. The deep-rooted effect of mistrust and poor police image leads to a majority of the public viewing them as “enemies of the people” rather than protectors. At the end of the day, the community policing efforts were found to be moribund due to this barrier.

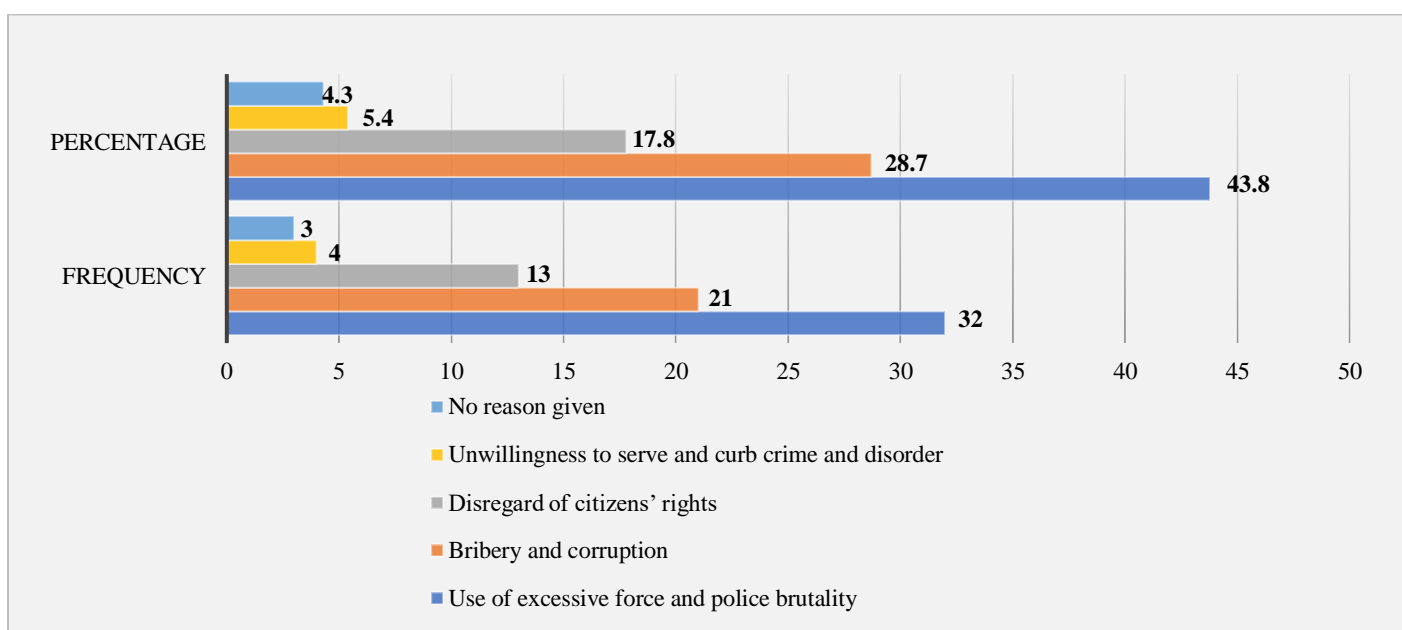


Figure 1
Drivers of Poor Police Image and Mistrust

As indicated in Figure 1 above, the major driver of poor police image and mistrust that significantly hampers community policing is the use of excessive force and police brutality. Bribery and corruption came second, and disregard for citizens’ rights followed. However, many of the respondents did not have direct or personal encounters where they were met with excessive force or brutality, but mostly relied on what was being reported in the media.

Mutahi et al. (2024) agree that for community policing to thrive, trust that involves the confidence of the citizens in individual police officers and the police service as an institution must be present. This study went further and established that the police did not trust the public as genuine partners in community policing. They accused them of insincerity, only supporting the police when themselves, their families, or friends are not in conflict with the law. Mwaura (2014) acknowledged that ineffectiveness and lack of confidentiality in the police with regard to information that is given to them by the public also leads to public loss of trust and confidence and is a barrier to community policing.

4.3 Barriers to Reporting Crime

The study found that barriers to reporting crime in Kizingitini are numerous, complex and intertwined. They majorly stem from a lack of confidence in the police and the criminal justice system. There were deep-seated perceptions of bribery, inefficiency and a feeling that justice is only for the rich who are able to bribe the police, prosecutors and judicial officers. Respondents indicated that it would not be beneficial to report a case that could either be turned against you or even require you to bribe to be assisted. The red tape associated with police paperwork and lengthy police, prosecution and court procedures were also cited as a hindrance to reporting crime since it causes frustrations and inefficiency. Another critical barrier that was identified was the fear of retaliation or re-victimisation. Community policing committee members were hesitant to report incidents and share intelligence on criminals because of fear of



being targeted by the same criminals. This is equally true with members of the public and victims of crimes who fear reprisal from offenders or further victimisation by the very system meant to protect them. Some respondents argued that some residents fear entering a police station to file a complaint due to an unfriendly atmosphere and poor customer service. They also accused the police of often failing to respond to community concerns, further alienating the public. Considered together, these barriers to reporting crime are also significant barriers to community policing in Kizingitini area.

Respondents indicated that other socio-economic factors, cultural norms and social stigma were also hindrances to reporting crime and hence acting as barriers to community policing. Community policing committee members talked about the close-knit Muslim Bajun community that almost solely occupies the Kizingitini area as a people whose norms prohibit one from reporting incidents to the police, believing that traditional dispute resolving mechanisms ought to be exhausted first lest one is viewed as a betrayer and faces stigma from the community. Fear of not being believed, self-blame, shame and when the social status or credibility of the perpetrator was perceived to be high were also identified as barriers to reporting crime. The essence of marginalisation and poor economic power was also cited as a disenfranchisement to reporting crime. Respondents also indicated that the lack of awareness of legal and reporting mechanisms hinders the reporting of crimes. The Bajun community consider itself to be marginalised with low literacy levels, and hence most of them may not be cognizant of organisations such as the Independent Policing Oversight Authority, the Ombudsman office and other bodies that check the accountability of the police and address complaints lodged against them. Some respondents cited incidents where victims may not report petty crimes since they consider them insignificant, or because they believe the police may not address them effectively.

Table 3
Barriers to Reporting Crime

Barriers	Percentage
Mistrust in the police and the criminal justice system	17
Bribery and inefficiency	21
Red tape and lengthy police, prosecution and judicial procedures	9
Fear of retaliation or re-victimisation	23
Socio-economic factors, cultural norms and social stigma	11
Fear of not being believed, self-blame, shame	4
Marginalisation and poor economic power	9
Petty or insignificant crimes that police may not address	6

As indicated in Table 3 above, fear of retaliation or re-victimisation was identified as the major reason why victims of crimes, members of the public and community policing committee members were not reporting crime. This means that despite the homogenous nature of the Bajun community in Kizingitini, fear of retaliation was a major barrier. Bribery and inefficiency came second. Kizingitini is a predominantly Muslim dominated area, known to accuse police of extrajudicial killings and enforced disappearances of radical Muslim clerics and suspected terror sympathisers. The respondents also expressed a strong mistrust of the police and the criminal justice system.

Conversely, Diphorn and van Stapele (2021) believed that a lack of informal social control and social disorganisation causes disharmony and disinterest in neighbourhoods hence the residents are not concerned with sharing information and reporting of crimes to the police. In addition, Gill et al. (2014) posit that some people view crime as a source of income, hence a rational choice for survival and therefore will unlikely report crime. This study identifies a fresh perspective on fear of not being believed, shame and self-blame as a realistic barrier in reporting crime. It also advances the concept of lengthy criminal justice procedure as a deterrent to reporting crime and hence a barrier to community policing.

4.4 Lack of Understanding and Training in Community Policing

The respondents cited the lack of understanding and training in community policing as one of the significant barriers to community policing. None of the police respondents, community policing committee members or even members of the public who participated in this study has ever been trained on community policing. There was an understanding amongst the respondents that community policing involved sharing information with the police and working together to keep the community safe. But that was all they understood. The lack of understanding stemmed from issues such as a lack of training and a lack of awareness of the respondents on the concept of community policing. Community policing committee members were old folks who had little, if any, education. Since their work is routine and tiresome, and there is no budget allocated for the implementation of community policing, most of them were engaged in fishing to supplement their income and are therefore partly available for meetings.



Police officers also indicated that the lack of clear policy guidelines had also hindered effective implementation of community policing. They cited the National Police Service Act No. 11A of 2011 which created the County Policing Authorities, whose mandate is implementation of policies, guideline development, training members of community policing within the county and preparing county community policing reports and submitting them to the cabinet secretary in the ministry which has not been fully realized due to bureaucracy and other obstacles that are founded on competing interests in different law enforcement arms of government. Most residents and community policing committee members were passive actors, mainly allocating ownership of community problems to the police rather than the whole community, and subsequently acting like informers and intelligence collectors, further hindering effective community policing.

As captured in the interviews with police officers, community policing for most of them was about retrieving information from the community and about the community coming to them, rather than the other way around. Some police officers saw it as a way of public engagement that entailed speaking to citizens on the streets, while for others, it was seen as a way of being friendly to citizens. This skewed view by the police officers did not see community policing as a holistic strategy that all officers must employ, but as specific tasks carried out at particular moments or by a designated officer, such as the officer commanding station (OCS). This uninformed understanding of community policing among the police officers, which is translated into their daily policing operations, was found to be a great barrier to the effective implementation of community policing.

Table 4

Lack of Understanding and Training in Community Policing

Comprehension and training in community policing	Percentage
Lack of training in community policing	32
Lack or poor understanding of community policing	27
Unclear or conflicting community policing policy guidelines	18
Low educational levels	16
Lack of budgetary allocation and the availability of committee members	7

As identified by the respondents in Table 4 above, lack of training in community policing was the greatest barrier, with poor or lack of understanding of community policing coming in second. Unavailability of community policing committee members who go out to fish in the ocean very early in the morning and come back later in the evening in a bid to earn a living was also cited as an obstacle, since there is no budgetary allocation for community policing activities.

Kiprono (2007) agrees that a lack of understanding of community policing is a barrier to community policing. He argues that this is exacerbated by the lack of training of police officers. This study found that there is a need to have an equal understanding of community policing by both the police, community policing committee members and the public. It also identified the need for a single uniform policy to spearhead community policing.

4.5 Extremist Influence

The influence of extremism was found to be a major barrier to community policing. The study found that the Al-Shabaab terrorist group had influenced Kizingitini and, by extension, other parts of Lamu East by exploiting real or perceived economic marginalisation, poverty, deprivation, unemployment, low education levels and poor governance to recruit the youth, instil fear and advance an ideology of hatred towards law enforcement and other government organisations. The police in Kizingitini had documented cases of local youth being recruited to join Al-Shabaab due to being susceptible, further fueling fear among the residents of possible repercussions of building a closer relationship with the police lest they are targeted. Due to the porous border with Somalia and the dense Boni Forest, which provides a haven for their operations, Lamu county has seen several Al-Shabaab terror attacks that have claimed hundreds of lives of both civilians, police and military officers.

Extremist influence was identified as a barrier to community policing, since it erodes public trust, creating a divide between communities and the police, leading to cynicism in the ability of the police to provide security and other services, which are critical for effective community policing. It was established that residents and community policing committee members were fearful of appearing friendly and cooperating with the police due to unknown consequences from extremist elements. They were also careful about who they talked to, what they said and, in whose presence, since they believed that they were Al-Shabaab sympathisers amongst them in the community.

Respondents argued that in a bid to counter extremism, radicalisation and recruitment of local youth in Kizingitini by Al-Shabaab, a heightened security response by the government turned the community into surveillance targets, alienating residents and further potentially discouraging community members who could otherwise be valuable



partners. Due to increased security operations to counter the terror group, some residents complained of profiling, harassment and enforced disappearances of youth, and perceived radical Muslim clerics perpetuated by various security actors, which led to alienation of the youth, pushing them further towards Al-Shabaab for identity and respect. This was seen to cause backlash against those who might serve as bridges between the police and the public. The study found that when the Kizingitini area was exposed to the aforementioned elements of extremism, the gap between the police and the public grew, hence strengthening the already existing barriers to community policing. Despite concerns from the residents that a security vacuum could have been created and subsequently filled by other non-state actors, such as vigilante groups, this did not occur.

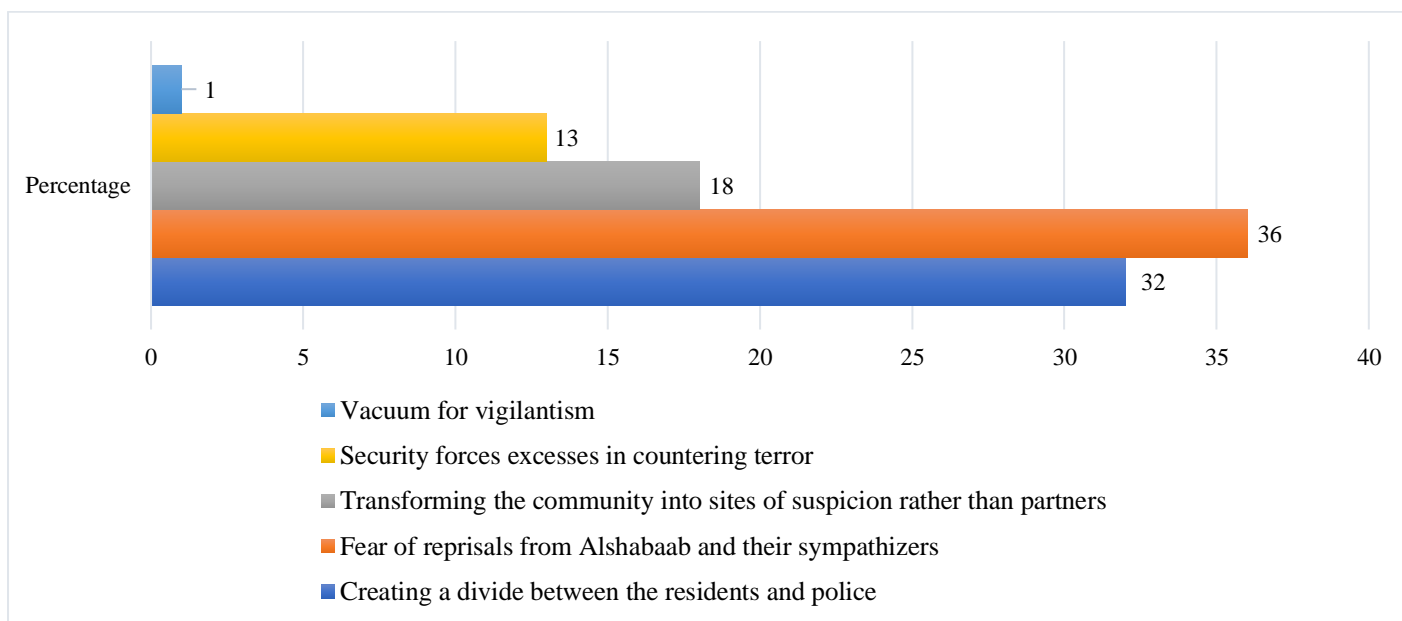


Figure 2
Extremist Influence

As Figure 2 above indicates, the greatest barrier to community policing was fear of reprisals from Al-Shabaab and their sympathisers. The terror group had managed to infiltrate and had made strides in creating fear and a divide between the residents and their trust in the police.

This study highlighted the relationship between extremism and community policing. It emphasised on the enabling conditions, such as illiteracy, marginalisation, and unemployment, among others, that have been exploited by Al-Shabaab to recruit youth and create a hostile environment for community policing. Mutahi et al. (2024), on the other hand identified structural and administrative issues that were obstacles to community policing. He mentions the police organisational structure, logistical and human resources inadequacies as hampering effective community policing.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

There is a general agreement in Kenya that community policing is one of the main drivers of police reforms and the pathway of transitioning to democratic and people-centred policing. This is in line with a fairly global trend of police reform projects that view community policing as a crucial element for building trust in a country’s police and, ultimately, ensuring that communities thrive in safety and security. This study identified key thematic areas that have been obstacles in the implementation of community policing in Kizingitini. Poor police image and lack of trust between the community and the police were seen to be a great barrier to community policing. Several barriers to reporting crime were also identified. Lack of understanding and training in community policing and extremist influence were also seen to be barriers to community policing. Addressing these issues requires a multi-faceted approach, including improving police-community relations, enhancing accountability and transparency, providing adequate training, and fostering genuine community participation in policing efforts. The common thread that cuts across these barriers is the issue of trust and the relationship between the police and the residents, which is the backbone of community policing. In Kizingitini, it is the view of this study that it will take time to break down barriers of apathy and mistrust so that meaningful partnerships

can be forged. Trust is the value that underlies and links the components of community partnership and problem solving, which are key elements in community policing.

Although there has been success in the implementation of community policing in other parts of the country, creating functional and effective community policing programs will require the creativity, energy, understanding, and patience of all the stakeholders. Whatever is applicable in one area may not work in another area, considering the geographical, social, cultural, economic, religious, and security considerations. Joint ownership of problems in the community between the police and residents, where they both voice their concerns, advice, and take action to address concerns, can build a foundation of trust that will allow the police to form close relationships with the community, thereby producing solid results. Without trust between the police and the community, effective community policing is impossible.

5.2 Recommendations

To effectively implement community policing in Kizingitini, comprehensive community policing training should be conducted. Skills in customer service, problem-solving, and conflict resolution are critical and should be included in the training. Community policing committee members should also be trained and carefully and impartially selected for appointment while considering their education and actual understanding of the area they represent.

A lack of sufficient resources has been a significant challenge in community policing. There is a need for the national government to allocate adequate resources, including funds, personnel and equipment to support community policing initiatives and motivate both the police and the community policing committee members. This is particularly important in economically deprived areas like Kizingitini, where residents are more concerned with putting a meal on the table more than anything else.

Reinvigorating communities is essential if we are to deter crime, build trust, and create more vibrant partnerships. Targeted community engagement activities, such as meetings and symposiums to discuss community issues, enhance civic education, and encourage community participation in security issues, can be a good starting point to build trust. This should be done in a multiagency approach that includes the police, community, national government administration officers, religious leaders, community-based organisations, other government agencies, etc.

Extremist groups exploit economic marginalisation, unemployment and poverty to recruit members, particularly the youth. The national government should seal these loopholes by strengthening economic opportunities and ensuring social inclusion of the people of Kizingitini with programmes such as promoting self-employment through skills training, funding youth economic development initiatives, economic development through infrastructure, and addressing historical communal grievances such as marginalisation.

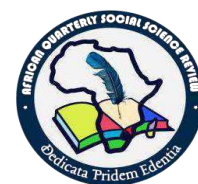
The national police service should come up with a single inclusive community policing document that gives direction on policy and implementation, and that allows for tailored application depending on the demands of the area of concern. To build community trust, there is a need for actual reforms in policing and the security sector that will gradually help repair the strained relationship between the community and security agencies, caused by the heavy-handed security tactics. Civic education on police accountability organisations, such Independent Police Oversight Authority, among others where citizens can go for redress, should also be prioritised.

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Strategies for improving employee job satisfaction in the public sector: A case of Kasulu Town Council, Tanzania

Kipara Japhert Kipara¹

¹kkipara992@gmail.com

¹Institute of Accountancy Arusha, Tanzania

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ABSTRACT

This study investigated possible strategies for improving employee job satisfaction in Kasulu Town Council. The study was guided by Herzberg's Two-Factor Theory. The study used 327 sample size out of 1800 target population, which included top management members, HR staff, and other employees, who were selected using simple random and purposive sampling techniques. The study adopted a descriptive research design where the data were collected using questionnaires and analysed with the help of SPSS version 26.0. The findings revealed that employee job satisfaction is shaped by multiple organizational strategies, including provision of good working conditions, recognition and rewards, career development, leadership and supervision, employee engagement, support from the organization, effective communication, and work-life balance. To enhance job satisfaction, the council should strengthen health and safety measures by investing in occupational health programs, modern facilities, and welfare initiatives. In addition, it should institutionalize recognition and reward systems through the establishment of formal, merit-based mechanisms, as well as formalize flexible work arrangements.

Keywords: Employee Job Satisfaction, Job Satisfaction, Motivation, Public Sector, Tanzania

I. INTRODUCTION

Employee job satisfaction is widely acknowledged as a critical factor influencing organizational performance, employee retention, and service delivery outcomes, particularly in the public sector (Dziuba et al., 2020; Herzberg, 1968). In the public sector, where services directly impact societal welfare and citizen well-being, the importance of a satisfied workforce becomes even more pronounced. Satisfied employees are more likely to demonstrate higher levels of motivation, commitment, and accountability, which are essential for achieving institutional goals and maintaining public trust. Governments around the world are increasingly recognizing that a satisfied workforce contributes to higher levels of productivity, accountability, and citizen satisfaction. However, public sector organizations often struggle with structural challenges, limited incentives, and rigid hierarchies that can adversely affect employees' job satisfaction compared to the private sector (Caoagdan et al., 2023).

In many developing countries, including those in Sub-Saharan Africa, public sector employees frequently face issues such as inadequate compensation, limited career progression, poor working conditions, and weak managerial support (Wale-Oshinowo & Majekodunmi, 2024). In Ghana, public servants have expressed issues over delayed promotions, poor supervision, and lack of recognition, leading to low levels of morale and productivity (Mickson & Anlesinya, 2020). In Kenya, studies have revealed issues such as salary disparities, lack of performance-based incentives, and political interference in public service appointments, which contribute to employee dissatisfaction (Bula & Makhamara, 2022). Similarly, in Nigeria, the public sector has been criticized for its non-transparent the human resource practices, weak training systems, and failure to implement merit-based rewards, all of which have negatively impacted motivation and service delivery (Alliu & Akinlabi, 2023). In Uganda, limited investment in employee welfare and outdated administrative procedures have been cited as key factors causing disillusionment among civil servants (Kansiime et al., 2024). These conditions tend to lower morale and hinder effective service delivery.

In Tanzania, the situation mirrors broader regional trends, as public sector employees continue to face significant challenges that affect their job satisfaction. Despite the government's efforts to implement public service reforms such as the Public Service Reform Program (PSRP) and Local Government Reform Programme (LGRP), which aimed to improve efficiency, accountability, and employee motivation, the outcomes have been mixed. Studies and government reports reveal that employee satisfaction in public organizations remains considerably low (Kimaro et al., 2018).

Despite ongoing efforts by the Tanzanian government to implement reforms within the public service sector, through initiatives such as the Public Service Reform Programme (PSRP) and the Local Government Reform



Programme (LGRP), employee job satisfaction in local government authorities remains low. More than 40% of public sector employees expressed dissatisfaction with their working conditions, citing factors such as limited career development opportunities, inadequate remuneration, poor communication, and lack of recognition. This problem is particularly critical at the local government level, where resource constraints, bureaucratic inefficiencies, and inadequate human resource systems prevail (Mateng'e, 2022).

1.1 Statement of the Problem

Employee job satisfaction is crucial for performance, retention, and effective service delivery, yet employees in Tanzanian local government authorities, including Kasulu Town Council, remain largely dissatisfied. In Tanzania, the government has introduced several reform initiatives, such as the Public Service Reform Programme (PSRP) and the Local Government Reform Programme (LGRP), to enhance efficiency, accountability, and employee motivation. However, despite these efforts, satisfaction levels in local government authorities remain low. National reports indicate that over 40% of public servants are unhappy with working conditions, career opportunities, and recognition (Mateng'e, 2022). These contribute to absenteeism, reduced morale, and low productivity (Mabindisa & Legoabe, 2021). Despite the reform initiatives, there is limited context-based evidence on effective strategies for improving job satisfaction, emphasizing the need for this study.

In Kasulu Town Council, the problem is evident. Over 35% of council employees reported dissatisfaction with their working environment, limited opportunities for training, delayed promotions, and poor supervision (Kimaro et al., 2018). In addition, human resource audit reports indicate a growing trend of absenteeism, low morale, and minimal employee engagement (Mateng'e, 2022; Mahyoro & Kasoga, 2021). Despite the awareness of these matters, there is a lack of empirical, context-specific literature that explores strategies for improving job satisfaction in under-resourced councils like Kasulu. Therefore, this study filled this knowledge gap by investigating strategies to enhance employee job satisfaction in Kasulu Town Council.

1.2 Research Objectives

The study investigated possible strategies to enhance employee job satisfaction in Kasulu Town Council.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Herzberg's Two-Factor Theory

This study is based on Herzberg's Two-Factor Theory of Motivation, developed by Frederick Herzberg in 1959. The theory assumes that job satisfaction and dissatisfaction are influenced by distinct factors rather than existing on a single continuum. While enhancing hygiene factors can alleviate dissatisfaction, true satisfaction and improved performance can only be achieved through the presence of motivators (Herzberg, 1968). This difference provides a critical framework for public sector organizations to accurately assess the needs of employees. By employing this means, organizations can enhance their understanding of workforce requirements and implement targeted strategies to address them effectively. For instance, addressing hygiene issues like poor salary or inadequate supervision may prevent dissatisfaction, while focusing on motivators like recognition and growth can improve employee engagement and performance.

Herzberg's Two-Factor Theory provides a practical and insightful framework for understanding employee motivation, making it highly valuable for both human resource management (HRM) and organizational development. Its clear distinction between motivators and hygiene factors allows managers and policymakers to design more targeted and balanced interventions aimed at enhancing job satisfaction and reducing dissatisfaction simultaneously. Moreover, the theory's emphasis on intrinsic motivators makes it relevant in resource-constrained environments, such as public sector institutions in developing countries, where financial incentives may be limited. In such contexts, non-monetary strategies like improved supervision, recognition, clear communication, and career development become even more critical in sustaining employee satisfaction and commitment.

2.2 Empirical Review

Khassim and Costapius (2025) conducted a study that explored adherence to and compliance with occupational health and safety standards in public organizations in Tanzania with reference to regional administration and local government. The social cognitive theory was used as the theoretical framework. The study adopted a descriptive research design. A sample of 120 respondents drawn from the regional administration and local government, Tanzania was used. Simple random sampling and purposive sampling were used to obtain respondents from different categories. Qualitative data were analyzed using thematic and content analysis. It was revealed that there are inadequate occupational safety and health mechanisms in complying with OSH practices in many Tanzanian local councils.



Sapta et al. (2021) conducted a study on the role of technology, organizational culture, and job satisfaction in improving employee performance during the COVID-19 pandemic. This study explains that technology, organizational culture, and job satisfaction at rural banks in Bali can serve as motivation for enhancing performance, especially during a pandemic. A questionnaire was distributed online using Google Forms to a total of 350 employees; data were collected from a sample of employees from rural banks in Denpasar, Bali. Respondents had to meet the following criteria: a minimum work period of one year and at least a high school education or an equivalent. Using these criteria, 100 samples were obtained. The study employs Structural Equation Modeling with a variance-based or component-based approach using Partial Least Squares. The results show that organizational culture, job satisfaction, and technology provide motivation and have a significant positive effect on employee performance. However, organizational culture does not have a direct or positive impact on employee performance.

Kitsios and Kamariotou (2021) conducted a study on the relationship between job satisfaction and motivation: An empirical study among public health workers. This article aims to investigate the dynamics that may be behind health workers at a public hospital in Northern Greece. Data were collected from 74 employees at the hospital and analyzed using ANOVA. The results show that key motivators for the employees can be considered the relationships with their colleagues and the level of achievement, while the level of rewards and job characteristics play a secondary role. These results make it clear that, for the hospital's management to be able to improve the level of employee performance, it should ensure the establishment of a strong climate among employees, and also acknowledge the efforts made by them.

Bhardwaj et al. (2021) analyzed the job satisfaction of employees in the banking industry. The purpose of this research is to observe employee satisfaction with respect to their position in various commercial banks, including private, public banks in Rajasthan, and to examine how various factors affect employee satisfaction. The research shows that there is a positive correlation and connection among job satisfaction & the award, remuneration, job security, promotion opportunities, and good relations with employees. The survey results also show that the majority of bank employees in the banking sector are satisfied as far as work culture is concerned, but salaries and timings remain the main concern for them.

Thant and Chang (2021) conducted a study on determinants of public employee job satisfaction in Myanmar. This study examines job satisfaction and dissatisfaction factors of government employees in Myanmar. A sample of 226 public employees in the Ministry of Border Affairs was randomly selected and interviewed for the study. The qualitative data collected from the interviews were analyzed by NVivo 12. Applying Herzberg's two-factor theory, the study found that both motivators and hygiene factors influenced job satisfaction and dissatisfaction of the public employees. In particular, interpersonal relationships, factors in personal life, work itself, and recognition were major determinants of job satisfaction, and working conditions, interpersonal relations, factors in personal life, supervision-technical, and recognition all influenced job dissatisfaction of public employees in Myanmar.

Akinwale and George (2020) investigated the predictors of work environment on job satisfaction among nurses in both federal and state tertiary hospitals in Lagos State. The study used the longitudinal research design to elicit information from the respondents. The simple random sampling strategy was used to administer the research instrument to 364 nurses. The study used hierarchical multiple regression to analyze the data obtained. This study discovered that all the variables collectively determined nurses' job satisfaction; however, the salary was the most fundamental essential predictor that drives nurses' job satisfaction, followed by advancement and promotion. All seven predictors, namely, workload allocation, managerial support, autonomy and responsibility, salary, supervision and working conditions, recognition and achievement, and advancement and promotion, collectively exert a positive relationship with nurses' job satisfaction.

Marta et al. (2021) analyzed job enrichment, empowerment, and organizational commitment and the mediating role of work motivation and job satisfaction. The sample population consists of all the employees in the regional office of DJKN Bali and Nusa Tenggara, who hold executive positions and have served the office for ≥ 4 years. This study adopts the second-order Partial Least Squares (PLS) model and the Smart PLS Version 3.0 program, which is used as the analysis tool. The results revealed that: job enrichment has a significant influence on organizational commitment; employee empowerment has an insignificant influence on organizational commitment; work motivation and job satisfaction partially mediate the influence of job enrichment on organizational commitment; work motivation and job satisfaction fully mediate the influence of employee empowerment on organizational commitment.

Mahmood Aziz et al. (2021) examined the association between employee commitment and job satisfaction at selected private universities in the Kurdistan region of Iraq. This research was carried out at three different private universities. A quantitative method was used to gather relevant information regarding the relationship between organizational commitment and job satisfaction. The results revealed that all three independent factors are correlated with job satisfaction. The result can be used as a guiding method for the university's management to increase its employees' commitment. Job satisfaction has a positive relationship with employee commitment. If employees are satisfied, they are organizationally committed, and found that job satisfaction has a positive impact on employee commitment.



Basalamah and As'ad (2021) analyzed the effect of work motivation on the satisfaction of management lecturers and analyzed the effect of the work environment on the satisfaction of management lecturers at a private university in the city of Makassar. This type of research is explanatory research. The sample of this research is management lecturers at private universities in Makassar city. Data were collected using purposive random sampling total of 105 respondents. The method of analysis in this study was multiple regression analysis. The results of this study indicate that motivation has a significant effect on job satisfaction. This study proves that both theoretically and previous empirical studies explain that increasing work motivation will increase the job satisfaction of lecturers at private universities in the city of Makassar.

Despite several studies exploring employee job satisfaction in different contexts, few address the challenges of local government authorities in Tanzania. For instance, Khassim and Costapius (2025) examined occupational health and safety compliance in local councils but did not address satisfaction factors such as recognition, career growth, and leadership. On the other hand, studies conducted in banking, health, and education sectors across countries like Indonesia, Greece, India, Myanmar, and Nigeria (Sapta et al., 2021; Kitsios & Kamariotou, 2021; Bhardwaj et al., 2021; Thant and Chang, 2021; Akinwale & George, 2020) provide useful insights but remain contextually different from Tanzania's public sector realities. This indicates a clear knowledge gap on effective strategies for enhancing employee satisfaction in under-resourced councils in Tanzania. To fill this gap, the study investigated possible strategies for improving employee job satisfaction in Kasulu Town Council.

III. METHODOLOGY

The study used a quantitative research approach and descriptive research design to allow a comprehensive understanding of the strategies for improving employee job satisfaction at Kasulu Town Council. Notably, the study area was chosen due to its unique and relevant setting, as it operates under tight budget constraints, with limited autonomy over human resource decisions. Preliminary reports and staff performance reviews have highlighted issues such as inadequate office space, poor information systems, understaffing, and limited professional development opportunities. A sample size of 327 respondents out of 1800 target population was obtained using the Yamane formula as shown below;

$$n = \frac{N}{1 + Ne^2}$$

n = Sample size,

N = Total number of the accessible population

e = Sampling error (e = 0.05)

$$n = \frac{1800}{1 + 1800(0.05)^2} = 327 \text{ respondents}$$

A sample size of 327 included top management members, HR staff, and other employees. Their diverse perspectives helped to obtain insights into employees' motivation to enhance their satisfaction. Furthermore, the study employed structured questionnaires to collect data, which were distributed to respondents who were selected using a simple random sampling for employees and a purposive sampling technique for top management and HR staff. Data collected were analyzed using descriptive statistics such as percentages, means, and standard deviations with the help of SPSS version 26.0 on strategies for improving employees' job satisfaction.

To enhance content validity, the study questionnaire was carefully designed based on established HR strategies for improving employee satisfaction. To strengthen internal reliability, a pilot study was conducted involving 50 participants who were not a part of this study sample. This pilot helped to refine and clarify survey items for better comprehension and consistency. To assess internal consistency, the study employed SPSS version 26.0 to compute Cronbach's alpha coefficient. The instrument achieved a Cronbach's alpha of 0.85, indicating strong internal reliability and confirming its use (Weyant, 2022).

IV. FINDINGS & DISCUSSION

4.1 Possible Strategies for Employee Job Satisfaction

This study investigated possible strategies for improving employee job satisfaction at Kasulu Town Council. To achieve the study objective, the researcher employed five assumptions, which were considered the best possible strategies for Kasulu Town Council using five Likert scales ranging from 1 (strongly disagree) to 5 (Strongly Agree). Respondents were asked how much they disagree or agree with the statement describing the assumptions as follows;

**Table 1***Possible Strategies for Employee Job Satisfaction (N = 327)*

Section	Questionnaire Item	1	2	3	4	5	Mean	Std Dev
Working Conditions	Health, safety, and welfare standards at my workplace are adequately maintained.	21 (6.4%)	183 (56%)	77 (23.5%)	36 (11%)	10 (3.1%)	2.48	0.89
Recognition and Rewards	Good performance is consistently rewarded through incentives, promotions, or acknowledgments.	68 (20.8%)	23 (7%)	182 (55.7%)	3 (0.9%)	51 (15.6%)	3.17	1.23
Career Development	The council provides relevant training and professional development programs that enhance my skills.	40 (12.2%)	82 (25.1%)	12 (3.7%)	181 (55.4%)	12 (3.7%)	3.13	1.19
Leadership and Supervision	My immediate supervisor provides regular feedback and guidance on my performance.	158 (48.3%)	50 (15.3%)	11 (3.4%)	61 (18.7%)	47 (14.4%)	2.35	1.56
Open Communication and Sense of Purpose	Communication within the council is open, clear, and allows employees to express their views.	18 (5.5%)	32 (9.8%)	244 (74.6%)	28 (8.6%)	5 (1.5%)	3.07	0.68
Work-Life Balance and Flexibility	The council offers flexible work arrangements, including flexible schedules and leave arrangements as needed.	160 (48.9%)	34 (10.4%)	67 (20.5%)	7 (2.1%)	59 (18%)	3.7	1.52

Working Conditions: The findings revealed that the majority of respondents (62.4%) disagreed or strongly disagreed that health, safety, and welfare standards at their workplace are adequately maintained. The mean score of 2.48 (SD = 0.89) reflects a low level of satisfaction with workplace conditions. The result indicates that the council's work environment lacks adequate safety and welfare support. Such conditions can affect morale, productivity, and retention rates in the Council. These findings align with Khassim and Costapius (2025), who reported that inadequate occupational safety and welfare programs are the critical challenge in many Tanzanian local government authorities.

Recognition and Rewards: The findings revealed a small proportion of respondents (16.5%) who agreed or strongly agreed that good performance is consistently rewarded through incentives, promotions, or acknowledgments, with a mean of 3.17 (SD = 1.23) reflecting a moderate satisfaction. This suggests that there is inconsistency in the application of recognition and rewards across departments. This indicates that some employees may occasionally receive incentives, promotions, or acknowledgments, while others do not. The findings align with Thant and Chang (2021) and Akinwale and George (2020), who found that informal recognition without institutional backing led to dissatisfaction.

Career Development: The findings revealed a mixed perception of career growth and training opportunities. While 55.4% of respondents agreed that the council provides relevant training and professional development programs, a notable 37.3% disagreed, producing a moderate mean of 3.13 (SD = 1.19). This indicates that employees recognize efforts to provide training but question its effectiveness in enhancing long-term career advancement. The findings align with Okolie et al. (2020), who argued that many public institutions provide training as a procedural activity without linking it to tangible career progression.

Leadership and Supervision: The findings revealed that 63.6% of respondents disagreed or strongly disagreed that their immediate supervisors provide regular feedback and guidance, leading to a low mean score of 2.35 (SD = 1.56). This indicates that supervisory support and performance feedback mechanisms are inadequate in the council, which may lead to uncertainty, reduced engagement, low performance, and job dissatisfaction. The findings align with Qi et al. (2023), who found that employees who receive frequent feedback from their supervisors are more likely to feel valued and motivated. Similarly, Abd et al. (2023) emphasized that participatory leadership improves satisfaction only when combined with constructive feedback and personal coaching.

Open Communication and Sense of Purpose: The findings revealed that 74.6% of respondents remained neutral on open and clear communication, with a mean of 3.07 (SD = 0.68). This indicates uncertainty and possibly limited trust in the council's internal communication systems, which may result in reduced motivation. The findings align with Akinwale and George (2020), who found that poor communication in public institutions leads to decreased motivation and misalignment with the organizational vision. Similarly, Mahmood Aziz et al. (2021) emphasized that transparent and two-way communication fosters employee trust, engagement, and job satisfaction.

Work-Life Balance: The findings revealed that 48.9% of employees disagreed, while 38.5% agreed, with a mean score of 3.70 (SD = 1.52). This indicates that although employees recognize some efforts of respect for their personal and family commitments, the actual implementation of flexible work mechanisms such as flexible scheduling and



remote work options remains limited. The relatively moderate mean further indicates that the council's efforts toward promoting work-life balance are not yet fully effective in meeting employee expectations. These results are in line with what Huan-Fang and Chang (2022) found: flexible work policies greatly improve employee satisfaction and mental health by giving them more control over their time and workload. Similarly, Guoqiang and Bhaumik (2024) emphasized that organizations providing flexible work arrangements experience improved employee retention, higher commitment, and stronger organizational loyalty.

4.2 Employee Job Satisfaction

The study sought to examine the level of job satisfaction among the respondents. Table 2 presents the findings obtained.

Table 2

Employee Job Satisfaction (N = 327)

Questionnaire Item	1	2	3	4	5	Mean	Std. Dev
I am satisfied with my job at the council.	53 (16.2%)	98 (30%)	101 (30.9%)	46 (14.1%)	29 (8.9%)	3.3	1.12
I would recommend this council as a good place to work.	50 (15.3%)	99 (30.3%)	83 (25.4%)	58 (17.7%)	37 (11.3%)	3.21	1.16
I intend to continue working with the council in the future.	33 (10.1%)	41 (12.5%)	78 (23.9%)	108 (33%)	67 (20.5%)	3.41	1.2

Satisfaction with Job: Most respondents reported a moderate level of job satisfaction, with 30.9% remaining neutral, 23% agreeing, and 46% disagreeing that they were satisfied with their jobs. The average score of 3.30 (SD = 1.12) indicates that, overall, employees are only moderately satisfied with their work environment and conditions. This suggests that while aspects such as job security and welfare benefits may contribute to satisfaction, other factors like career growth, recognition, and leadership support seem inadequate. The findings align with Demircioglu (2021), who stated that job satisfaction is greatly affected by an employee's perception of fairness, recognition, and autonomy, aspects that are often limited in bureaucratic public organizations.

The Council is perceived as a good place to work: The findings revealed that about 45.6% of respondents disagreed or strongly disagreed, 25.4% remained neutral, and only 33% agreed, with a mean score of 3.21 (SD = 1.16). This indicates that organizational reputation and employee advocacy remain relatively weak within the council. Limited recognition systems, inefficient communication, or perceived unfairness in administrative procedures may contribute to the low level of recommendation. The findings align with Qi et al. (2023), who noted that a lack of transparent leadership and organizational justice often reduces employees' willingness to speak positively about their workplace. The council should work on improving its image by using fair promotion systems, programs to recognize employees, and programs that keep employees involved all the time.

The results showed that about 53.5% of employees disagreed or strongly disagreed with the idea of continuing to work with the Council, while 33% were neutral. The mean was 3.41 (SD = 1.20). This indicates that most employees have a moderate feeling and willingness to remain at Kasulu Town Council. This relatively high percentage of disagreement implies that many employees are uncertain about their long-term attachment to the council, possibly due to factors such as limited career growth opportunities, inadequate motivation, or unsatisfactory working conditions. The findings align with Jepngetich and Omondi (2025), who argued that rigid bureaucratic structures, delayed promotions, and a lack of motivational rewards often contribute to reduced job satisfaction and weaker employee retention.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The findings revealed that employee job satisfaction is shaped by multiple organizational strategies, including provision of good working conditions, recognition and rewards, career development, leadership and supervision, employee engagement, organizational support, communication, and work-life balance. The study recognized that working conditions, recognition and reward systems, and leadership and supervision were among the least satisfactory areas. The findings further revealed that employees experience only moderate satisfaction with career development and communication practices.

Furthermore, while some employees appreciated the council's recognition of work-life balance, the actual mechanisms for ensuring flexibility such as flexible scheduling and remote work options remain limited. This suggests that, despite management's awareness of the need for work-life integration, practical implementation is still weak. Consequently, overall employee job satisfaction and retention remain moderate, as many employees appear uncertain about their long-term commitment to the council.



5.2 Recommendations

To enhance job satisfaction, Kasulu Town Council should strengthen health and safety measures by investing in occupational health programs, modern facilities, and welfare initiatives, while ensuring compliance with national labour safety standards. In addition, the Council should institutionalize recognition and reward systems through the establishment of formal, merit-based mechanisms that consistently reward high-performing employees, both financially and non-financially. Furthermore, the council should focus on enhancing career development opportunities by aligning training programs with employees' career progression and organizational needs. Moreover, the Council should strengthen employee engagement through team-building initiatives and recognition of collaborative achievements. Finally, the Council should formalize flexible work arrangements and wellness programs that promote employee well-being.

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Exploring citizens' perceptions on the roles of Members of Parliament in Tanzania: A case of Dodoma Municipality constituency

Dorothea Mdanku^{1*}
Revocatus Kabobe²
Emmanuel Mallya³

^{1*}gillyfs@yahoo.com

^{1,2,3} The Open University of Tanzania

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ABSTRACT

This study explores citizens' perceptions of the roles of members of parliament in Tanzania, a case of the Dodoma municipality constituency. This study was guided by role theory, which was developed by Robert Merton in 1957. The study used the following specific objectives: to assess citizens' understanding of the roles of Members of Parliament in Tanzania, to identify the factors influencing citizens' perceptions of the roles of Members of Parliament in Tanzania, and to assess the level of citizen satisfaction with the performance of Members of Parliament in fulfilling their roles. The study was conducted at the Dodoma Municipality constituency, which encompasses the entire Dodoma electoral district. Focusing on a single, high-profile urban constituency allows for an in-depth exploration of how residents across income levels, occupational groups, and wards perceive and engage with their elected MPs. Insights gleaned here may later be compared with those from other municipal and rural constituencies in follow-up research between June 2024 and August 2025. The study adopted the interpretivism research philosophy, a qualitative approach, and an action research design. Purposeful and accidental samples yielded 36 participants, including six (6) Members of Parliament (MPs), 20 citizens, and 10 political party leaders. Interviews and Focus Group Discussion (FGD) were used to collect data. The analysis of the study data using thematic findings revealed that perceptions of Members of Parliament (MPs) are heavily influenced by structural incentives, socioeconomic contexts, and the information ecosystem. These factors have perpetuated a “development banker” image of MPs whose primary role, in the public’s eyes, is delivering tangible goods rather than shaping policy or holding the executive to account. The study concluded that while most citizens recognize that MPs engage in lawmaking and debate, there remains a substantial gap in awareness of their oversight functions, committee work, and budgetary responsibilities. Overall citizen satisfaction with MPs is modest, with trust and approval closely tied to both the visibility of constituency engagement and citizens’ understanding of legislative achievements.

Keywords: Citizens, Constituency, Members of Parliament, Parliament, Perception

I. INTRODUCTION

Members of Parliament (MPs) play a crucial role in democratic systems, including Tanzania's parliamentary democracy (Draman et al., 2019). Their roles, as defined by the constitution, mainly revolve around creating laws, overseeing the government, and representing the interests of their constituents at the national policy level (Inter-Parliamentary Union, 2022). However, there often seems to be a significant gap between these official duties and what citizens actually expect from them.

This study primarily addresses the widespread misconception among Tanzanian citizens regarding their MPs' duties (Collord, 2020). Many people believe that MPs should primarily act as providers of direct, personal support, helping with expenses like medical bills, school fees, and everyday needs (Almoatasm, 2020; Azevedo, 2020). This expectation is quite different from the MPs' official responsibilities, which are more focused on legislative work and oversight.

This disconnect isn't just a theoretical issue; it has real-world implications. The pressure from these expectations reportedly causes significant stress for MPs, which can affect their ability to carry out their essential duties effectively. Anecdotal evidence, like reports from the Tanzanian Hansard during the 2024/2025 budget session, suggests that MPs have been avoiding their constituencies due to overwhelming demands, underscoring the seriousness of the problem. Research from neighboring Kenya shows the extent of the issue, with findings indicating that a staggering majority (for instance, 795 out of 800) of communications from constituents are requests for financial assistance (Sulley, 2022). In Tanzania, studies reveal a considerable misunderstanding among citizens, with one study indicating that most (five out

of eight) citizens don't have a clear grasp of what MPs are actually supposed to do (Collord, 2022; Lukiko, 2023). This lack of understanding weakens the representative connection, which could lead to citizen disillusionment and obstruct effective democratic governance (Ahikire, 2023). Despite initiatives from the Parliament of Tanzania's Civic Education unit aimed at educating the public, these misconceptions continue to persist.

While earlier studies have looked into the roles of MPs in Tanzania (Collord, 2020; Almoatasm, 2020; Sulley, 2022), and some have highlighted the challenges MPs face due to constituent demands (Collord, 2020; Azevedo, 2020), especially in Dodoma, there's still a significant gap in information. Current research hasn't thoroughly examined how citizens in specific contexts, like the Dodoma Municipality Constituency, perceive, interpret, and assess the roles of their MPs. From the citizens' point of view in this specific constituency, there isn't enough information about the nature, prevalence, and underlying reasons for these perceptions.

This study aims to fill a gap by diving into how citizens in the Dodoma Municipality Constituency perceive the roles of their Members of Parliament (MPs). Understanding these perceptions is vital for a few key reasons: it sheds light on the degree and specific nature of the disconnect between what people expect and what MPs are officially supposed to do. It also provides insights into why these views continue to exist, even with ongoing civic education efforts. The results will help shape more effective communication strategies and tailored civic education programs. This understanding will enable MPs and parliamentary institutions to better manage what constituents expect, fostering more realistic and productive relationships. Ultimately, grasping and addressing these perceptions is crucial for bolstering democratic accountability, enhancing the quality of representation, and improving the legitimacy and effectiveness of parliamentary democracy in Tanzania. This study investigated these perceptions by examining citizens' articulated understanding of MP duties, their expressed expectations for assistance (especially material/financial), and their criteria for evaluating MP performance.

1.2 Research Objectives

- i. To assess citizens' understanding on the roles of Members of Parliament in Tanzania
- ii. To identify the factors influencing citizens' perceptions on the roles of Members of Parliament in Tanzania
- iii. To assess the level of citizen satisfaction with the performance of Members of Parliament in fulfilling their roles.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Role Theory

This study was based on role theory, which was developed by Robert Merton in 1957. Role theory served as a framework in social science that explored how individuals acted and interacted within society according to the roles they held. It suggested that people's behaviors and attitudes were shaped by the expectations tied to their social positions and influenced by cultural norms, institutional structures, and interpersonal relationships.

The significance of role theory in this study lay in its ability to shed light on how Members of Parliament (MPs) were viewed in relation to their various roles, such as legislators, representatives, or service providers. This theory explored the behaviors of individuals within social positions and how these roles were shaped by societal expectations.

Role theory could simplify complex behaviors too much by overlooking the context and power dynamics involved in role expectations. To overcome these limitations, the researcher incorporated multi-level analyses and additional frameworks that considered structural, cultural, and situational factors. This approach allowed for a more detailed understanding of both role expectations and performance.

Role theory, while useful for categorizing the socially prescribed tasks of MPs, was critiqued for assuming clearly defined, static roles, underplaying the power and agency that legislators exercised, and oversimplifying the complex trade-offs they navigated. In the Dodoma Municipality study, these limitations emerged as citizens expressed ambiguous or conflicting expectations of their MPs (e.g., balancing lawmaking with constituency service), highlighting how MPs had to negotiate between national party directives and local demands in ways that the traditional role theory framework only partially explained.

2.2 Empirical Review

2.2.1 Citizens' Understanding on the Roles of Members of Parliament

In Tanzania, Makulilo (2023) conducted a study on oversight functions of the national assembly and good governance in Tanzania. This includes MPs drafting, debating, and voting on legislation. Study represents the views and needs of the people in their electoral district. Some citizens possess a more detailed understanding of the various functions of MPs, which include: MPs hold the government accountable through questioning, debates, and committee work. They often engage with their constituents to gather feedback and address local issues. Informed Citizens, a smaller segment of the population, may have a comprehensive understanding of the parliamentary system, including

understanding how MPs oversee government actions and expenditures and recognizing how MPs influence national policies and development programs.

2.2.2 The Factors Influencing Citizens' Perceptions on the Roles of Members of Parliament

Fish (2006) conducted a study on Stronger Legislatures, Stronger Democracies in Tanzania. The finding revealed the way Tanzanians perceive the National Assembly and its functioning in the post-multiparty election era (i.e., since 1995). Understanding the factors that influence citizens' perceptions of the roles of Members of Parliament (MPs) is crucial for evaluating democratic engagement and governance. Citizens often identify with their MPs on a personal level. The frequency and quality of interactions between MPs and their constituents significantly affect how citizens view their roles. Positive personal experiences enhance trust and approval. The perceived accountability of MPs in their decision-making processes plays a vital role. Citizens are more likely to have a favorable view of MPs who are transparent about their actions and decisions and who actively engage in holding the executive accountable. The portrayal of MPs in the media greatly influences public perception. Positive coverage enhances an MP's image, while negative reporting leads to distrust and skepticism among citizens.

2.2.3 The Level of Citizen Satisfaction with the Performance of Members of Parliament in Fulfilling their Roles

Mwombela (2020) Tanzanian Citizens Assess the Performance of Parliament and Consider Its Responsibility for Legislation and Oversight. The study used a mixed approach and a cross-section design. Findings revealed that in Tanzania citizen satisfaction with the performance of Members of Parliament (MPs) varies widely across different regions and circumstances. Generally, factors influencing satisfaction include responsiveness to constituents: how well MPs are perceived to address the concerns and needs of their constituents. Legislative Effectiveness: The extent to which MPs pass laws and policies that positively impact their communities. Communication and Transparency: The clarity and frequency with which MPs communicate their activities and decisions to the public. Engagement with the Community: How actively MPs participate in local events and their availability to constituents. Trust and Integrity: Public perceptions of the MPs' honesty and commitment to serving the public interest.

III. METHODOLOGY

3.1 Research Design

A research design is a comprehensive plan that outlines how to conduct a research study, ensuring that the data collected effectively addresses the research problem (Farquhar et al., 2020). This study employed an action research design. Reason and Bradbury (2021) explained an action research design is a participatory, iterative approach that focuses on solving real-world problems while simultaneously generating knowledge. It involves collaboration between researchers and participants to identify issues, implement interventions, and evaluate outcomes in cycles of reflection and action. The researcher used this design because of its usefulness particularly when researchers want to gain an understanding of complex problems and help to create a plan of action using the research findings.

3.2 Population of the Study

The study population refers to the specific group of individuals selected for this research based on characteristics that align with the study's objectives (Rubin & Babbie, 2017). It's the entire group that the researcher was drawing conclusions about. The study included: Six (6) Members of Parliament (MPs): The selection of six members of parliament is due to the fact that the constituency has one elected member of parliament and five other special seats for women. Also, there were 20 citizens and 10 political party leaders. Political party leaders was drawn from the following parties: Chama Cha Mapinduzi (CCM), Chama cha Demokrasia na Maendeleo (CHADEMA), ACT-Wazalendo (Alliance for Change and Transparency), Civic United Front (CUF), NCCR-Mageuzi (National Convention for Construction and Reform), United Democratic Party (UDP), Democratic Party (DP), Tanzania Labour Party (TLP), CHAUSTA (Chama cha Ukombozi wa Umma) as well as SAU (Sauti ya Umma Party).

3.2 Sample size

Kothari (2004) define sample size as the number of items to be selected from the universe to constitute a sample. In other way, it is a small group of research participants or materials selected from identified population of the study. This study gathered and analyzed data in a systematic way for the purpose of answering the research objective or research question. This study was plan to interrogate respondents from Dodoma municipality constituency ranging people such as 6 members of parliament, 10 political party leaders and 12 citizens as this helped in in-depth understanding on the topic.

3.3 Sampling techniques

Sampling techniques involve the processes of selecting a subset of research participants or materials from a defined study population. Therefore, the researcher employed purposive sampling and accidental sampling techniques.

3.3.1 Purposive sampling

Purposive sampling is a non-probability sampling technique where researchers intentionally select participants based on specific characteristics, knowledge, or experiences relevant to the research question (Etikan, 2016). This study picked participants who were obtained through a purposive sampling for Members of Parliament and political party leaders. Purposive sampling helps researchers focus on individuals or groups that have direct experience or expertise related to the research topic, leading to more meaningful and relevant data.

3.3.2 Accidental sampling

Accidental sampling, also known as convenience sampling, is a non-probability sampling technique where researchers select participants based on their ease of access, availability, and willingness to participate (Saunders et al. 2019). This Accidental sampling used to select citizens. Creswell (2014) implies that accidental sampling allows researchers to collect data quickly since participants are readily available.

3.4 Data Generation Process and Methods

The Data Generation Process refers to the underlying mechanism or process through which data is produced or generated (Hastie et al. 2021). This study used primary data collection methods such as the interview method and focus group method, and in secondary data collection methods such as documentary review.

3.4.1 Document Review

Document review is the process of examining documents to assess their content, accuracy, and relevance to the research question. The study also employed secondary data to supplement the primary data. Gay et al. (2012) define secondary data as the source of data that interprets or analyzes the work of others. Secondary data used because it helped complement the primary data with additional insights leading to more comprehensive outcomes. Secondary data gathered from a collection of Statutes Relevant for Parliamentary Business and Roles of 2020, Constitution of the United Republic of Tanzania (1977), REPOA reports on Parliament, REDET reports on Parliament as well as Political Parties reports and speeches so as to gain more insights into the perceptions of the roles of Members of Parliament in Tanzania.

3.4.2 Interview Method

The study used the interview to obtain information from Members of Parliament and Political Party Leaders. Interviews allow for the exploration of complex topic in greater depth, also provide detailed insights into a person's thoughts, experiences, or perspectives that might not emerge from other data collection methods like surveys (Carlos, 2023).

3.4.3 A Focus Group Discussion (FGD)

A focus group discussion (FGD) used to obtain information to citizens. A focus group discussion (FGD) is a good way to gather people from similar backgrounds or experiences to discuss a specific topic of interest (Mishra, 2022). The group of participants of not more five participants guided by a moderator (or group facilitator) who introduces topics for discussion and helps the group to participate in a lively and natural discussion among them. Group of five participant were easy to maintain and guide them for discussion. FGD also is proposed as it helped obtain information in the participants' own language. Interaction with participants allows for follow-up questions for clarity, and information provided more quickly compared to if people are interviewed separately.

3.5 Data Analysis

Data analysis is the systematic process of organizing, interpreting, and making sense of qualitative data to extract meaningful insights. It is also a process of inspecting, rearranging, modifying data to extract useful information from materials collected. For this study, thematic analysis applied, an approach is well-suited for uncovering patterns within textual data such as interview transcripts, focus group discussions, and written responses (Priya, 2021). Thematic analysis including; The process begins with transcribing and thoroughly reviewing interview data to immerse researchers in the content and note emerging patterns. Next, an inductive coding process labels segments of text with descriptive codes, often aided by qualitative software for consistency. These codes are then grouped into preliminary themes through constant comparison. The themes are critically reviewed against the entire dataset, refined or merged as necessary, and clearly defined and named. Finally, the analysis is interpreted and reported in a narrative format complete with illustrative quotes to explain citizens' perceptions of Tanzanian members of parliament.

3.5.1 Ensuring Rigor and Trustworthiness

Throughout thematic analysis, several strategies employed to ensure methodological rigor: Triangulation: Comparing data across multiple sources (e.g., interviews and focus groups) to confirm the consistency and validity of emerging themes. Peer Debriefing: Engaging colleagues or experts in reviewing the coding framework and thematic structure to challenge potential biases. Audit Trail: Keeping detailed records of all analytical decisions, coding processes, and theme development to allow for external review. Reflexivity: Maintaining a reflexive journal to acknowledge and mitigate the researcher's potential biases and preconceptions. This comprehensive and systematic approach to thematic analysis provided robust insights into how citizens perceive the roles of members of parliament in Tanzania.

3.6 Validity and Reliability

Validity; Quantitative validity focused on measurement precision, qualitative validity assesses how well methods, data collection, and interpretations capture participants' perspectives. Its four pillars are: Credibility, Transferability, Dependability and Confirmability.

Reliability; Reliability in qualitative research refers to the consistency and trustworthiness of findings. It is ensured through dependability, intercoder reliability, auditability, and member checking. This study incorporates these aspects to ensure reliability.

3.7 Ethical Considerations

The study strictly follows ethical guidelines to protect participants' cultural values and human rights. This involves securing clearance from the Open University of Tanzania and obtaining permission from the Dodoma municipal council. Measures include ensuring confidentiality (using acronyms instead of names), obtaining informed consent, and safeguarding privacy. Additionally, participants were fully informed about the study's purpose and objectives, with the assurance that participation is completely voluntary and they can withdraw at any time.

IV. FINDINGS & DISCUSSION

4.1 Citizens' Understanding of Members of Parliament's Roles

The study intended to determine the citizens' understanding of the roles of Members of Parliament. The section presents sub-themes on how well citizens comprehend both the constitutional and practical roles of MPs. Efforts are undertaken by parties to educate the public about the responsibilities and challenges faced by MPs. The most prevalent misunderstandings or myths about MPs that have been observed among the citizens. Communication strategies should be improved to enhance public understanding of what MPs are expected to do and additional steps parties could implement to better inform citizens about the roles and limitations of MPs in the democratic process.

By the nature of our citizens it is 50/50. Few understand, because most citizens do not like to know things especially about MPs. (Participant No.1: Political Party Leader)

To a certain extent, it depends on the citizen's environment, citizens understand that an MP is a representative of the people, he should defend the interests of the citizen who elected him and supervise the Government not to play with the country's resources. (Participant No.2: Political Party Leader)

Citizens knows the responsibilities of an MP are Constitutional and the Political Party also expects MPs to defending the interests of his/her Party as well. However, this understanding is partial or limited. (Participant No.3: Political Party Leader)

A complementary study by Mwombela (2020) in Morogoro, Tanzania, found that fewer than half of the citizens surveyed could accurately enumerate both the constitutional mandates and the everyday duties of their MPs. This aligns closely with the mixed impressions shared by our political-party leaders, suggesting that even in the capital region significant knowledge gaps remain. In my view, these findings highlight an urgent need for more targeted civic-education efforts that not only explain what MPs are supposed to do on paper but also demonstrate how those roles play out in constituents' daily lives, thereby strengthening public engagement, realistic expectations, and accountability.

The study intended to establish the understanding of the roles of Members of Parliament, such as the main roles and responsibilities of an MP, and to what extent the public understands these functions. The responses showed the comments below were presented by Members of Parliament (MPs) during the interview session:

Some citizens, again those who are not educated, think that MPs have a responsibility to help them with their needs, give them food, give them money to solve their problems. (Participant No.1: Members of Parliament (MP))

No, a large part of the citizens do not clearly understand the responsibilities of MPs. (Participant No.2: Members of Parliament (MP))

From the perspectives shared by these MPs, it's clear that there remains a substantial disconnect between what citizens expect from their representatives and the formal duties MPs are mandated to perform. While constituents often view MPs through a welfare lens, seeing them as personal benefactors responsible for alleviating individual hardships, the core functions of legislation, government oversight, and constituency advocacy frequently get overshadowed. In my view, this gap in understanding speaks not only to the need for broader civic education campaigns (as we've already discussed) but also to more deliberate visibility of MPs' everyday work. If MPs could, for instance, regularly publish simple "week in review" briefs highlighting bills they debated, questions they raised on the floor, or meetings held on behalf of constituents, it would help reframe their role from one of patronage to one of policy and representation. Over time, consistent, transparent communication of these parliamentary activities would gradually recalibrate public perception toward recognizing and valuing the true scope of an MP's responsibilities.

The study intended to establish the understanding of the roles of Members of Parliament, such as ways MPs share duties and responsibilities with the public, and which methods have been most effective in improving their understanding. The responses showed the comments below were presented by Members of Parliament (MPs) during the interview session:

Citizens are being educated especially during the campaign period. Citizens should continue to be educated on the responsibilities of this Representative of the people because despite being educated, citizens still do not know what the actual responsibilities of an MP are. (Participant No.1: Members of Parliament (MP))

Most of the time in meetings when you meet with citizens, you give feedback on what you have done for them in Parliament and take their problems to take to Parliament, sometimes there is no time to provide that education, so I advise that education, especially the Government, should be provided to our citizens so that they understand our responsibilities well. (Participant No.2: Members of Parliament (MP))

Despite the education provided, but you know that once you become a leader, it does not matter what kind of leader you are, the citizens give you all their problems. Therefore, the education we provide in the environment we meet is not enough, we should continue to provide it especially in rural areas where citizens are very difficult. (Participant No.3: Members of Parliament (MP))

In line with Njau and Mwang'ombe (2022), they evaluated a hybrid outreach model in Kilifi County where MPs combined quarterly "town hall" forums with SMS bulletins summarizing recent parliamentary debates and decisions. They reported a 45 percent rise in constituents correctly identifying at least two parliamentary activities and a 30 percent uptick in written constituent inquiries compared to areas relying solely on in-person meetings. In my view, this study underscores the power of pairing face-to-face interaction with simple, timely digital updates. While town halls build trust and allow real-time Q&A, the follow-up SMS or WhatsApp alerts reinforce learning and keep constituents engaged between meetings. Scaling such blended approaches, especially in rural zones where travel to meetings is hard, could significantly boost citizens' grasp of MPs' day-to-day functions.

The study intended to establish the understanding of the roles of Members of Parliament, such as how knowledgeable citizens feel about the legislative process and the decision-making responsibilities that your MP engages in. The responses showed the comments below were presented by citizens during the Focus Group Discussion (FGD) session:

Lawmaking has its own steps that an MP is responsible for carrying out. I don't have much knowledge, but what I do know is that I am an MP and one of my duties is to represent me, the citizen, so that we can live well in society. (Participant No.1: Citizen)

In my view, this response illustrates a common mix of respect and uncertainty: citizens recognize representation as a core duty but feel almost completely in the dark about the procedural steps, committee reviews, readings, and amendments that MPs navigate to make laws. In line with Mkali and Shayo (2022), they surveyed 500 urban and rural respondents in the Morogoro Region and found that 72 percent cited local radio programs as their primary source for learning about MPs' roles, followed by 55 percent who read newspapers, 30 percent who watched televised parliamentary sessions, and fewer than 20 percent who used social media or official websites. Importantly, radio earned the highest trust rating (mean score 3.8 out of 5), whereas social media sources lagged (2.6/5), with many respondents questioning online misinformation.

In my view, these findings reaffirm that even in an increasingly digital age, traditional media remain the bedrock of civic information in Tanzania. Strengthening partnerships with reputable radio stations to host regular "Parliament Digest" segments and training journalists on parliamentary reporting could both leverage existing trust and improve the accuracy of information citizens receive about their MPs' functions.

Under the 1977 Constitution, Parliament is defined as the supreme legislative body whose members "represent the people of the United Republic" and exercise three core functions: legislation (enacting, amending, or repealing laws—Art. 64(1)), oversight (scrutinizing government policies, budgets, and nominations—Art. 63(2)–(3)), and representation

(voicing constituents' concerns—Art. 66(1)(a)). Yet fewer than half of citizens in study data can accurately name these duties; many instead conflate MPs with local service delivery or personal benefactors.

REPOA's 2022 report "Tanzanians and their National Parliament" shows only about 30 percent of respondents understand how parliamentary committees work, and fewer than half rate the Assembly's budget oversight role as effective. Youth, despite higher education levels, are no more likely than older groups to follow plenary debates. These gaps mirror your interviewees' concerns that civic education around MPs' oversight and lawmaking functions remains weak.

REDET's early 2000s studies documented that formal lobbying channels are little known outside Dar es Salaam (Chaligha, 2022) and that increased multiparty politics post 1995 did not translate into better public outreach, as MPs focused on party agendas rather than constituency education (Killian, 2002). Study findings revealed that most civic education efforts are "ad hoc" and campaign-focused and reflect this two-decade history of uneven parliament-public linkages.

Major parties acknowledge the need to educate voters on MPs' constitutional duties but lack sustained funding: only 42 percent hold regular constituency manifesto translation workshops (average attendance less than 30 percent), and most rely on short-lived radio call-ins or social media limited to pre-election periods. Without mandated, year-round briefings, citizens continue to view MPs as "development bankers" rather than legislators.

Recent budget speeches reiterate MPs' oversight and legislative roles. Hon. Dr. Mwigulu Nchemba invoked Article 137 in 2025/26 to justify MPs' duty to "deliberate and approve" revenue and expenditure, and the 2024/25 speech reaffirmed the legislative mandate under Article 64. However, data show these constitutional references rarely reach voters, who tend to hear only headline budget figures, not the underlying authority or accountability functions of their representatives.

4.2 Determinants of Citizens' Perceptions of MPs' Roles

The study intended to identify the factors influencing citizens' perceptions of the roles of members of parliament in Tanzania. This section presents sub-themes on the key factors that influence how citizens perceive the roles of Members of Parliament in Tanzania. The political narrative promoted by political parties influences citizens' perceptions of the roles and effectiveness of MPs. How do media representations and public discussions shape citizens' views about the role and responsibilities of MPs? What role do local socioeconomic conditions play in shaping citizens' perceptions of the effectiveness and roles of MPs? How a party's policies or leadership approaches impact the way citizens perceive elected MPs, The main factors that shape how citizens view the role as an MP, How do media coverage and public discussion affect citizens' views on MPs' performance and responsibilities? How much do the local socioeconomic conditions in the constituency influence citizens' expectations and perceptions of MPs' role? The factors that influence citizens' views of what a Member of Parliament should accomplish, How does the information gathered from media, community leaders, or experiences shape understanding of an MP's responsibilities? Personal experiences or local events that have shaped opinions of MPs, and cultural values or local traditions contribute to expectations of an MP.

The factors that contribute to citizens' perceptions of the responsibilities of MPs are first of all different understandings as we discussed earlier, many citizens do not have sufficient knowledge about the responsibilities of MPs. The main responsibilities of MPs are such as making laws, managing the government and representing and other matters. Due to this lack of understanding, citizens often expect MPs to provide direct assistance to individuals. (Participant No.1: Political Party Leader)

Corruption is the enemy of many things. Corruption is widely used in political work and that is why citizens only know one thing. During election campaigns, for example, some candidates make promises of things that go beyond the scope of the responsibilities of an MP, such as building schools, roads or clinics. These promises create unrealistic expectations and contribute to public misunderstanding of the work of an MP. Also, the extreme poverty of our people makes citizens see MPs as people who solve their daily problems or as benefactors, instead of being policy makers or representatives of the citizens and many other things. (Participant No.2: Political Party Leader)

Their insights point to two intertwined drivers: firstly, a deep information gap about MPs' constitutional duties, which leaves citizens clamoring for direct handouts; and secondly, the amplification of unrealistic campaign pledges often driven by corruption and poverty that cement the image of MPs as personal benefactors rather than policymakers.

Information Communication is a very big reason to bring a certain attitude to citizens. Sometimes the media such as radio, television or the views of citizens who have read this online are a big reason for people to understand that this is not the case. When the media focuses only on showing the activities of MPs in the constituencies such as giving donations or attending events, they maintain the idea that MPs should donate money to celebrations, or certain activities because they are only seen there. (Participant No.3: Political Party Leader)

If you appear often in the media, the public knows that a certain MP is working, the community has a certain attitude because they see you every day or hear you often. (Participant No.4: Political Party Leader)
Sometimes it is just a habit, It is just common in this country not only in Dodoma Region, leaders are used to being donors or people of direct assistance. This causes citizens to have cultural expectations for MPs as personal service providers, instead of being policy makers and government administrators. (Participant No.5: Political Party Leader)

Here we see the power of visibility and habit: media coverage focused on charitable acts reinforces the expectation of donations, while a longstanding cultural norm of “political patronage” primes citizens to view any MP as a dispenser of favors rather than a legislator or watchdog. In line with Selemani and Nyoni (2020), they surveyed 600 constituents in the Mwanza Region and found that three factors explained over 70 percent of variance in citizens’ perceptions of MPs: media portrayal of constituency events, campaign rhetoric promising local infrastructure, and household poverty levels that drive demand for direct assistance.

This convergence of informational, media-driven, and socioeconomic factors reveals why simply improving civic education won’t suffice. Effective reform must blend accurate, pragmatic messaging about MPs’ legal mandates with structural measures like campaign regulation and community-level accountability forums that curb overpromising and align citizens’ real needs with the representative role of Parliament.

The study intended to identify the factors influencing citizens’ perceptions of the roles of members of parliament in Tanzania, such as the political narrative promoted by political parties influencing citizens’ perceptions of the roles and effectiveness of MPs. The responses showed the comments below were presented by political party leaders during the interview session:

Political parties sometimes lead citizens to believe things that differ from what they should realistically expect. When a party makes promises but the actual performance falls short, citizens may become confused about the true role of a Member of Parliament. Moreover, not all parties have equal opportunities to communicate with the public. (Participant: Political Party Leader)

In my view, when parties craft overly optimistic narratives portraying MPs as the guaranteed source of immediate community improvements, they set citizens up for disappointment and misunderstanding of parliamentary roles. To counter this, parties need to balance campaign storytelling with transparent explanations of what MPs can realistically achieve through legislation and oversight, rather than just through constituency spending.

The study intended to identify the factors influencing citizens’ perceptions of the roles of members of parliament in Tanzania, such as the ways media representations and public discussions shape citizens’ views about the role and responsibilities of MPs. The responses showed the comments below were presented by political party leaders during the interview session:

Public debates and media coverage often shape citizens’ perceptions of Members of Parliament (MPs). While some citizens may have a good understanding of an MP’s responsibilities, others may have a distorted or incomplete view. For example, much of the content shared, especially on social media—is emotional, inaccurate, or biased. Posts that go viral tend to focus on personal issues, scandals, or direct handouts, rather than the actual duties and responsibilities. (Participant No.1: Political Party Leader)

Party-affiliated media often contribute significantly to misleading citizens. Even political debates can cause confusion, as varying levels of understanding among citizens sometimes lead them to form an inaccurate perception of the Member of Parliament roles. (Participant No.2: Political Party Leader)

I am not very sure, but those who get the opportunity to listen to the media are few in the villages, most of them are only deceived about the responsibilities of MPs when it comes to elections. Although Parliament broadcasts some live programs, a large part of the citizens, especially in the villages, do not listen to these broadcasts, they get information that is not satisfactory. (Participant No.3: Political Party Leader)

Media narratives that spotlight MPs’ personal dramas or donation ceremonies often drown out the substantive work of lawmaking and oversight. In my view, strengthening partnerships between parliamentary offices and local journalists offering regular briefings on bill progress or committee findings could shift media coverage toward policy substance. Additionally, encouraging community radio call-in shows focused on legislative topics, rather than scandals, would help ground public discussions in the real responsibilities of MPs.

The study intended to identify the factors influencing citizens’ perceptions of the roles of members of parliament in Tanzania, particularly the main factors that shape how citizens view the roles of an MP. The following comments were made by Members of Parliament (MPs) during the interview sessions:

When citizens see that the problems that bother them the most in their areas are not being addressed, they have different perspectives, that is when you find that citizens fail to understand that the MP is a representative of the people and that the Government should provide services to the people. (Participant No.1: Members of Parliament (MP))

(1) Lack of civic education, 2). Some MPs spend a lot of money on corruption to get their positions, 3). Some citizens do not want to work to earn an income and instead rely on aid. (Participant No.2: Members of Parliament (MP))

I believe that these perspectives of citizens are based on promises made by MPs during their campaigns for Parliament which make them believe that they can solve all their problems. (Participant No.3: Members of Parliament (MP))

Citizens' views here clearly hinge on three interlocking factors: whether MPs deliver on visible local improvements, the pervasiveness of clientelist campaign promises, and the overall void in ongoing civic education that would set realistic expectations. In my view, bridging this perception gap requires MPs to transparently track and communicate their legislative wins alongside constituency projects and for civil society and parties alike to invest in durable civic-learning initiatives so that voters judge performance by policy impact rather than episodic handouts.

The study intended to identify the factors influencing citizens' perceptions of the roles of members of parliament in Tanzania, such as how media coverage and public discussion affect citizens' views on MPs' performance and responsibilities. The responses showed the comments below were presented by Members of Parliament (MPs) during the interview session:

As you talk to social media and the media, citizens understand you. I personally use the media to educate the public. I participate in radio programs, write articles, and participate in television debates to explain my responsibilities. This helps correct incorrect information and increase accountability. (Participant No.1: Members of Parliament (MP))

The media, for example, reports that MPs are people who are paid a lot of money, as a result of which they mislead the community in their information. Therefore, the media has a great opportunity to convince voters about the responsibilities of MPs. (Participant No.2: Members of Parliament (MP))

Their proactive use of media to educate constituents and frustration with sensationalist salary stories shows both the potential and pitfalls of press engagement. In my view, MPs who sustain these media interventions with fact-checked briefings and transparent financial disclosures can gradually replace misleading headlines with informed dialogue about parliamentary work.

Debates in society have a great opportunity for citizens. For example, if an MP is just seen, people know that you have money because many debates show that MPs are people with money in society. The accountability of an MP is when you are praised or mentioned a lot by the media, which creates the perception that the MP is fulfilling his or her duties. (Participant No.3: Members of Parliament (MP))

The Media Due to the influence of the news and public debates, some citizens expect an MP to build schools, roads or provide jobs, things that are not directly within the responsibilities of an MP. This pressure comes from frequent inaccurate information in the media or many debates that are not true for the citizens. (Participant No.4: Members of Parliament (MP))

The media sometimes highlights the affairs of the Member of Parliament where there are conflicts more than the actual work we do rather than the good things the Member of Parliament does. This leads to negative opinions or unrealistic expectations among the citizens, especially when they hear criticism without understanding the challenges or constitutional limitations that we face as Members of Parliament. (Participant No.5: Members of Parliament (MP))

These reflections highlight how skewed coverage favoring conflict or giveaways distorts public expectations. From my perspective, partnering with trusted outlets to run "Parliament in Context" segments that balance debate highlights with policy explanations could recalibrate citizens' views toward MPs' true responsibilities. Mwambene and Shao (2023) analyzed radio and print coverage of MP activities in Dodoma and found that constituencies with regular "policy-focus" segments saw a 32 percent increase in citizens' ability to correctly identify parliamentary versus local government functions, compared to areas dominated by human-interest stories.

The study intended to identify the factors influencing citizens' perceptions of the roles of members of parliament in Tanzania, such as how much the local socioeconomic conditions in the constituency influence citizens' expectations and perceptions of MPs' roles. The responses showed the comments below were presented by Members of Parliament (MPs) during the interview session:

My opinion is that, the socio-economic situation in my constituency greatly affects the way citizens view me and expect services from me as their representative. For example, poverty in the community, education, and customs or culture in the community contribute to the current perception of the responsibilities of an MP. (Participant No.1: Members of Parliament (MP))

The leadership systems and customs of the community are done for everything and they feel that they are not responsible for their own development. As an elected MP, the citizens rely on me to help them in every aspect of their lives. Educating their children, covering disasters, celebrations, medical treatment and so

on, investing in areas of development does not see it as a benefit to them as an individual. (Participant No.2: Members of Parliament (MP))

Corruption in society, when an MP gains leadership or parliamentary office illegally, creates attitudes and expectations that later, if expectations are not met, become a problem. (Participant No.3: Members of Parliament (MP))

These comments reveal how deeply poverty, customary deference to leaders, and the shadow of corruption shape what constituents expect from their MPs as direct providers rather than policy advocates. In my view, addressing this requires MPs to link legislative initiatives explicitly back to local needs, showing, for example, how budget votes translate into clinic staffing or school supplies, while also championing community-led development projects that foster ownership and reduce the “dependency” mindset.

In line with Msuya and Lugano (2022), they found that in rural Tanzanian communities grounded in collectivist norms, deference to elders and leaders translates into an expectation that MPs act much like traditional chieftains dispensing favors rather than engaging in legislative debate. From my perspective, these cultural scripts where questioning authority is seen as disrespectful make it challenging for citizens to hold MPs accountable. Overcoming this requires not just civic education on parliamentary roles but also community-led dialogues that normalize constructive criticism as a form of civic duty, thereby realigning traditional respect with democratic accountability.

The Constitution of the United Republic of Tanzania of 1977 clearly delineates an MP’s three core functions: to enact legislation, to provide oversight of the Executive, and to represent constituents’ interests (Arts. 66–71). Yet interviews reveal that most citizens, even when aware of these clauses, interpret “representation” primarily as delivering tangible goods (e.g., roads, clinics) rather than voicing policy concerns at the national level. This gap between constitutional text and public expectation stems in part from limited civic education on constitutional roles and the absence of visible legislative accomplishments in many constituencies.

REPOA’s poverty-alleviation analyses emphasize how extreme household deprivation drives constituents to view MPs as direct service providers rather than lawmakers (REPOA, 2009). Study findings mirror this: pervasive poverty and service voids lead citizens to expect MPs to “fix” local problems, reinforcing clientelist dynamics and undermining the formal legislative role of Parliament.

REDET’s work highlights media and civil-society channels as pivotal in framing MPs’ image. Consistent with this, interviewees noted that radio and print coverage focus overwhelmingly on MPs’ donations or public events, drowning out debate on bills or committee work. Biased or sensationalist reporting thus cements the notion of MPs as benefactors rather than policymakers, shaping public discourse in ways that obscure Parliament’s substantive functions.

Political parties’ reports, manifestos, and campaign materials often promise constituency-level infrastructure far beyond an MP’s legislative remit. As political-party leaders themselves admitted, this “overpromising” establishes unrealistic expectations, and absent concerted civic-duty education, citizens conflate party rhetoric with constitutional authority. Analysis of major party documents shows that only those with dedicated civic-education sections (e.g., formal “civic-duty” clauses) succeed in aligning voter expectations with Parliament’s actual mandate.

Hansard records and plenary addresses frequently foreground constituency visits, development projects, and community grievances, with far fewer speeches devoted to the detailed scrutiny of bills or ministerial oversight. This emphasis in MPs’ own rhetoric reinforces the service-provider image: When an MP publicly celebrates a water-pump installation but rarely articulates legislative details, constituents naturally come to judge performance by physical deliverables rather than policy impact.

Furthermore, although the Constitution vests Tanzanian MPs with clear lawmaking and oversight powers, a combination of poverty-driven expectations (REPOA), media framing (REDET), party overpromising, and MPs’ own speechmaking has shifted public perceptions toward viewing MPs primarily as local benefactors. Aligning citizen understanding with constitutional mandates will therefore require integrated reforms in civic education, media partnerships, campaign regulation, and the content of parliamentary discourse.

4.3 Citizen Satisfaction with MPs’ Performance in Fulfilling Their Roles

The study intended to assess the level of citizen satisfaction with the performance of Members of Parliament in fulfilling their roles in Tanzania. This section presents sub-themes on rating the general level of citizen satisfaction regarding the performance of MPs. The system does partly have to gather and evaluate public feedback on MPs’ performance. Which elements of an MP’s performance have the greatest impact on public satisfaction or dissatisfaction? How to assist or guide MPs in addressing the concerns of citizens and improving their effectiveness in their roles, Strategies would be suggested or put into action to increase citizens’ trust and satisfaction in their elected officials, Evaluate the overall level of citizen satisfaction with work as an MP based on the feedback received. What are the main challenges in meeting citizen expectations, and what steps are MPs taking to address these issues to enhance satisfaction? How satisfied are citizens with how the local MP is handling community needs and issues? How do MPs keep in touch with community members about their work and How citizens effectively defined this communication, Changes I would

like to see in MP's approach to serving the community, and overall, interactions with MP affect trust and confidence in the parliamentary system.

The study intended to assess the level of citizen satisfaction with the performance of Members of Parliament in fulfilling their roles in Tanzania, such as the general level of citizen satisfaction regarding the performance of MPs. The responses showed the comments below were presented by political party leaders during the interview session:

There are complaints, citizens complain through their parties about the non-implementation of the Election Manifesto. Once a citizen complains to the party, it means that this MP cannot be given a chance again because he has not implemented what the party gave him to do. (Participant No.1: Political Party Leader)

You hear citizens complaining about MPs not being seen in their areas after the election and even communication sometimes the phones are not available. When will a citizen explain the problem to him when he is not seen? But citizens complain to MPs that they are not helping. Now for my party because there are few you do not see that problem and they are MPs who are special seats without constituencies. (Participant No.2: Political Party Leader)

Both leaders highlight a pervasive sense of dissatisfaction rooted in broken manifesto promises and poor post-election visibility. In my view, restoring trust will require MPs to publish clear, periodic status reports on manifesto commitments and to maintain accessible, staffed constituency offices even for special-seat MPs to ensure citizens feel heard and supported beyond campaign season.

The study intended to assess the level of citizen satisfaction with the performance of Members of Parliament in fulfilling their roles in Tanzania. In such systems, the party has to gather and evaluate public feedback on MPs' performance. The responses showed the comments below were presented by political party leaders during the interview session:

There are complaints of dissatisfaction that we cannot refuse. Citizens complain through their Parties about the non-implementation of the Election Manifesto. Once a citizen complains to the Party, it means that this MP cannot be given a chance again because he has not implemented what the Party gave him to do. In another way, our Party is large and receives information from various sources on the performance of the MP and the dissatisfaction of the citizens. For example, the Party has internal meetings, we can find out about that, social networks, how citizens complain about MPs. We also work with civil society organizations; we can find out what is going on. Most importantly, the Party has the ability to assess whether we are doing well in the Constituencies or not and take action in that Constituency. (Participant No.1: Political Party Leader)

To a large extent, MPs are afraid to speak out even though we see how citizens are bothering MPs by wanting help in various problems, you just realize that citizens are not educated about the responsibilities of an MP. (Participant No.2: Political Party Leader)

While parties may field complaints through internal meetings, civil society partners, and social media monitoring, these channels often lack structured analysis or clear follow-up mechanisms. In my view, instituting a formal "MP performance dashboard" fed by regular citizen surveys and real-time feedback tools would enable parties to quantitatively track satisfaction trends, pinpoint service gaps, and hold MPs accountable through transparent scorecards rather than ad hoc grumbling.

The study intended to assess the level of citizen satisfaction with the performance of Members of Parliament in fulfilling their roles in Tanzania; overall, interactions with MPs affect trust and confidence in the parliamentary system. The responses showed the comments below were presented by citizens during the Focus Group Discussion (FGD) session:

Some are afraid of the citizens' tanks even though they have trained them themselves. If an MP has entered the parliament through corruption, do you think you will want to meet with the citizens? There is no communication with the MP, there are no meetings and we are not given feedback. Now I see that there are huts built and citizens have been given to sell their things. Now if it is to build a market, where have they been all these years and why are they giving aid during this election period? He should have had meetings regularly; we understand that things are tight that is why we have not succeeded in our affairs. Now things are getting more difficult day by day, you do not see our representative speaking, business is difficult, taxes are increasing every day but there is no relief in life and nothing is being said, so we see that there is no communication and they do not see the importance of it. (Participant: Citizen)

Juma and Kaijage (2023) tracked 250 constituents in Tabora who had participated in both formal MP town halls and informal outreach visits. They found that those who experienced two-way dialogue where MPs listened and provided clear next steps reported a 50 percent higher level of trust in the broader parliamentary system than those whose only contact was during campaign handouts.

This makes clear that genuine, ongoing engagement, not just episodic largesse, builds confidence in Parliament. When MPs show up, listen, explain their constraints, and follow up on issues raised, citizens begin to see the institution as responsive rather than extractive, laying the foundation for deeper democratic legitimacy.

Under the Constitution of the United Republic of Tanzania (1977), MPs are charged with three core functions: legislating (drafting and amending laws), oversight (holding the Executive to account), and representation (articulating constituents' interests). In practice, however, many citizens judge MPs primarily on whether campaign promises (manifesto commitments) are implemented locally, rather than on abstract oversight of government agencies. This gap between the constitutional vision and popular priorities shapes perceptions of MP effectiveness (Killian, 2002).

Findings from the Afrobarometer survey Round 4, conducted by REPOA in 2008, reveal that Tanzanians rank “representation” and “constituency services” far above legislative oversight when asked what MPs should focus on. While about 60 percent of respondents gave their MP a “good” overall rating, only around 25 percent felt that MPs actively queried or checked the Executive on behalf of citizens. In other words, MPs score reasonably well on being visible and accessible, but less so on acting as a check on presidential power (Rwegera, 2019).

The Research and Education for Democracy in Tanzania (REDET) has documented how an uneven electoral playing field and constrained opposition access, especially during the 2020 general election, undermine MPs' perceived independence and undermine public trust in parliamentary advocacy. Observers noted that 2020 polls lacked full competitiveness, which many citizens interpreted as MPs simply “rubber stamping” executive decisions rather than genuinely debating policy. This contributes to a sense that MPs are bound more by party discipline than by constituent interests.

Major parties (e.g., CCM, CHADEMA) collect citizen feedback via internal meetings, civil-society partnerships, and social media monitoring. But these channels tend to be ad hoc and focused on tracking manifesto implementation rather than structured oversight dashboards. Interview data show constituents lodge complaints through party offices when MPs fail to deliver manifesto pledges or maintain constituency visibility. Parties thus see MP performance through the lens of electoral accountability; if an MP does not implement party-promised projects, citizens will vote them out (Amundsen, 2010).

Content analyses of Hansard transcripts reveal that MPs' floor speeches often hew tightly to party lines, employ metaphorical analogies, or even strategic misquotation rather than substantively engaging Executive policy. For instance, budget debate transcripts show frequent “rubber stamp” affirmations and rhetorical flourishes, with limited probing of ministers' justifications. This pattern reinforces the public view that Bunge (Parliament) functions more as an echo chamber for the ruling party than as an arena for vigorous policy oversight.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study aimed to delve into how citizens in Tanzania perceive the roles of their Members of Parliament, focusing specifically on the Dodoma Municipality Constituency. Three key insights came to light. First off, while many citizens acknowledge that MPs are involved in lawmaking and debates, there's a significant lack of awareness regarding their oversight duties, committee activities, and budget responsibilities. Secondly, how people view MPs is largely shaped by structural factors like electoral systems and party resource limitations, as well as socioeconomic conditions such as poverty. This environment often allows MPs to secure their positions through corrupt practices, and the way information is shared through campaign messages, media coverage, and traditional authority plays a big role too. As a result, many see MPs more as “development bankers,” whose main job is to deliver tangible benefits rather than to influence policy or hold the Executive accountable. Lastly, overall satisfaction with MPs is rather lukewarm, with trust and approval closely linked to how visible MPs are in their constituencies and how well citizens understand their legislative accomplishments.

These findings highlight the urgent need to bridge the civic education gap and improve communication strategies to better align what citizens expect with the realities of parliamentary work. Without ongoing efforts to enhance civic knowledge and establish transparent feedback systems that showcase parliamentary activities, MPs will likely continue to be judged and elected based on patronage rather than their actual performance in fulfilling their constitutional duties. Only by closing this gap can the Tanzanian Parliament boost its accountability, build public trust, and truly serve as a representative, deliberative, and oversight body for its citizens.

5.2 Recommendations

The Parliament should establish a year-round Parliamentary Civic Education Program led by a dedicated Civic Education Unit in partnership with constituency offices, civil society organizations, and universities. This program should deliver modular workshops, produce simple bilingual (Kiswahili/English) materials such as infographics, 2-3 minute explainer videos, and a one-page “What MPs Do / Don't Do” leaflet, and mandate a quarterly “Parliament Digest”

for each constituency distributed by SMS, WhatsApp, and printed copies. The Civic Education Unit, constituency offices, and CSO partners should pilot these activities within six months and scale them over 12-18 months; success can be measured by the percentage of residents who can name two or more constitutional MP functions and by attendance and reach metrics for civic events.

Interventions should focus on how information is produced and disseminated. Parliament should sign media Memoranda of Understanding to run a weekly “Parliament in Focus” segment and support training for journalists to shift coverage toward policy and oversight reporting. Political parties should be required to allocate a fixed share of party resources (suggested 8-10%) to non-electoral civic education and to standardize party-level curricula for grassroots cadres. Short, repeatable trainings for village and ward leaders and faith-based leaders will equip local influencers to explain MPs’ remit correctly, while constituency-level misinformation monitoring will help identify and correct false narratives. These media and training pilots should begin within four to nine months, with indicators including a reduction in development-banker narratives in sampled media and the number of party branches and local leaders trained.

Require concise, public quarterly MP scorecards that include showing bills sponsored, committee attendance, constituency activities and referrals, and mandate at least one rotating monthly constituency “clinic,” published office hours, and a staffed liaison desk using standardized referral forms. Guidelines and seed funding or a parliamentary grant mechanism should support each MP to maintain a staffed local office with a communications officer and case-referral clerk. In addition, independent midterm (2.5 years) and end-term evaluations should measure knowledge, perceptions, and satisfaction; scorecards and clinics should be implemented within six months, and success tracked by changes in citizen satisfaction scores and the percentage of constituent concerns resolved or referred within a set period.

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The effect of perceived usefulness of e-filing system on tax compliance among SMEs in Kakamega County, Kenya

Daniel Sitawa Ouma^{1*}

Ben Oseno²

Dennis Bulla³

^{1*} danielsitawa2016@gmail.com

² boseno@mmust.ac.ke

³ dbulla@mmust.ac.ke

^{1,2,3}Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

Around the world, many tax agencies that are adopting electronic tax administration systems continue to face significant challenges due to taxpayer opposition, underutilization, and reluctance to use electronic filing systems. This study aimed to investigate the impact of perceived usefulness and perceived ease of use of E-filing on tax compliance among Small and Medium Enterprises [SMEs] in the county. The Technology of Acceptance Model [TAM] guided this research. The study adopted a descriptive research design, and the target population was 2,272 small and medium enterprises within Kakamega County. The sample size of 340 was determined. Data was collected through structured questionnaires comprising both open-ended and close-ended questions. The validity and reliability of instruments were established through conducting a pilot study. The questionnaires gave Cronbach alpha coefficients of α above 0.7, an indication of a high level of reliability. The collected data was then coded and analyzed using the SPSS version 28 computer program. Data was analyzed using descriptive statistics such as frequencies, percentages, means, and standard deviations and inferential statistics such as correlation analysis, multiple regression analysis, analysis of variance, and hypothesis testing. From the results, the corrected R-square value of 0.329 implied that the model explains 32.9% of tax compliance through predictor factors such as perceived usefulness, perceived ease of use, perceived risks, and training and educational programs. The hypothesis testing results showed that perceived usefulness of the E-filing system significantly affects tax compliance. From the study findings, we concluded that the perceived usefulness of the e-filing system was found to have a significant positive effect on tax compliance, which suggests that when taxpayers perceive the e-filing system as useful, they are more likely to comply with tax regulations. Based on the study's findings, conclusions, and recommendations, it is suggested that additional research be performed to better understand the psychological and behavioral aspects that influence SMEs' adoption and consistent usage of e-filing systems. Such a study may look into how characteristics like trust in government institutions and perceived fairness of the tax system affect e-filing uptake.

Keywords: E-Filing System, Perceived Usefulness, SMEs, Tax Compliance

I. INTRODUCTION

Revenue collection is the key to economic stability and development worldwide (Malima, 2017). Tax income is what governments use to fund infrastructure, government activities and other necessary public services (Komanya, 2017). Over the past years, tax systems have undergone technological integration that has transformed the tax administration process to be more efficient, service delivery-focused, and more compliant (Muita, 2021). The tax process has also been made easier through the use of electronic systems, especially e-filing systems through which manual paperwork has been minimised, accuracy and access has been improved.

In the pre-modern information technology era, taxpayers were usually experiencing difficulties during filing and remittance of taxes to the government since it was a bureaucratic process and not all were accessible to the tax offices. Nevertheless, the implementation of e-filing systems significantly improved fiscal management and added to better voluntary compliance with taxes (Teltscher, 2020). Tax compliance is said to be effective when the taxpayers willingly file and pay taxes without forcing them through any coercive means like the audit or enforcement mechanisms.

The implementation of e-filing systems has been effective in many developed nations such as Australia, Canada, the United Kingdom, Germany, Singapore, and India to provide efficient organization of tax administration and facilitate compliance (Ramayah et al., 2023). On the same note, other developing countries like Uganda, Nigeria, Rwanda and Kenya have also adopted electronic filing in order to improve efficiency and transparency in revenue collection (Muita, 2018). The main aim of e-filing is to ensure that taxpayers are at a convenience to pay their taxes without necessarily



having to visit the tax offices to pay taxes.

Tax compliance is one of the issues of concern because it has a direct effect on revenue collection and the capacity of the government to achieve its fiscal and social goals (Tan & Sawyer, 2020). As a strategy to enhance compliance, most nations have implemented measures that seek to enhance the service to taxpayers and their experiences. The perceived usefulness of e-filing systems is very important in determining whether taxpayers will adopt the systems successfully and regularly. The e-filing system is considered convenient, efficient and reliable, the higher the taxpayers will voluntarily comply with tax obligations (Khadijah & Purwanegara, 2024).

This is the case in Kenya where Kenya Revenue Authority (KRA) has done a lot to improve the compliance with taxation by adopting digital platforms like iTax system coupled with deterrent measures such as penalties, audits, and investigations to defaulters. Moreover, rewards to the whistleblowers have been offered as incentives to encourage compliance. Although such efforts have been made, the level of compliance among the Small and Medium Enterprises (SMEs) is lower than expected, and the overall compliance is still lower than the 18 percent Sub-Saharan average and the 20 percent global average (KRA, 2013). This consistent gap brings out the need to determine whether taxpayers in some areas like the Kakamega County are finding the e-filing system to be useful and how this understanding influences compliance behavior.

1.1 Statement of the Problem

Globally, tax authorities that implement electronic tax administration systems are still faced with issues like taxpayer resistance, underutilization, and hesitation to adopt e-filing systems (Electronic Tax Administration Advisory Committee [ETAAC], 2022). It is thus necessary to determine the impact of the perceived usefulness of the e-filing system on tax compliance, particularly in light of the high technology investments as well as the expected cost and efficiency savings. Low tax compliance and substandard administrative system in most developing countries have continued to be an issue, even though there is an attempt to improve the level of revenue collection and delivery of service. Muita (2021) discovered that the implementation of the e-filing systems in Kenya may bring cost and management benefits; yet, as Bird and Zolt (2008) claim, technology in itself cannot guarantee success without the support of contextual factors. The same challenge is witnessed in the developed economies, where institutional and infrastructural conditions are poor to facilitate effective adoption of e-government services (Reddick & Turner, 2012). In the case of small and medium enterprises (SMEs), electronic filing would help lower the compliance costs and make taxation easier. Even with these expected advantages, the research on the effects of perceptions of usefulness of the e-filing systems by the taxpayers on the compliance with the SMEs in Kenya has limited empirical research. In as much as Kenya Revenue Authority (KRA) recently implemented e-filing as a way of modernising its systems, this study aims at filling this knowledge gap by assessing the impact of perceived usefulness of e-filing system on tax compliance among SMEs in Kakamega County.

1.2 Research Objectives

The primary aim of the study was to evaluate the effect of perceived usefulness of E-filing system on tax compliance among SMEs in Kakamega County

1.3 Research Hypothesis

H01: Perceived usefulness of the E-filing system does not have a significant effect on tax compliance among SMEs in Kakamega County.

II. LITERATURE REVIEW

2.1. Theoretical Review

2.1.1. Technology of Acceptance Model

Technology Acceptance Model (TAM) drawing off from Horbj & Fishbein's (Hagger, 2019) TRA model, Davis (2017) created Technology Acceptance Model (TAM). The most common model in information systems research is TAM. Perceived utility and perceived ease of use applied to different settings of technology acceptance comprise the two variables of Davis's (2017) Technology Acceptance Model (TAM) (Amalia, 2019). According to this paradigm, when consumers learn about a new technology, a number of factors will influence their choices about when and how to use it. TAM explains how specific dimensions may have an impact on how well users accept information technology.

The model TAM was developed in the 2019s as a result of an agreement between IBM Canada and Massachusetts Institute of Technology (MIT). Its objectives were to evaluate the prospective market for novel items under the brand and to provide a description of the factors influencing computer use (Davis et al., 2020). In order to better understand why users, accept or reject information technology (IT) and how to increase acceptance established the Technology Acceptance Model (TAM), which provides a framework for anticipating and explaining user adoption.



In 2020, Davis performed a survey with 40 Boston University MBA students and 112 IBM users in Canada. The adoption of a software text editor served as the foundation for the TAM model's validation (Davis, 2017; Sa, 2023). Davis (2017) discovered that, for this sample, perceived convenience had a greater influence on behavior than perceived facility. According to Davis (2017), the TAM has the benefit of being unique to IT and having a solid theoretical foundation in addition to having a large amount of empirical backing.

The TAM model was created to explore the causal relationship between the user's acceptance of external factors and his actual computer use, attempting to interpret the user's behavior based on his perceptions of the value knowledge and use facilities (Davis et al., 2020). According to Davis et al. (2020), people often utilize or don't use specific technologies in an effort to perform better at work. This is known as perceived utilization. Even though this individual is aware of the benefits of some technology, their ability to use it effectively may be compromised if it is overly complex and renders the effort unjustified relative to the apparent utility. The TAM is mainly based on these two constructs because they have comprehensively studied the influence of external factors, such as functional systems, creative processes, and training on intention to use (Dillon & Morris, 2020; Lee et al., 2020; Venkatesh et al., 2020). The goal of this model is to illustrate how external factors related to information systems impact an individual's internal factors, such as attitudes and usage intentions. According to Davis et al. (2020), the two primary TAM factors are as follows: Perceived utility is the extent to which an individual thinks using a specific system will enhance his performance. The degree to which someone thinks using an information system would be effortless is known as the facility of perceived use. The information displayed in the diagram implies that people will utilize a particular piece of technology if they think utilizing it would have a beneficial impact, with a focus on perceived usefulness and simplicity of use.

2.2 Empirical Review

Malonza (2016) also carried out research evaluating how medium company taxpayers in Kenya used iTax and how that affected their corporation tax compliance. The criteria used to gauge compliance were filing, reporting, and payment. Descriptive research methodology was used for the study, and taxpayers were issued a questionnaire to complete in order to gather data. Out of the 1,500 participants in the study, 75 taxpayers were chosen to provide data. The results of the study showed that Kenyan medium taxpayers' compliance increased as a result of using iTax.

Munyoro (2017) conducted research to examine how iTax affected SMEs in Wote town, Makueni county, with regard to Value Added Tax [VAT] compliance. The study's particular goals were to ascertain whether Wote town taxpayers' ICT knowledge had an impact on VAT compliance and how utilizing iTax for VAT registration affected compliance. 581 SMEs from the Wote sub-county made up the study population, and 120 taxpayers were chosen at random through the use of a sample technique. After applying multiple linear regression to evaluate the data, it was discovered that most taxpayers have registered since iTax's launch. Online VAT return filing offers advantages in terms of cost, ease of use, and time required, according to registered iTax businesses. The study came to the conclusion that registering VAT taxpayers through iTax improves KRA revenue collection and closes potential channels for tax fraud.

Kiringa and Jagongo (2016) examined the effect of electronic tax filing on small and medium-sized enterprise (SME) tax compliance in the Kibwezi sub-county of Kenya in another study. The survey described how people felt about filing electronically, as well as their technical proficiency in tax return filing and compliance. The research design used for the study was a descriptive survey, and the data needed for the study was gathered from primary sources utilising an interview schedule and a self-administered questionnaire. Using a straightforward random sampling method, 316 SMEs in total were chosen as the sample size from the 1,800 SMEs that made up the target population. The data was gathered using a questionnaire that was given to 316 SMEs in the sub county of Kibwezi. Descriptive and inferential statistics were employed in the study to Apply t-test analysis to the data analysis. The results of the study showed that filing taxes online does impact SMEs' level of tax compliance in terms of their perceptions about online tax filing and Concerned were the technical aspects of submitting tax returns. The findings of the correlation test showed a negative relationship between tax compliance and the notion of online tax filing there was an increase in the technical proficiency needed to file tax returns.

Kochanova et al. (2017) provided an evaluation of the benefits of e-government for UK businesses. The inquiry was prompted by the need to examine the major obstacles that developing countries have in collecting taxes, including high compliance costs and tax official harassment that discourages investment, stifles economic growth, and encourages tax cheating. It evaluated 150 small businesses by looking at things including how much tax automation costs, how long it takes to file and pay taxes, how often tax officers visit a company, and how taxpayers perceive the cost of tax administration. The results demonstrated that tax automation increases tax compliance while simplifying interactions between the relevant institution and the revenue body at minimal expense.

Sawyer (2016) conducted an investigation on the intricacy of tax simplification in New Zealand, a country known for having a straightforward, transparent, and coherent tax structure. Ninety private sector companies were selected for the study and asked to provide their independent opinions on New Zealand's tax system and associated expenses. Given that the business sector has unfettered access and is allowed to share information with the government, the results showed that the procedure is less expensive and that they experience justice in tax administration. The tiny



population functioning under a clear and cogent tax policy framework supports this. Additionally, the complexity of tax simplifications in Turkey was examined by Budak and Benk (2016). This came about when taxes in the nation had increased to a point where tax rates were regarded as reasonable, cost-effective, and less complicated. A random sample of sixty respondents business owners, legislators, and economists—was used in the study. The findings demonstrated that tax simplification's complexity had a detrimental effect and attracted criticism for being costly. The majority of economists, legislators, and business leaders agreed with this.

III. METHODOLOGY

3.1. Research Design

The study employs a descriptive research design combined with explanatory research design. The descriptive aspect allows for a detailed depiction of the current state of digital lending innovations among commercial banks, while the explanatory design helps identify and explain relationships between the variables (Saunders et al., 2019). The use of these designs aligns with studies by Creswell and Creswell (2017), who argue that descriptive and explanatory designs are effective in social science research where understanding complex relationships is crucial.

3.2 Study Area

Kakamega County is located in the western region of Kenya and is known for its rich cultural heritage and vibrant economy. It is the second most populous county in Kenya, with a population of approximately 1.87 million people as of the 2019 census. The county is predominantly rural, with a significant portion of its population engaged in agriculture, small-scale businesses, and informal sector activities. The county's economic activities are diverse, with a notable presence of small and medium enterprises (SMEs) across various sectors, including agriculture, retail, manufacturing, and services. SMEs play a crucial role in the county's economy, providing employment and contributing to economic growth. The business environment in Kakamega County is characterized by a mix of traditional practices and modern entrepreneurial activities, making it a dynamic area for studying tax compliance behaviors.

By focusing on Kakamega County, this study aimed to provide a detailed understanding of how SMEs perceive the e-filing system and how these perceptions influence their tax compliance behavior. The findings will contribute to enhancing tax administration practices and support the development of targeted interventions to improve compliance rates among SMEs in Kenya. The study was carried out in Kakamega County. The population for this study comprised of Small and Medium Enterprise in Kakamega County who have businesses registered with KRA and are also themselves registered as taxpayers with KRA. Kakamega County for purposes of this study comprised of 12 sub counties in which 1. Market per sub County was targeted. The preliminarily data provided by KRA puts the number of SMES in Kakamega county at 7,133 (Kenya Revenue Authority Tax Base Expansion Office, 2023).

3.3 Population

Mugenda and Mugenda (2008) articulate that a target population constitutes a precisely delineated collection of individuals, services, elements, events, or households that are the focus of investigation. It is posited that the target population in statistics refers to the particular group from which information is sought. The focus of this study was on the entirety of small and medium-sized enterprises located within Kakamega County. Given the substantial number of SMEs, this study concentrated exclusively on those businesses registered with the KRA, totaling 2,272.

This research examines tax compliance within small and medium enterprises in Kakamega County, with particular emphasis on the electronic filing system implemented by the Kenya Revenue Authority. The primary category of taxation under scrutiny encompasses Turnover Tax (TOT), pertinent to small enterprises, alongside additional statutory levies such as Value Added Tax (VAT) and Income Tax, which small and medium-sized enterprises must adhere to when utilizing the e-filing system.

3.4 Data Collection Instruments and Procedures

Mertens (2014) articulates that research instruments serve as tools for the collection of data. In a research endeavor, various methodological instruments may be employed, contingent upon the study's characteristics, the type of data to be gathered, and the specific demographic being examined. This study employed both open-ended and closed-ended questionnaires. A questionnaire serves as a tool for collecting data, facilitating the assessment of a specific perspective. The purpose is to establish a standardized instrument for data collection, thereby achieving objectivity in survey methodologies (Gray, 2019). This study employed a 5-point Likert scale to assess respondents' perceptions and attitudes regarding different facets of taxpayers' views on the e-filing system and tax compliance. The Likert scale was designed to measure the extent of agreement or disagreement with particular statements pertaining to the study variables.

The research instruments exhibited a strong alignment with the conceptual framework, facilitating an assessment of SMEs' adoption of the E-filing system for tax compliance. The assessment of perceived usefulness and ease of use was conducted using Likert-scale items focused on efficiency, accuracy, and user-friendliness,



complemented by open-ended questions that elicited detailed insights into specific benefits and challenges encountered. The evaluation of perceived risk was conducted via statements addressing security, privacy, and system reliability, complemented by open-ended responses that offered a more profound understanding of the concerns held by SMEs. The efficacy of training and education is assessed by examining factors such as accessibility, relevance, and their influence on compliance behavior. The examination of tax compliance behavior was conducted through a series of structured inquiries focusing on the aspects of timely filing, meticulous record-keeping, and awareness of regulatory frameworks. The demographic data served as a foundational element for the analysis. The combination of quantitative and qualitative responses provided a thorough insight into the experiences, challenges, and recommendations of SMEs regarding the enhancement of the E-filing system.

3.5 Data Analysis

Data analysis and presentation utilized descriptive statistics to elucidate patterns and overarching trends within a data set. Descriptive statistics were employed to analyze a single variable at a time. The open-ended questions underwent qualitative content analysis, categorizing responses into principal themes, including efficiency, technological obstacles, security issues, and training deficiencies. A theme coding approach revealed repeating motifs, while frequency analysis indicated the predominant issues and recommendations. Illustrative quotations were employed to substantiate conclusions, and the results were juxtaposed with quantitative Likert-scale data to discern consistencies or differences. This methodology yielded profound insights into SMEs' interactions with the E-filing system, elucidating practical issues and opportunities for enhancement. Descriptive statistics encompassed frequencies, percentages, mean, and standard deviation (Mugenda & Mugenda, 2008). The mean is a statistical measure of central tendency that represents the most representative value within a dataset. Descriptive and inferential statistics were employed to analyze quantitative data following suitable data coding utilizing Statistical Package for Social Sciences (SPSS) version 28. The standard deviation indicates the extent to which the distribution deviates from the mean. Inferential statistics were employed to evaluate the study hypotheses, aiming to identify the correlations and relationships between the independent and dependent variables. The association between the independent and dependent variables was assessed by Pearson Correlation and regression analysis (Creswell & Clark, 2017). The researcher used a linear regression study to determine the association between taxpayers' perceptions of the e-filing system and tax compliance.

IV. FINDINGS & DISCUSSION

4.1 Response Rate

The study distributed a total of 340 questionnaires to SMEs in Kakamega County. Out of these, 247 were satisfactorily filled and returned, resulting in a response rate of approximately 72.6%. The remaining 93 questionnaires (27.4%) were either unsatisfactorily filled (53) or not returned (40). The high response rate enhances the reliability and validity of the findings (Mugenda & Mugenda, 2008).

Table 1

Response Rate

Category	Frequency	Percentage
Satisfactorily filled	247	72.6%
Unsatisfactorily filled	53	15.6%
Unreturned	40	11.8%
Total	340	100%

4.2 Demographics of the Respondents

The study sought to establish the demographic data of the respondents. These data included highest level of education, work experience and the designation of the respondents. The inclusion of demographic data such as highest level of education is of critical importance. These variables help in understanding the context and background of the respondents, which in turn enhances the interpretability and applicability of the research findings.

4.3 Demographic Characteristics of the Respondents

4.3.1 Market Centers of Respondents

The study examined the distribution of respondents across various market centers in Kakamega County. The representation from different market centers is summarized below:

**Table 2***Market Centers of Respondents*

Market Centre	Frequency	Percentage
Malava	28	11.3%
Butere	17	6.9%
Ikolomani	29	11.7%
Khwisero	20	8.1%
Lugari	16	6.5%
Likuyani	18	7.3%
Mumias East	27	10.9%
Mumias West	10	4.0%
Shinyalu	21	8.5%
Navakholo	16	6.5%
Matungu	29	11.7%
Lurambi	16	6.5%
Total	247	100%

The study examined the distribution of respondents across various market centers in Kakamega County. The representation from different market centers is as follows: Malava had 28 respondents, Butere 17, Ikolomani 29, Khwisero 20, Lugari 16, Likuyani 18, Mumias East 27, Mumias West 10, Shinyalu 21, Navakholo 16, Matungu 29, and Lurambi 16. This diverse geographical representation ensures that the findings are not skewed by the characteristics of any single area, thereby providing a comprehensive view of the perceptions of SMEs across the county (Kothari, 2021).

4.3.2 Level of Education of Respondents

The educational background of the respondents is distributed is presented below:

Table 3*Level of Education of Respondents*

Educational level	Frequency	Percentage
PhD	0	0%
Masters	7	3%
Bachelor's degrees	67	27%
Diploma	77	31%
Certificate	96	39%
Total	247	100%

The educational background of the respondents varied significantly. None of the respondents had a PhD, 3% had a master's degree, 27% had bachelor's degrees, 31% had diplomas, and 39% had certificates. This distribution indicates that the majority of the respondents have post-secondary education, which could influence their understanding and perception of the E-filing system. Higher educational attainment is often associated with better comprehension of technological systems, which could affect the adoption and effective use of E-filing (Amalia, 2019).

4.3.3 Duration of SME Operation

The duration for which the respondents' SMEs had been in operation was another key focus of the study. The findings showed that 146 respondents (59.1%) indicated their SMEs had been operational for less than four years, 84 (34.0%) had been operating between 4-10 years, and 37 (6.9%) had been in business for more than 10 years. The table below summarizes this information:

Table 4*Duration of Operation as SME*

Duration of operation	Frequency	Percentage
Less than 4 years	146	59.1%
4-10 years	84	34.0%
More than 10 years	37	6.9%
Total	247	100%



4.4 Descriptive Results of the Study Objectives

Descriptive analysis included description of the perceived usefulness of e-filing system, perceived ease of use of e-filing system, perceived risk of e-filing system, training and educational programme towards e-filing system. The descriptive results also presented the findings for the dependent variable. The responses ranged from strongly disagree (1) to strongly agree (5) on a likert scale where: Strongly agree (SA) =5, agree (A) =4, Neutral (N)=3, disagree (D)= 2, and strongly disagree (SD) =1.

4.4.1 Perceived Usefulness of E-Filing System and Tax Compliance amongst SMEs

These are condensed responses to the query of whether perceived usefulness of e-filing system has an effect on tax compliance amongst SMEs in Kakamega County. The results are displayed in Table 5.

Table 5

Perceived Usefulness of E-Filing System

Statement	SA	D	N	A	SA	Mean	SD
	1	2	3	4	5		
My tax filing performance is enhanced by technology.	3 1.2%	12 4.9%	22 8.9%	119 48.2%	91 36.8%	4.15	0.86
Using technology improves my efficiency while filing taxes	10 4.0%	40 16.2%	20 8.1%	68 27.5%	109 44.1%	3.91	1.24
I find that using technology to file taxes is beneficial.	30 12.1%	13 5.3%	15 6.1%	76 30.8%	113 45.7%	3.93	1.35
I find the information on the KRA online tax filing system to be helpful.	3 1.2%	10 4.0%	21 8.5%	56 22.7%	157 63.6%	4.43	0.90
Online tax filing system is functional	14 5.7%	33 13.4%	5 2.0%	51 20.6%	144 58.3%	4.13	1.28
Overall, I find online tax filing system useful	25 10.1%	27 10.9%	14 5.7%	46 18.6%	135 54.7%	3.97	1.40
The E-filing system is useful for managing my tax obligations.	12 4.9%	37 15.0%	9 3.6%	68 27.5%	121 49.0%	4.01	1.25
Using the E-filing system makes tax compliance easier for my business	20 8.1%	30 12.1%	6 2.4%	55 22.3%	136 55.1%	4.04	1.34
I am likely to continue using the E-filing system for future tax filings	56 22.7%	10 4.0%	3 1.2%	21 8.5%	157 63.6%	3.86	1.68
I am satisfied with the features and functionalities of the E-filing system for tax purposes.	22 8.9%	12 4.9%	119 48.2%	91 36.8%	3 1.2%	3.17	0.89
Aggregate						3.96	1.28

The results of Table 5 indicated that the respondents had a positive attitude towards the e-filing system with a total mean of 3.96 indicating that most taxpayers use the system as useful, efficient, and helpful in tax compliance. This is in line with Malonza (2016), who discovered that the implementation of iTax system in Kenya in the medium enterprises increased their compliance with corporate tax. As was observed by Malonza in the current study results, electronic filing enhanced the accuracy in filing, efficiency in reporting and timely payment of tax. The fact that the respondents agreed that the technology enhances their performance in tax filing (mean = 4.15) and their efficiency (mean = 3.91) is reflective of the conclusion made by Malonza who stated that automation eases compliance procedures and generates confidence in taxpayers of the digital systems.

In line with this good news, Munyoro (2017) found that SMEs in Wote town had enjoyed great advantages in terms of cost reduction, convenience, and time saving upon exploiting iTax. These observations are supported by the current results since the mean scores of statements like the ease of tax compliance with the E-filing system in my business are high (mean = 4.04) and the usefulness of the E-filing system in managing my business is also high (mean = 4.01). These findings show that taxpayers appreciate e-filing as a convenience that facilitates management of operations and compliance as Munyoro has found that iTax system encourages registration of VAT, efficiency and revenue collection.

In addition, that the majority of respondents considered the information in the KRA e-filing system to be helpful and reliable (mean = 4.43, SD = 0.90) also supports the report by Kochanova et al. (2017), who discovered that e-government initiatives minimize contact between taxpayers and tax officials, thereby reducing the cost of compliance and corruption possibilities. It indicates that by digitalizing tax services, the usability is enhanced in addition to promoting transparency and accountability. The availability of information in the KRA system helps taxpayers be more effective in comprehending their tax requirements and creating better outcomes, which corresponds to the conclusion shared by Kochanova et al. that automation promotes trust and compliance.

Nevertheless, the range of the values of some statements, especially when it comes to the efficiency of the system ($SD = 1.24$) and usefulness ($SD = 1.40$), denotes the mixed experiences of taxpayers. This is reminiscent of the study by Kiringa and Jagongo (2016) who have concluded that, although e-filing had a positive effect on compliance, the technical issues, including the lack of ICT skills and challenges with the usability of the system remained the central barriers to its adoption. This observation is supported by the large standard deviation ($SD = 1.68$) of the statement that I am likely to use the E-filing system in future tax filing because this means that although a majority have intentions to continue using the platform, a section of taxpayers is still skeptical, which may be as a result of the difficulty in using the system or the lack of a consistent system performance.

The least mean score of 3.17 of satisfaction about the system features and functionalities also bring areas of concern to light. The responses seemed to be neutral to marginally positive, which indicates that the platform might still be limited in terms of usability, e.g., slowness of the response, confusing interface, or weak support capabilities. This is echoed by the results of Budak and Benk (2016), who noted that complicated or simplified too simplified tax systems will put off the users and earn them disapproval as being expensive and hard to navigate. Therefore, although the situation is in general positive, continuous system improvement and maintenance are necessary to ensure the satisfaction level and improve the compliance rates.

In addition, Sawyer (2016) focused on simplified and open tax systems such as New Zealand, which rely on fairness, accessibility, and efficiency, which Kenyan taxpayers seem to appreciate according to the results of the current study. The uniformity in the majority of the items shows the increasing value to the modernization of the tax processes. However, the middle scores on the levels of satisfaction with features suggest that Kenya e-filing system remains in the process of development until achieving the same level of simplicity and user-friendliness as observed in the developed economies.

Overall, the research results obtained in the present study support a significant part of the empirical data available that indicate that e-filing systems can increase compliance, efficiency, and user satisfaction in the case of a successful implementation. Nevertheless, the differences in reaction confirm the continuation of technical and usability issues which can obstruct the universal adoption. On-going system upgrades, education of taxpayers and easy to use additions are thus important in reinforcing the results of the positive perception and maintaining the gains in compliance that have been witnessed in the course of the study as well as in previous studies.

4.3.2 Tax Compliance

The following are the descriptive findings regarding tax compliance among SMEs. The numerical results are as follows: Strongly agree (SA) =5, agree (A) =4, Neutral (N)=3, disagree (D)= 2, and strongly disagree (SD) =1.

Table 6
Tax Compliance

Statement	SA	D	N	A	SA	M	SD
	1	2	3	4	5		
KRA's imposition of penalties for late return filing is unjust.	38 15.4%	9 3.6%	18 7.3%	76 30.8%	42.9%	3.82	1.41
The purpose is to lower tax liabilities by inflating permitted expenses or claiming disallowable expenses.	6 2.4%	13 5.3%	19 7.7%	82 33.2%	127 51.4%	4.26	0.98
For tax purposes, it's critical to have accurate accounting records.	33 13.4%	37 15.0%	21 8.5%	72 29.1%	84 34.0%	3.55	1.42
Using tax management tools to file returns and pay taxes is always crucial.	10 4.0%	19 7.7%	17 6.9%	76 30.8%	125 50.6%	4.16	1.10
Taxpayers are accountable for registering with i-tax to fulfill their tax obligations.	6 2.4%	50 20.2%	28 11.3%	78 31.6%	85 34.4%	3.75	1.19
My business consistently meets its tax obligations on time.	5 2.0%	50 20.2%	28 11.3%	78 31.6%	85 34.4%	3.75	1.20
I ensure that all required tax forms and documents are accurately filled and submitted.	19 7.7%	42 17.0%	18 7.3%	83 33.6%	85 34.4%	3.70	1.30
I actively seek to understand and comply with changes in tax regulations relevant to my business.	4 1.6%	46 18.6%	44 17.8%	86 34.8%	67 27.1%	3.67	1.11
I keep detailed records of financial transactions and tax-related information for compliance purposes.	00 0.0%	00 0.0%	126 51.0%	102 41.3%	19 7.7%	3.57	0.63
I engage in regular communication with tax authorities to clarify any uncertainties or issues regarding tax compliance.	00 0.0%	15 6.1%	108 43.7%	109 44.1%	15 6.1%	3.50	0.70
Aggregate						3.77	1.11



The results of Table 6 indicate that the respondents, in most cases, consider that tax compliance and management practices of Kenya Revenue Authority (KRA) are important, but not without difficulties. The mean of 3.77 is positive in general showing a sense of positive attitude towards compliance related practices like keeping records, use of tax management tools, and filing on time. Nevertheless, the standard deviation (1.11) is relatively high, which indicates that taxpayers have different experiences and degrees of knowledge. These results are consistent and opposite to a number of studies analyzed in the literature.

Malonza (2016) noted that the iTax system improved the compliance of the medium taxpayers in Kenya significantly because it made the processes of filing, reporting, and paying easier. This can be compared to the result of the current study, which shows that respondents are mostly in agreement with the necessity to register on iTax (mean = 3.75) and ensure compliance by proper record keeping (mean = 3.55). Nevertheless, the wide range of the responses implies that not everyone among taxpayers received the same degree of benefit, which may be explained by the disparities in the system literacy, technical ability, or perceptions of equity.

On the same note, Munyoro (2017) discovered that introduction of iTax enhanced VAT compliance in Wote town, particularly due to its convenience, cost-effective and time-saving features. The current results support this fact in which the respondents were in strong agreement when it comes to the necessity of implementing tax management tools (mean = 4.16). However, the noted difference regarding the effectiveness of KRA punishments (mean = 3.82, SD = 1.41) can be explained by the fact that, although digital systems are more efficient, taxpayers continue to see the mechanisms of punishment as punishment, not rehabilitation. This image can be a barrier to complete voluntary compliance, and Munyoro notes in his comments that the aspects that increase compliance are not only the adoption of the system, but also the fairness of the tax administration.

The findings can also be supported by the Kiringa and Jagongo (2016), who developed the idea that e-filing has an impact on the compliance behavior of SME in Kibwezi, yet it is important to mention that the researchers also reported difficulties associated with technical skills. The difference in the current study in terms of agreeableness to keep adequate records (SD = 1.42) and understanding of the changing tax legislation (SD = 1.11) might be due to the identical factor, that is, the discrepancies between the digital literacy and online adaptation ability of taxpayers. Therefore, as much as technology increases the level of access and efficiency, the differences in user competence still pose a challenge to the achievement of consistent compliance results.

On a bigger scale, the results can be compared to Kochanova et al. (2017) who found that e-government projects increase compliance by ensuring that the taxpayers do not have close direct contact with the tax officials and, therefore, the possibility of harassment and corruption is limited. The mediocre consensus among respondents in the matter of frequent contact with tax authorities (mean = 3.50) provides an indication that though digital platforms have minimized friction, human fact in tax administration is also relevant in the clarification and guidance. This explains the necessity of further taxpayer education and responsive communication lines.

Globally, Sawyer (2016) established that the tax system of New Zealand was simple and transparent, which encouraged the sense of fairness and justice among taxpayers. In its turn, the fact that the present research has found that a high number of participants view the penalties of KRA as unfair makes it clear that the taxation system of Kenya can still be considered slightly excessively punitive or complicated. This perception difference indicates a direction in which Kenya needs to simplify more on tax processes and increase equity in its enforcement to encourage greater voluntary compliance.

The results also partly coincide with Budak and Benk (2016), who mentioned that although tax simplification is intended to make it easier to comply, the implementation process may create new difficulties and expenses occasionally. The overall average consensus of the current study (aggregate SD = 1.11) indicates that Kenyan taxpayers can have both advantages and costs of digitized taxation- enjoying the increase in efficiency and have difficulties in working with complexities of the system and do not feel fairly treated.

On the whole, the findings of the present research confirm the agreement in the literature that the implementation of e-filing systems such as iTax has a positive impact on tax compliance through the increase in convenience and efficiency (Malonza, 2016; Munyoro, 2017; Kochanova et al., 2017). Nevertheless, it also highlights some lingering issues, as observed by past scholars, such as system literacy differences (Kiringa & Jagongo, 2016) and a sense of injustice (Sawyer, 2016; Budak & Benk, 2016). The differences in the experiences of the taxpayers as portrayed by the different standard deviations show the necessity of ensuring that taxpayers are educated continuously, procedures simplified, and mechanisms of fair enforcement put in place to increase the compliance outcomes among the various strata of taxpayers.

4.5 Hypothesis Testing

The study set out a hypothesis where a linear regression was utilized to ascertain. The research employed, the following hypothesis was tested at an alpha level of 0.05 using Regression analysis:

H₀₁: Perceived usefulness of the E-filing system does not have a significant effect on tax compliance



The independent variable is perceived usefulness while the dependent variable tax compliance of SMEs in Kenya. The regression analysis for the effect of digital lending on the financial sustainability of commercial banks in Kenya is presented in Table 7 and Table 8.

4.5.1 Analysis of Variance

The study employed analysis of variance to compare the means of tax compliance and its predictive variables. Table 7 shows the results:

Table 7
ANOVA

Model	Sum of squares	dF	Mean	Mean Square	F	Sig
1	Regression	689.940	4	172.485	31.017	.000 ^a
	Residual	1351.393	243	5.561		
	Total	2041.333	247			

Predictors: (constant): perceived usefulness
Dependent variable: tax compliance

The F-ratio was 31.017 with four degrees of freedom, indicating that the variable factor. The regression model's effect size was significant at 95% confidence level ($p=0.000$), demonstrating that the independent variables can predict tax compliance.

4.5.4 Coefficient Analysis

The coefficient analysis from multiple regression analysis is as follows:

Table 8

Coefficient Analysis

Model		Unstandardized coefficients	standardized coefficients	Beta	t	Sig.
		B	Std Error			
1	(Constant)	2.829	.772			
	Perceived usefulness of the E-filing system	.169	.039	.287	4.33	.000

a Dependent variable: tax compliance

From the table 8, the study established that: Perceived Usefulness of the E-filing System ($t = 4.33, p < 0.05$). This result indicates that perceived usefulness has a strong and statistically significant impact on tax compliance. A high t-value suggests that when SMEs perceive the e-filing system as beneficial and effective in improving tax filing efficiency, they are more likely to comply with tax obligations. Hypothesis 1 (H01) anticipated that the perceived usefulness of the E-filing system had no significant impact on tax compliance. Table 8 shows that perceived usefulness of the E-filing system significantly affects tax compliance ($p < 0.05$). We reject the null hypothesis that perceived usefulness of an e-filing system has no significant impact on tax compliance.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The perceived usefulness was recognized as a crucial factor influencing tax compliance. The research indicated that taxpayers who perceive e-filing as enhancing efficiency and alleviating the tax filing load are more inclined to comply. These findings correspond with the Technology Acceptance Model (TAM), which posits that individuals are more inclined to accept a system if they see it as advantageous. Perceived utility significantly impacts taxpayer behavior regarding e-filing.

5.2 Recommendations

The study found that perceived usefulness has a considerable influence on tax compliance. As a result, KRA should promote the practical advantages of the e-filing system, such as efficiency, accuracy, and time-saving. Utilize success stories and case studies to demonstrate these benefits and highlight the positive impact on SMEs. KRA should continuously upgrade the e-filing system to include useful features like automatic calculation tools, pre-filled forms, and integration with accounting software. Gather user feedback to prioritize and implement feature enhancements.



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The social-economic and institutional conditions that influence the adoption of soil conservation and rehabilitation technologies in Bungoma County, Kenya

Shisia Alubokho David^{1*}
Chesambu Alice Ndiema²
Ogema Vitalis³

^{1*}davidshisia86@gmail.com

²achesambu@mmust.ac.ke

³vogemah@mmust.ac.ke

¹<https://orcid.org/0000-0002-8604-7883>

²<https://orcid.org/0000-0003-4153-5637>

³<https://orcid.org/0000-0002-3434-0770>

^{1,2,3} Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

In Kenya, soil erosion is one of the major risks to the productivity and sustainability of the environment. In Bungoma County, food security and rural livelihoods are still threatened by declining soil fertility, soil erosion, and unsustainable agricultural activities. This research paper looks into the socio-economic and institutional determinants of the adoption of soil conservation and rehabilitation technologies in Bungoma County. The study was guided by diffusion of innovations theory. The research was based on a descriptive survey design. The target population was 41,109 farm households. Out of this population, a sample population of 381 households was calculated using the formula of determining the sample size by Krejcie and Morgan, which used a 95 per cent confidence level, a 0.05 margin of error, and a 50 per cent proportion of the population in order to be representative. Data were gathered by questionnaire and interview using a descriptive survey design for the farmers. The chi-square test was used to establish the associations between variables, including education level, land area, land ownership type, access to credit, and access to extension services and the adoption of different technologies, which included composting, vermicast, agroforestry, physical measures, and minimum tillage. The results highlight that the level of education, size of land, secure tenure, availability of credit, and extension services play a major role in the adoption of some conservation technologies. The paper concludes that socio-economic empowerment, better access to credit and extension services, and tenure security are the keys to making soil management sustainable. It suggests the need to enhance institutional structures, provide soil conservation training to the farmers, and implement inclusive financial schemes to promote the general acceptance of soil conservation technologies.

Keywords: Conservation, Erosion, Fertility, Soil

I. INTRODUCTION

A significant amount of nutrient depletion, erosion, compaction, and reduced land productivity is a typical symptom of soil degradation, which continues to be one of the most urgent environmental and agricultural issues in sub-Saharan Africa (Lal, 2015). It is compromising food security, reducing the fertility of soil and destroys the viability of the agricultural systems that millions of rural households have depended on. It is further worsened by the fact that the population is growing rapidly, which puts pressure on the available land area, thus making farmers to develop marginal land and reducing fallow time. This has resulted in massive soil erosion, river sedimentation and reduction of crop yields in Kenya especially in the overpopulated areas like the western highlands (Nyangena & Kohlin, 2008). This increase in the agricultural land areas without proper soil conservation practices has led to the disappearance of topsoil and organic matter which have further eroded the natural resource base that is basic in sustainable agriculture.

The crisis is observed in the Bungoma County, which is a major agricultural area. Both large and small household economies rely on smallholder farming as their means of livelihood, but the soil is becoming degraded because of over-cultivation, deforestation, and erosion of vegetative cover (Kimetu *et al.*, 2017). Land degradation has been increased and the soil productivity decreased due to unsustainable activities like continuous monocropping, overgrazing and improper application of organic or inorganic fertilizers. Although several technologies of soil

conservation and rehabilitation have been developed such as terracing, agroforestry, contour ploughing and use of cover crops, uptake by the smallholder farmers is low.

It is based on such challenges that a critical insight into socio-economic and institutional dynamics that influence the decision of farmers to use soil conservation technologies is necessary. Education level, size of a farm, availability of credit, extension services and security of land tenure are factors that are critical in influencing the behavior of adoption. The institution support, policy framework, community participation and involvement are important in Bungoma County and other states to sustain management of soil and enhance agricultural production.

1.1 Statement of the Problem

Although there are several government and non-government policies that encourage farmers to conserve soil, soil conservation is still low among farmers in the Bungoma County. Unsustainable farming practices still are being practiced by many farmers, which drain the soil fertility and expose them to the risk of erosions. The socio-economic characteristics including education level, land size, and income level as well as institutional factors including the presence of access to credit and extension services are important in determining adoption behavior (Kassie *et al.*, 2013). Nevertheless, the interplay between these factors in the local setting is not well studied. Lacking empirical understanding of their effect on technology adoption, interventions can continue being ineffective. As such, the paper examined the socio-economic and institutional drivers towards adoption of soil conservation technology in the Bungoma County.

1.2 Research Objectives

- i. To determine the effect of the education level on adoption of soil conservation and rehabilitation technologies.
- ii. To test the relationship between the size of land and land ownership type and adoption.
- iii. To test the hypothesis on the role of access to credit in the adoption of conservation technologies.
- iv. To determine the impact of availability of extension services on the level of adoption.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Diffusion of Innovations Theory

The research is based on the Diffusion of Innovations Theory created by Everett Rogers (1962) which is a theoretical framework of spreading new ideas and technologies across a population. The theory proposes that innovation adoption is affected by the perceived attributes of the innovation, channels of communication, time and social systems. The use of technologies happens when the relative advantage, compatibility, ease and benefits are perceived by farmers. These perceptions are influenced by socio-economic factors like education, income, and land ownership (Rogers, 2003). The theory is applicable in soil conservation based on the behavioral change and institutional support through the flow of information to enable a behavior change to sustainable practices. The provision of extension services and access to credit, e.g., is an accelerator that enhances the spread of information across the communities of the farmers.

2.2 Empirical Review

2.2.1 Effect of Education Level on the Adoption of Soil Conservation and Rehabilitation Technologies

Education is important in influencing awareness, perception and decision making by the farmers towards agricultural innovations. Feder *et al.* (1985) hold the view that education improves capacity of farmers to obtain, process and use information pertaining to new technology that augments chances of adoption. Educated farmers tend to be more in the position to know the advantages and expenses and long-term effects of soil conservation and rehabilitation technologies (Schoonhoven & Runhaar, 2018).

Empirical evidence in the sub-Saharan Africa has continually revealed that there is positive relation between education and the adoption of technology. As an example, Mwangi and Kariuki (2015) discovered the level of literacy played a significant role in determining the extent to which farmers in Kenya adopted soil and water conservation practices because educated farmers are more likely to interact with the extension officers and use better methods of soil conservation, including terracing, agro forestry and contour ploughing. In the same study, Tenge *et al.* (2004) found that the more formal education one had, the more he or she could adopt the soil conservation measures in Tanzania because of better knowledge on the process of land degradation.

Nevertheless, the correlation of the two education and adoption is not always linear. According to some researchers like Bekele and Drake (2003) some studies have indicated that though in formal education, the rate of awareness is incremental, the effect reduces when farmers are overly dependent on the indigenous knowledge systems and conservation technologies are labour-intensive. Therefore, learning should be followed by a specific training, examples, and programs of participation extension to reinforce adoption judgments.

2.2.2 Relationship between Land Size, Land ownership and adoptions

The area of land and ownership system plays a major role in the willingness and the ability of the farmers to invest in long term conservation practices. Place and Hazell (1993) argue that secure land tenure encourages farmers to use soil conservation practices as they know that they will reap the rewards in the future. Conversely, farmers in leased or communal land mostly shun long-term investments because of the uncertainties on the re-entrance of land.

According to the studies of Kassie *et al.*, (2010) and Pender and Kerr (1998) in Ethiopia and India respectively, the farmers with larger and privately owned plots are more likely to embrace conservation technologies like terraces, grass strips, and organic soil management. The size of bigger landholdings enables flexibility in setting aside some of the land to experiment and the risks of the initial loss of productivity when implementing conservation structures are eliminated.

On the other hand, the smallholders might not be able to conserve their lands because they have limited land and labour hence could not easily afford to leave productive land to conservation work. Shiferaw and Holden (1998) contend that tenure insecurity and soil fragmentation inhibit investments in soil rehabilitation because farmers consider this intervention as expensive and time-consuming before fruits can be realized. Thus, the tenure security and the land size remain central to the insight of adoption behaviour, among the rural farmers.

2.2.3 Role of Access to Credit in the Adoption of Conservation Technologies

Access to credit is one of the main factors that determine the adoption of technology since it helps in relaxation of the issue of liquidity which in most times disallows farmers to invest in conservation efforts. Feder *et al.*, (1990) argue that credit availability promotes farmers to buy inputs, engage labor, as well as embrace technologies that demand initial capital investment. Technologies like terracing, planting trees, and contour farming are some of the technological methods of soil conservation requiring upfront expenses which poor households do not have access to unless they are subsidized.

The published empirical data on Kenya, Uganda, and Ethiopia show that access to credit plays a significant role in predicting the adoption of conservation technologies. Indicatively, Nkonya *et al.*, (2008) discovered that farmers who had access to formal institutions of credit had an increased chance of investing in the practice of soil fertility improvement and water harvesting structures. On the same note, Mugwe *et al.*, (2009) established that involvement in the microfinance programs increased the capacity of farmers to use integrated soil fertility management technologies in central Kenya.

Nevertheless, the availability of credit is not certain to lead to adoption. Place *et al.* (2007) suggest that the attitude of farmers, their perception of risk and trust in financial institution are some of the factors that affect the use of credit. Additionally, it can deter uptake due to high rates of interest, collateral requirements and inadequate rural banking infrastructure particularly among smallholder farmers. Thus, the availability of cheap and flexible credit facilities continues to be key in enhancing quickening the acclimatization of soil conservation technology.

2.2.4 Effect of Extension Services on the Level of Adoption

Extension services are significant in eliminating knowledge gaps between researchers and farmers. The Diffusion of Innovations Theory used by Rogers (2003) supports the idea, that, with successful communication via extension systems, the spread of and the integration of new technologies is faster. The agricultural extension officers are intermediaries who offer technical advice, demonstrations and constant follow up to sustainability to make sure that the conservation practices are appropriately implemented.

Research has demonstrated that the rate and quality of extension contact have a substantial effect on the adoption rates in Kenya (Mutsotso *et al.*, 2014) and Uganda (Place *et al.*, 2003). The farmers that engage frequently with the extension agents have a higher propensity to implement soil conservation practices like contour bunds, agroforestry, and composting. Furthermore, the participatory extension methods that help farmers to take part in making decisions boost ownership and sustainability of conservation programs (Anderson & Feder, 2007).

However, institutional inefficiency and insufficient manpower in the extension departments is a thorn in the flesh of developing countries. According to Mwangi *et al.*, (2021), the efficiency of extension programs is in most cases diminished by lack of resources and lack of coordination between government and non-governmental organizations. These systems can be improved with the help of training, digitalization, and multi-stakeholder partnerships to promote the spread and uptake of soil conservation tech in a more significant way.

III. METHODOLOGY

3.1 Research Design and Approach

The research was based on a descriptive survey design, which aims at examining the socio-economic and institutional conditions that determine the use of soil conservation and rehabilitation technologies. This method enables quantitative study of the relationships between the variables and gives information on the behavioral patterns in the farming community.

3.2 Target Population

This study targeted 41,109 farm households in Bungoma County, which is the sum total of households that practice farming activities as per Kenya National Bureau of Statistics data in 2019. These households were used as the unit of analysis as they are directly involved in production in the agricultural sector, and they are the decision-makers when it comes to soil conservation and rehabilitation technologies. The population has a wide range of socio-economic and institutional nature, in terms of education levels, land size, ownership, access to credit and extension services. The target population facilitated the study to produce a holistic understanding of the factors of adoption of soil conservation practices.

3.3 Sampling Strategy and Sample Size

The sampling plan adopted in the study was stratified random sampling where the farmers in various wards in the Bungoma County were adequately represented. The stratification was done depending on the differences in agro-ecological zones and level of farming which were used to capture the different experiences in soil conservation and rehabilitation practices. The simple random sampling was used to select households within every stratum to maximize bias and increase the validity of the result. The total population was then used to get a sample size through using the formula developed by Krejcie and Morgan (1970), and the sample size established was 381 farm households out of the total population of 41,109. Such sample was thought to be adequate to have 95 confidence level and 5% margin of error.

3.4 Data Collection

Structured questionnaires and semi-structured interviews were used as the main methods of collecting primary data. The instruments were used to gather demographic data, characteristics of the farm, institutional support accessibility, and adoption of soil conservation technologies. Agricultural reports and policy documents were used to get secondary data.

3.5 Data Analysis

The SPSS software was used in the analysis of data. Socio-economic characteristics were summarised using descriptive statistics and chi-square tests were used to test the relationships between independent variables (education, land size, land ownership, credit access and extension services) and adoption of conservation technologies (composting, vermicast, agro forestry, physical measures and minimum tillage).

3.6 Ethical Considerations

Ethical permission was obtained by the appropriate authorities. The participants had been briefed on the aim of the study as well as their rights to confidentiality, voluntary participation and to discontinue the study at any point. Reporting did not reveal any identifiable information.

IV. FINDINGS & DISCUSSION

4.1 Response Rate

There are a number of socio-economic and institutional factors influencing the implementation of soil conservation and rehabilitation technologies in Bungoma County. These are the education level, which will affect farmers knowledge and readiness to use the better practices; land size that defines the magnitude and ability to use the technology and the land ownership type, which will impact the investment choices and long-term dedication to sustainable land management of the farmers. Moreover, credit access allows farmers to invest in resource-intensive technologies and credit access to extension services allows farmers to increase awareness, technical skills and conservation innovations implementation abilities. The subsequent subsections show the findings of the chi-square analysis to determine the impact of each of these factors on technology adoption.



4.1.1 Effect of the Education Level on Adoption of Soil Conservation and Rehabilitation Technologies

Table 1 presents the results of the Chi-square test showing the relationship between farmers' education levels and their adoption of various soil conservation and rehabilitation technologies in Bungoma County. The results illustrate how education influences the uptake of specific technologies such as composting, vermicast, physical measures, agroforestry, and minimum tillage.

Table 1

Chi-Square Test Showing the Relationship Between Farmers' Education Levels and Their Adoption of Various Soil Conservation and Rehabilitation Technologies in Bungoma County

Level of Education	Test values		
	Chi-Square Value	df	P-value
Compost Acreage	5.167 ^a	8	0.740
Vermicast Acreage	13.936 ^a	8	0.083
Physical measure Acreage	9.260 ^a	4	0.055
Agroforestry Along SWCs Acreage	11.097 ^a	4	0.025
Minimum tillage Acreage	20.597 ^a	8	0.008

The results of the analysis indicate the existence of different levels of statistical significance between the education level and adoption of soil conservation and rehabilitation technologies in the Bungoma County. The level of education plays an important role in the adoption of minimum tillage ($p = 0.008$) and agro forestry along the soil and water conservation structures (SWCs) ($p = 0.025$). These results indicate that the increased education leads to the improvement of awareness and understanding of the long-term advantages of these methods, and, therefore, their usage increases.

In the contrary, there is less or no significant relationship between education and adoption of vermicast ($p = 0.083$), physical measures ($p = 0.055$), and composting ($p = 0.740$). Implementation of these technologies might be based on practice, community knowledge-exchange or demonstrations by farmers rather than schooling. All in all, the issue of education seems to be major in promoting the application of knowledge-intensive conservation technologies like minimum tillage and agroforestry. Increasing the rate of adoption of these technologies and bettering the long-term outcomes of soil management could thus be achieved by increasing the education of farmers in training and awareness initiatives.

The results indicate that education levels are strongly correlated with the adoption of some soil conservation technologies with minimum tillage ($p=0.008$) and agro forestry in structures of soil water conservation (SWCs) ($p=0.025$) showing significant correlation. These findings indicate that the levels of higher education have a significant positive role in the awareness and knowledge of the benefits of such practices by farmers. Learned farmers would have a higher perception of the benefits of sustainable practice in the long run and they would have the technical skills to adopt complicated strategies such as minimum tillage and agroforestry. These results are consistent with those of Kabubo-Mariara (2007), who also pointed out the importance of education in the process of adopting the modern technologies in agriculture.

Through education, farmers can gain access to and get processed information on new conservation methods, translate technical guidelines, and learn the larger scope of the soil health management. As an example, agro forestry involves a subtle skills in the selection, spatial planning, and management of tree species that can be effectively provided to educated people. Likewise, minimum tillage entails certain equipment and procedures that might be not familiar to lowly educated farmers.

On the other hand, the use of technologies, like composting ($p=0.740$) and physical measures ($p=0.055$) have less close relationships with education levels. This means that these practices are more accessible and they can be embraced regardless of formal education. An example of composting is the fact that in many cases, composting is based on the time-tested approaches towards organic waste disposal, which have been used over years. Likewise, physical interventions, such as terracing, can be prescribed by community standards or group work, and therefore are not dependent on technical know-how. These observations are echoed by Rambo *et al.* (2017) who observe that the idea that practices of conservation culturally embedded do not necessarily presuppose formal education to be implemented.

The results emphasize the need to use custom intervention. Although education-based programs can help advance the introduction of knowledge-intensive technologies, culturally aware strategies should take the first priority in practices based on the use of traditional knowledge. This duality means that there is fair access and that more measures are adopted in terms of conservation.

4.1.2 Relationship between the Size of Land and Land Ownership Type and Adoption

Table 2 summarizes the Chi-square test results assessing the relationship between farm size (in acres) and the adoption of different soil conservation technologies. The table highlights whether the scale of landholding affects the likelihood of adopting specific conservation practices among farmers.

Table 2

Chi-Square Test Results Assessing the Relationship Between Farm Size (in Acres) and the Adoption of Different Soil Conservation Technologies

Land size in Acres	Test values		
	Chi-square value	df	P-value
Compost Acreage	5.861 ^a	6	0.439
Vermicast Acreage	26.268 ^a	6	<.001
Physical measure Acreage	6.205 ^a	3	0.102
Agroforestry Along SWCs Acreage	5.476 ^a	3	0.140
Minimum tillage Acreage	8.546 ^a	6	0.201

The findings indicate that, there was a significant positive correlation between land size and vermicast adoption, which is statistically significant ($p < 0.001$). The larger landholdings seem to promote the use of vermicast by farmers probably due to the fact that the technology can be scaled and it is economical when it is applied on a large land area. Other technologies like composting ($p = 0.439$), physical measures ($p = 0.102$), agroforestry and SWCs ($p = 0.140$) and minimum tillage ($p = 0.201$) are not significantly related to land size. This implies that the practices can be applied in both small and large farms. Factors like availability of resources, labour and technical support may be more influential in determining their adoption than acreage. The results highlight the fact that even though bigger land areas may act as a motivator in the use of some technologies such as vermicast, most of the soil conservation strategies are flexible with either small-scale or large-scale farming systems.

The discussion highlights the importance of land size as a critical factor affecting the adoption of particular soil conservation technology especially vermicast technology ($p < 0.001$). Vericolumn farmers endowed with bigger land area will tend to embrace vermiform casting since it is scalable and economical. On larger farms, it is easier to be more flexible in allocating parts of the farms to experimental practices and reduce the possible risk of extreme consequences of initial adoption. This observation is consistent with that of Kassie *et al.* (2013) who noted that farmers with large parcels of land usually have the room to experiment and invest in new farming technologies. Vermicast is also a by-product of earthworms and has been shown to increase the quality of soil and its ability to retain water which is particularly appealing to bigger operations that need to find sustainable and high yield solutions.

Conversely, the technology that has been adopted like composting ($p = 0.439$) and agro forestry ($p = 0.140$) do not have significant correlation with land size. This absence of correlation indicates the flexibility and suitability of these practices to different farm sizes. An example is composting, which is the conversion of organic waste into fertilizer containing high levels of nutrients, which can be effectively used on small plots or scaled up to large enterprises. Agro forestry, on the same note, incorporates trees in the growth of crops or livestock, whereby the advantages include soil stabilization as well as increase of biodiversity, irrespective of the scale of the farm.

These practices are flexible in nature, which highlights the possibility of inclusive implementation in various farming scenarios. Marketing conservation accessible and scalable technologies would make sure that smallholder farmer and large-scale farmers can achieve gains through conservation practices. The policies adopted to focus on smallholder farmers, who are usually constrained in the resources and finances, might focus on the distribution of affordable and efficient technologies such as vermicast technology. Pretty *et al.* (2011) argue that subsidies, training, and availability of inputs are important in helping smallholders to embrace sustainable practices. The policy and development practitioners can promote the adoption of soil conservation practices in large numbers by adjusting the interventions to reflect variations in the land size thus promoting sustainable agricultural development in Bungoma County.

Type of Land Ownership: Table 3 presents the statistical relationship between types of land ownership and the adoption of soil conservation and rehabilitation technologies. It shows how tenure security and ownership arrangements influence farmers' investment in sustainable soil management practices.

Table 3

Statistical Relationship Between Types of Land Ownership and the Adoption of Soil Conservation and Rehabilitation Technologies

Type of land ownership	Test values		
	Chi-square value	df	P-value
Compost Acreage	8.453 ^a	2	0.015
Vermicast Acreage	3.564 ^a	2	0.168
Physical measure Acreage	9.113 ^a	1	0.003
Agroforestry Along SWCs Acreage	0.953 ^a	1	0.329
Minimum tillage Acreage	12.401 ^a	2	0.002

The findings suggest that the kind of land ownership has a significant effect on the adoption of composting ($p = 0.015$), physical measures ($p = 0.003$), and minimum tillage application ($p = 0.002$). The chances of farmers adopting such practices are higher where farmers have secure or formal land tenure as they have long-term benefits and thus worth investing their labor and financial resources. On the other hand, there are no significant differences between the ownership type and vermicast ($p = 0.168$) and agroforestry along SWCs ($p = 0.329$), which indicates that those technologies can be applied despite poor ownership security.

These results emphasize the fact that tenure security encourages an investment in sustainable practices, especially those that are associated with an increased initial cost or long-term maintenance. Enhancement of land tenure policies would thus promote the broader use of conservation oriented farming systems.

As indicated in the analysis, the nature of land ownership has a very strong effect on the adoption of some of soil conservation technologies, especially composting ($p=0.015$), physical measures ($p=0.003$), and minimum tillage ($p=0.002$). Secure land tenure gives the farmers the assurance of investing in practices that have long term payoffs. As an example, through composting, the soil becomes fertile in the long run, whereas physical controls such as terracing and building bunds lessen erosions in steep farms and finally, minimum tillage helps in maintaining soil structure that will be cultivated later. The findings are supported by Place *et al.* (2003), who underline that secure ownership of land is a determining factor in conservation investments in the whole of Sub-Saharan Africa. Land owners are farmers, and they view land as a long-term asset and hence they have been encouraged to practice in a manner that enhances the health of the soil and productivity in agriculture.

On the other hand, land ownership does not seem to have such an impact on such technologies as vermicast ($p=0.168$) and agroforestry ($p=0.329$). This implies that such practices are rather motivated by short-term gains or community-based projects rather than tenure security. One example is Vermicast that is an instant boost to soil fertility and crop yields, and it is likely to be tempting, irrespective of who is the owner. In the same way, multifunctional advantages of agro forestry like availability of fuel-wood, fodder and amelioration of soils may attract farmers who have different tenure agreements.

This difference shows the need to adjust the soil conservation strategies to the existing land tenure systems. In the regions with weak land tenure, using other technologies such as vermicast and agroforestry, which have short payoffs and do not require ownership may be an effective approach. Resource management programs at the community level as suggested by Food and Agriculture Organization [FAO] (2011) can also be critical in promoting the practice of such practices in shared or communal pieces of land.

Through the focus on tenure-related challenges and the use of flexibility of some of the practices, the policy makers will be able to develop inclusive strategies that promote sustainable production of soils in varying land ownership arrangements. The method guarantees that every farmer irrespective of the tenure will be in a position to participate and gain in conservation moves, which will create a sustainable agricultural season in Bungoma County

4.1.3 Role of Access to Credit in the Adoption of Conservation Technologies

Table 4 displays the Chi-square results examining the influence of access to credit on farmers' adoption of soil conservation technologies. It identifies which conservation practices are most affected by the availability of financial resources.

Table 4

Chi-Square Results Examining the Influence of Access to Credit on Farmers' Adoption of Soil Conservation Technologies

Access to credit	Test values		
	Chi-Square value	df	P-value
Compost Acreage	19.971 ^a	10	0.030
Vermicast Acreage	7.178 ^a	10	0.709
Physical measure Acreage	12.158 ^a	5	0.033
Agroforestry Along SWCs Acreage	4.694 ^a	5	0.454
Minimum tillage Acreage	100.564 ^a	10	<.001

The access to credit has a substantial impact on the use of composting ($p = 0.030$), physical measures ($p = 0.033$), and the use of minimum tillage ($p < 0.001$). Farmers who have financial means are in better position to acquire equipment, inputs or even labour required in these practices. Minimum tillage that has the most significant association, frequently implicates the procurement of specialized equipment or machinery which supports the idea of credit in enabling adoption. On the other hand, vermicast ($p = 0.709$) and agro forestry along SWCs ($p = 0.454$) do not have a significant relationship with credit access, which means that, the practices are not capital intensive and can be applied in low capital investment. These findings indicate the importance of credit as an enabler to the uptake of costly technologies. An increase in affordable credit services via cooperatives, microfinance institutions and agricultural banks would thus increase adoption of sustainable soil management practices.

The availability of credit is also very important in determining the adoption of capital-intensive technologies in soil conservation. The research indicates that there are strong correlations between the availability of credit and the adoption of minimum tillage ($p=0.001$), composting ($p=0.030$) and physical measures ($p=0.033$). Such practices may demand huge financial requirements on initial investment in tools, equipment, or inputs which may be a challenge to the financially constrained farmers. The barriers can be overcome through credit access which allows farmers to adopt and maintain such technologies. The findings are also supported by Deressa *et al.* (2009) who underscore the role of financial resources in increasing the adoption of agricultural innovations.

Minimum tillage such as that of the example requires specialized equipment that might not be affordable to smallholder farmers unless they are given financial aid. On the same note composting takes laborious operations and in certain instances, organic waste management facilities. Terracing and bund building are especially resource-consuming measures that not only demand materials but also a great amount of labor which further stresses the role of credit in enabling such measures to be made possible.

On the other hand, the two practices vermicast ($p=0.709$) and agro forestry ($p=0.454$) are not significantly related to access to credit. Such activities are relatively cheap and commonly based on the easily accessible resources, including organic waste to create vermicast or tree seedlings to practice agro forestry. Their low financial needs allow them to be available to a larger number of farmers, irrespective of their access to credit. This observation highlights the need to encourage such low-cost technologies in the regions with low financial capabilities.

Policymakers ought to come up with specific credit schemes targeting soil conservation technologies in order to increase capital-intensive use. These programs might entail low interest loans or grants to buy the necessary equipment and input. Besides, the inclusion of subsidies or community-based assistance on high cost practices might be incorporated to close the financial gap to the smallholder farmers. At the same time, by encouraging low-cost technologies such as vermicast and agro forestry using training and resources sharing schemes it is possible to secure widespread implementations in a variety of financial situations. This two-fold strategy would enhance conservation of the soil and resolving barriers of finances leading to sustainable agriculture within Bungoma County.

4.1.4 Availability of extension services on the level of adoption

Table 5 presents the statistical association between farmers' access to extension services and the level of adoption of soil conservation and rehabilitation technologies. It highlights the extent to which information, training, and technical support affect the uptake of these practices.

Table 5

Statistical Association Between Farmers' Access to Extension Services and the Level of Adoption of Soil Conservation and Rehabilitation Technologies

Access to extension services	Test values		
	Chi-Square Value	df	P-value
Compost Acreage	6.874 ^a	8	0.552
Vermicast Acreage	15.328 ^a	8	0.055
Physical measure Acreage	8.493 ^a	4	0.076
Agroforestry Along SWCs Acreage	10.142 ^a	4	0.039
Minimum tillage Acreage	18.762 ^a	8	0.012

Extractive service access demonstrates some statistically significant correlations with minimum tillage ($p = 0.012$) agroforestry on SWCs ($p = 0.039$). These findings represent that information transmission, training, and technical assistance by the agents of extension is essential in the adoption of knowledge intensive and skill intensive technology. There are higher chances that farmers who are contacted on a regular basis by extension will effectively put into practice such practices. The Vermicast ($p = 0.055$) is almost statistically significant indicating that the extension support is not independent of its uptake but other variables like the input can also act. Weaker associations were found in composting ($p = 0.552$) and physical measures ($p = 0.076$) as they are relatively easy techniques that may be passed through traditional knowledge and farmer-to-farmer learning.

The concluding findings demonstrate the need to reinforce agricultural extension systems in order to facilitate the impartation of experience and technical skills. Extended coverage of the extension might make a significant impact on the use of sustainable soil conservation and rehabilitation technologies. Availability of extension services is one of the critical issues in the usage of knowledge-intensive soil conservation technologies. The analysis reveals that there are significant corporeal associations amid extension services and adoption of minimum tillage ($p=0.012$) and agro forestry ($p=0.039$). These practices cannot be executed without special knowledge and the extension agents are crucial in offering the required training and technical guidance. Muriithi *et al.* (2018) note that the extension services are used to address the knowledge gaps, thereby providing the farmers with the skills and knowledge to adopt and maintain new and sustainable agricultural practices.

An example of this is minimum tillage whereby the soil disturbances are accurately controlled to maximize the productivity and conservation process, which may be complicated to the farmers unless instructed by the experts. In a similar manner, agro forestry requires information regarding tree species, planting, and how to integrate into the current mechanisms of production. These processes are made easy by the extension services with the use of demonstrations, workshops and one on one interaction so that farmers get to know and be in a position to practically use these techniques.

On the other hand, there is less connection between the use of technologies, such as composting ($p=0.552$) and physical measures ($p=0.076$) and extension services. These practices are usually based on folk practices and community-based networks that can be used in place of formal education. In these practices, farmers who have a rich cultural or communal background did not feel that extension services are necessary in matters of implementation. Nevertheless, this consistency in the reliance on the traditional methods might inhibit the optimization and scaling of such practices particularly in regions that do not have a powerful community setup.

In order to increase the rate of adoption of advanced conservation practices, there is a need to intensify the extension services in the underserved regions. The expansion of the coverage and the ability of the extension programs should be given the following priority by the policy makers in order to make sure that the programs can be customized to meet local needs and knowledge gaps. These may involve the use of mobile departments, provision of online learning resources, and the use of bonuses to motivate extension workers in the community in order to improve accessibility. Besides, incorporation of traditional practices into extension programs may generate a holistic model that may streamline innovative techniques with cultural aptitude that will promote wider embrace of varied soil conservation technologies. In so doing, the extension services will provide a base towards sustainable agriculture in Bungoma County.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This research determines that the implementation of the use of soil conservation and rehabilitation technologies in Bungoma County depends on the socio-economic and institutional factors. Knowledge on sustainable practices improves the appreciation and knowledge of the farmers on the same as well as land size and ownership provides incentive to invest in long term measures. Credit also allows capital intensive technologies to be adopted and extension services transfer the technical knowledge needed to execute the same. Findings show that to achieve sustainable soil



management, the approach along with it should be holistic to cover not only technical but also social and institutional obstacles.

5.2 Recommendations

The County Department of Agriculture and NGOs must also redouble their efforts in training farmers via field demonstrations and community workshops in order to get them to adopt conservations on soil. Training farmers will improve their knowledge and skills concerning conservation techniques like terracing and agroforestry hence promoting sustainability. On ownership and size of the land, the national and county governments should through the ministry of lands hasten land titling, and boundary conflicts be resolved to obtain tenure. The secure ownership enables the farmers to invest in permanent soil conservation measures. Financial institutions and county revolving funds must develop low-interest and flexible loans to be used specifically to fund investments on soil conservation. The local government can offer the guarantee so that smallholders can access the inputs and machinery required to have sustainable agriculture. With regard to extension services, the Ministry of Agriculture needs to hire additional field officers, improve logistics, and launch mobile-based advisory services in order to address the remote farmers. Enhanced expansion chains guarantees the availability of technical advice and encouragement to embrace the best practices in time. These measures all combined, education-based on actions, land security, credit access, and extension systems will stand farmers empowered, lessen soil degradation, and increase agricultural productivity at Bungoma County.

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Farmers' perceptions towards khat (*muguka*) in Mbeere South Sub-County, Embu County, Kenya

Faith Mukami Ngari¹
Eric R. Masese²
Francis O. Barasa³

¹fngari@karu.ac.ke/ngamingari@gmail.com

^{1,2,3}Moi University, Kenya

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ABSTRACT

Khat (*muguka*) is one of the crops in Kenya, which elicits much debate because, on one hand, it is considered a drug of dependence and is also blamed for many other social evils. On the other hand, it is a crop that has both economic and cultural value. Despite the largely publicised social evils associated with it as a crop, smallholders are increasingly embracing its cultivation in the study area. However, little is known about how they perceive it so as to embrace it amidst the controversies. Therefore, this study investigated the farmers' perceptions towards muguka in Mbeere South sub-County, Embu County, Kenya. It was guided by the social constructionism theory, which observes that humans construct social reality through externalisation, objectivation and internalisation. The study was qualitative and cross-sectional. The target population was all the muguka-producing households in the study area. A non-probability sampling technique was employed to select the muguka-producing households. Specifically, purposive sampling was used to arrive at a sample size of 112 households, and this was determined through saturation. Thus, a semi-structured interview schedule was used to collect data from the 112 households. Purposive sampling was also used to select the 15 key informants and the participants of the 3 focus group discussions. Qualitative data was analysed using thematic analysis and presented using direct quotations and narratives. The results showed that muguka was perceived as money (*mbia*), help (*útethio*), employer (*mwandíkani*), business (*mbiacara*) and coffee or tea (*kaúwa kana manjani*). The study thus concluded that muguka was perceived favourably by the farmers due to the economic benefits since it was not food and did not have a place in the Mbeere traditions, and that was why they embraced its cultivation. This was because its cultivation provided farmers and non-farmers with opportunities for earning income that was used to acquire assets, educate children, start small-scale businesses and meet all other household needs, including food needs, thus reducing hunger and poverty in the area since most of the people in the area were not in formal employment. Even though they perceived it favourably, its cultivation was blamed on other social evils such as school dropouts, early marriages, young men's deaths, negative health effects, alcoholism and prostitution, among others. Others indicated that they cultivated it largely because they lacked other alternatives since Mbeere is a dryland and there was no water for irrigation. This study, therefore, recommends that the people of Mbeere South sub-County be provided with water for irrigation so that they can engage in the farming of other crops that would serve as both food and cash crops, most of which are not surrounded by controversies. It also recommends that intensive campaigns promoting the importance of education be carried out and training on financial management be offered to reduce the misappropriation of proceeds through excessive drinking of alcohol and prostitution.

Keywords: Farmers, Households, Income, Khat, Muguka, Perception

I. INTRODUCTION

Khat is an evergreen plant that is cultivated as a bush or small trees (Omar *et al.*, 2020). It is grown for the production of young leaves and tender twigs which are chewed for their stimulating effects (Feyisa & Aune, 2003). Khat is one of the crops in Kenya which elicits much debate because on one hand, it is considered a drug of dependence and is also blamed on many other societal evils and on the other hand, it is a crop that has both economic and cultural value. To start with, in 1980, the World Health Organization (WHO) classified khat as a drug of abuse that can produce mild to moderate psychological dependence (Hendricks & Radwa, 2018). Thus, medically, khat is viewed as a drug whose major active ingredients are Cathinone and Cathine. Cathine is a Schedule IV stimulant, and Cathinone is a Scheduled 1 stimulant under the controlled substances Act, meaning that it has a high potential for abuse (Silva *et al.*, 2022). As a drug, chewing it, is associated with a number of health related complications that includes; increased blood pressure, tachycardia, insomnia, anorexia, gastritis, stomatitis, oesophagitis, gastric ulcers, hemorrhoids, constipation, general malaise, irritability, migraine headaches, cardiovascular complications, loss of appetite and impaired sexual potency in men (Al-Motarreb *et al.*, 2002; Hassan *et al.*, 2005; Luqman & Danowski, 1976; Nencini & Ahmed, 1989). Additionally, when chewed by pregnant women it impairs growth of foetus by inhibiting utero-placental blood flow (Mwenda *et al.*, 2003).

However, though khat use is associated with negative health effects, evidence shows that it is ranked by consumers as a mild stimulant and not a hard drug (Anderson *et al.*, 2007). In addition, Griffiths *et al.* (1997) in a study of khat use by Somali immigrants in the United Kingdom observe that medical problems associated with khat are rare. Pennings *et al.* (2008) also indicate that the abuse potential as well as dependence of khat is low and there is no strong evidence for a causal relationship between use of khat and psychiatric morbidity. Consequently, a report by the WHO Expert Committee on Drug Dependence (ECDD) indicate that the potential for khat abuse and dependence is low and hence not significant to warrant international control (WHO, 2006). The National Campaign Against Drug Abuse [NACADA] opine that most chewers mixed it with other substances such as cigarettes which are known to stimulate the Central Nervous System while other chewers used sugared menthol or pieces of sugar and cardamom among others to improve the bitter taste of khat (NACADA, 2013). Thus, since khat was chewed along other substances it was difficult to conclude on the health effects of chewing it.

In addition, khat is blamed for other societal evils. In instances where its production replaces food crop production, it undermines household food security whereby the households' largely relies on the market for food and in instances where the food prices go up, the household may not afford (Feyisa & Aune, 2003 and Bulos, 2021). Additionally, in the non-growing areas, chewers spend money on khat instead of using it to feed their families (Bulos, 2021). Further, sitting to chew khat for long hours, wastes a lot of time which would have been used in other productive activities (Bulos, 2021). Further, Mukami (2014) observes that school interruptions are noted in the khat growing areas. Lower retention rates of both boys and girls are observed, absenteeism is noted as children fail to attend school to participate in khat production activities, missing some of the classes as children sneak out from school to engage in the khat production activities, difficulty concentrating in class since some children doze as a result of waking up very early to pick khat, and others drop out of school altogether (Mukami, 2014). In addition, khat is also blamed for change in attitudes towards schooling where there is general disregard for education since its returns are long term and disregard for teachers who are seen to earn less compared to the khat farmers and dealers. Khat is also blamed for increasing child labour, early marriages and parental/guardian neglect among others (Mukami, 2014).

On the other hand, khat is of great economic importance. It earns revenues for the governments in the producing countries. In Yemen, since khat is produced and consumed locally, the government benefits through domestic tax as it is transported from one place to another (Bulos, 2021). In Ethiopia, khat is exported earning the government foreign exchange (Terefe, 2020) and a lot is still traded domestically, thus domestic tax is collected at different regional and zonal levels which augments the total export tax collection revenue (Feyisa & Aune, 2003). In Kenya, *míraa* – khat variant cultivated in Meru County – is exported and earns foreign exchange (Muchui, 2019). It is also traded locally in major towns also earning domestic tax. In addition, khat earns income to the farmers who directly cultivate it in their farms. It also creates job opportunities for earning income to the traders, middlemen, businessmen, transporters (Carrier & Klantschnig, 2012). Further, once khat is sold, it increases household income, and that income can be used to buy food improving household food security (Gezon, 2012).

In addition, khat has cultural significance to the communities that cultivate and use it. In Yemen, khat is used in festivals and weddings among other events (Bulos, 2021). In Ethiopia, cultural ceremonies such as births, naming ceremonies, marriages and funerals were celebrated by chewing khat (Carrier & Klantschnig, 2012). It was also used in religious festivals such as meditation and worship (Carrier & Klantschnig, 2012). The traditional healers used khat to heal various ailments (Yeshigeta & Abraham, 2004). In Kenya, the Tigania and Igembe of Meru County have much pride in the crop because of its place in their traditions (Bururia & Nyaga, 2014). For instance, a bundle of *míraa* serves as a marriage proposal and engagement (Bururia & Nyaga, 2014). In preparation for circumcision, the candidate gives a bundle of *míraa* to the man of his choice who then agrees to serve as his guardian father during the seclusion period (Bururia & Nyaga, 2014).

Even though khat use is associated with negative health effects and its use and production is associated with other societal evils, *muguka* - a khat variant - production is rapidly increasing in Embu County, especially in Mbeere South sub-County. Notwithstanding its advantages such as its economic importance, *muguka* farmers often face significant obstacles such as bans and threats to ban and higher taxes in some Counties. Its marketability is hampered by the social stigma and unfavourable opinions attached to it, mostly because of its psychoactive properties (Mugo, 2025) that causes it to be perceived as a drug. Nevertheless, irrespective of the social stigma and unfavourable opinions attached to it and irrespective of the bans and the threats to ban its production, sale and distribution, *muguka* production continues to be embraced by the small holders. This was why this study sought to find out the farmers' perceptions towards *muguka* since it was a crop surrounded by controversy, but which was widely embraced by the farmers.

1.1 Statement of the Problem

Khat whose major active ingredients are Cathinone and Cathine (Silva *et al.*, 2022) is on one hand, viewed as a drug of dependence that produce mild to moderate psychological dependence (Hendricks & Radwa, 2018). As a drug, chewing it, is associated with a number of health related complications that includes; increased blood pressure,

tachycardia, insomnia, anorexia, gastritis, stomatitis, oesophagitis, gastric ulcers, hemorrhoids, constipation, general malaise, irritability, migraine headaches, cardiovascular complications, loss of appetite and impaired sexual potency in men (Al-Motarreb *et al.*, 2002; Hassan *et al.*, 2005; Luqman & Danowski, 1976; Nencini & Ahmed, 1989) and when chewed by pregnant women it impairs growth of foetus by inhibiting utero-placental blood flow (Mwenda *et al.*, 2003). Additionally, it is also blamed for many other societal evils such as undermining food security because of reducing area under food crop production and using household income to buy it (Feyisa & Aune, 2003 and Bulos, 2021), increase in school drop out in the growing areas, increased child labour, early marriages and parental neglect (Mukami, 2014). On the other hand, it is a crop of great economic and cultural importance (Carrier, 2005b). Thus, due to the former view, khat is always facing bans and threats to ban which hinders its production, sale and distribution. Despite the controversies surrounding khat, *muguka* production is on the increase in Mbeere South sub-County whereby many small holders have ventured in its production because of various reasons including economic returns. However, few studies have explored how the farmers in the area perceive it, since their perceptions are likely to inform its adoption.

1.2 Research Objective

The research objective was, to find out the farmers' perceptions towards *muguka* as a crop in Mbeere South sub-County, Embu County, Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

The study employs Berger and Luckmann (1966) social constructionism theory. Their conceptualization challenges the notion of an inherently objective reality. Thus according to their argument, reality is not something that exists independently of human beings but is instead created through social interactions and shared meanings. In their work, Berger and Luckmann propose that humans construct social reality through the process of externalization, objectivation and internalization. Externalization according to Berger and Luckmann is 'the ongoing outpouring of human being into the world, both in the physical and the mental activity of men.' During externalization, humans project their subjective meanings onto the world through their activities and creations. Thus, externalization is the way in which individuals create cultural products through social interaction. For instance, the creation of language, exemplifies externalization of humans' thoughts and experiences by developing words and grammatical structures to represent them.

Objectivation is the process whereby the externalized products of human activity attain the character of objectivity. Thus, through objectivation, externalized human products acquire an apparent objective reality, seeming to exist independently of their human creators (Berger & Luckmann, 1966). For instance, language, norms, values, and institutions like marriage and government come to be seen as natural and permanent even though they are socially created. Consequently, internalization is the immediate apprehension or interpretation of an objective event as expressing meaning (Berger & Luckmann, 1966), a process contemporary scholars link to the ongoing construction of identity and collective meaning in social contexts (Joas & Knöbl, 2022; Vandenberghe, 2019). During this process, individuals reincorporate the now seemingly objective social world into their subjective consciousness. For instance, individuals accept the socially constructed norms and values as part of their own reality guiding their behaviours and shaping their identities. In addition, with regard to internalization of gender roles, children observe and internalize socially constructed ideas about appropriate behavior for men and women, often accepting these roles as natural and inevitable rather than as products of social interaction.

2.2 Perceptions towards Khat as a Crop

2.2.1 Khat is a Drug

The view towards khat is controversial. On one hand it is viewed as drug. The World Health Organization (WHO) classified it in 1980 as a drug of abuse that can produce psychological dependence (Hendricks & Radwa, 2018). However, Al-Mugahed (2008) observes that the WHO does not consider khat addiction to be a serious problem. This controversial status is what leads to khat being legal and illegal in some countries. For instance, khat is a specifically controlled substance in some countries including Canada, Germany, the United Kingdom and the United States. On the other hand, khat is legal in Djibouti, Kenya, Uganda, Ethiopia, Somalia, Sudan and Yemen (Cox & Rampes; 2003 and Manghi *et al.*, 2009). Additionally, its status of being a drug raises concern and thus it receives a different kind of scrutiny than other crops, one that is often tinged with what Warfa *et al.*, (2007) call 'moral panic' due to fears of its effects on individual and social health. Thus, in the community there are those who embrace it and there are those who do not embrace it because of various reasons. Nevertheless, khat still tends to be singled out for scrutiny based on emotional reactions against its status as a recreational drug. In Madagascar for instance, many people especially those with a relatively high amount of Western education, those from a different part of the country, or the relatively wealthy-disdain khat (Gezon, 2012).

2.2.2 Khat is a Cash Crop

On the other hand, it is viewed as a cash crop which brings substantial returns to the farmers. Poulton *et al.*, (2001) observes that crops that are cultivated entirely for the market are known as cash crops. The plant is less vulnerable to drought with less cost for labor demand throughout its production (Girma & Challa, 2021). Khat is a non-food cash crop like that of cotton, tobacco, tea, coffee and cacao among others but that is worth cultivating for its benefits to farmers' livelihood (Dessie, 2015). It is thus viewed as an avenue of earning economic resources. Gebissa (2008) asserts that khat as a shrub was Ethiopia's predominant cash crop which had moved from being a shrub grown for domestic consumption and from a substance that was being chewed during religious and cultural occasions to become a visible and pervasive social habit. It had also moved from a product sold in local markets to the most profitable commodity (Gebissa, 2008). Mwenda *et al.*, (2003) also asserts that in Kenya khat is also viewed as a cash crop of immense economic value. Khat as pointed out by Carrier (2005a); Carrier (2005b) and Klein and Oni (2009) is an outstanding cash crop, very profitable to farmers as it is grown for the local market as well as for the export market. As a cash crop khat is popularly known as the 'green gold' of Nyambene (Bururia & Nyaga, 2014; Njeru & Mwangi, 2013). Consequently, Mugendi (2017) indicates that khat growers for instance, earn around five times more cash crop income than non-khat growers. This amount is far much higher compared to the market price of the main crops grown in the greater Mbeere sub-County (Mugendi, 2017).

2.2.3 Khat is an Employer

Further, Dessie (2013), in a study that was carried out among the learned Ethiopians asserts that khat is an employer because of the large numbers of producers –farmers - it employs. Girma and Challa (2021) also observe that khat serves as an employment opportunity. As an employer, it was a source of income in its production activities and in the marketing processes (Girma & Challa, 2021). Gebissa (2008) also observes that khat trade involves millions of farmers, traders and other service providers in the Horn of Africa and the Arabian Peninsula. Carrier and Klantschnig (2012) observe that khat also provides employment to many people; farmers, middle men, businessmen, and transporters. In addition, Goldsmith (1998) indicates that khat trade has created many jobs not only for local people living in the growing areas but also others who have migrated to the area due to its potentiality in business. The income from khat trade locally is used basically for construction of schools, churches and other community projects (Goldsmith, 1998). In a way therefore, this trade is the major economic contributor to the development of the region. Further, khat can undoubtedly be said to be an integral part of Mbeere's economy as many people have built their lives around it. Those who have been able to make good use of the money got from khat have admirable lives. They have been able to educate their children and build good houses (Ngari, 2011). A majority of the Mbeere people view the introduction of khat as a blessing since those involved in the trade are able to earn a living.

2.2.4 Khat is a Stimulant which is socially and culturally valued

Gebissa (2004) point out that khat is a valued crop because of its critical role in such productive activities as work, cultural ceremonies, meditation and worship. It was also seen as a medium of social interaction (Gebissa, 2004). Gebissa (2004) opined that typical farmers in Hararghe for instance, between 8:00 am to 9:00 am walked into their khat orchards and settled down with other men belonging to the family or those from the neighbourhood for the morning chew session locally known as the *ighbana* which means the eye opener which lasts for about an hour. During this period, only a small quantity of khat is chewed for the purpose of achieving the desired state of euphoria for a burst of energy for the work ahead (Gebissa, 2004). The chew session as indicated by Gebissa (2004) is followed by breakfast brought to the field by the farmer's wife. After breakfast, for the next 3 - 4 hours the farmer worked vigorously in his farm preparing seedbeds for planting or shoring up the khat trees, watering, fertilizing, pruning and defoliating depending on the season. However, if khat chewing was not followed by hard labour, it then served as an irritant rather than as a stimulant and was highly disapproved (Gebissa, 2004).

The Oromo of Hararghe in Ethiopia, celebrated births, marriages and religious festivals by chewing khat and on occasions such as funerals and naming ceremonies (Gebissa, 2004). Khat leaves were presented as gifts during the popular *wadaga* ritual; a ceremony of a group prayer performed at times of illness, death or calamity. In the course of the ritual large amounts of khat are consumed by the participants (Gebissa, 2004). Guests are welcomed with it; prayers were kept long and lively with it, in wedding and funeral ceremonies as well as in other social gatherings people were supplied with bundles of the leaves as a matter of course (Gebissa, 2004). Political and religious leaders customary gave visitors khat as a sign of politeness while friends host are expected to provide a handful of the leaves to friends and guests as an indication of hospitality (Gebissa, 2004).

Woldu *et al.*, (2015) also observe that in Eastern Ethiopia, khat also has a considerable social value and a special place in the socio-cultural life of the people. He notes that the most accepted social value of khat is related to religious rites (Woldu *et al.*, 2015). Thus, khat has been used by elder Muslims, Sheikhs and Muslim spiritual scholars. Socially, it is acknowledged to produce excitation, promote social interactions; recreation and past time, as well as banish sleep,

enhance job efficiency, dispel fatigue and suppress hunger (Woldu *et al.*, 2015). Further as noted by Woldu *et al.*, (2015) khat also is known to play a dominant role in all male activities and social celebrations such as marriages, business proceedings, meetings, mourning, weddings and other ceremony as well as collective labour works. The khat ceremony has its own associated services like use of incense, sandal, soft drinks, cigarettes, tea/coffee, sugar and milk.

In Kenya, the Tigania and Igembe have much pride in the crop, emphasizing its place in their traditions (Bururia & Nyaga, 2014). Khat locally referred to as *míraa* is a highly valued crop among the Ameru. Bururia and Nyaga (2014) indicate that culturally *míraa* has a great value as far as the traditional marriage and male circumcision rites are concerned. During traditional marriages, a prospective bridegroom takes a bundle of *míraa* called *ncoolo* in Kimeru language, to the prospective bride who in turn gives to her mother who then gives to the father (Bururia & Nyaga, 2014). This serves as a marriage proposal and engagement. Additionally, in preparation for circumcision the candidate of initiation gives the bundle of *míraa* to the man of his choice who then serves as his guardian father during the seclusion period (Bururia & Nyaga, 2014). Further, Carrier (2005b) observes that *míraa* is incorporated into a 'youth ethos' among the Ameru where it is validated as 'poa' (cool). To them *míraa* is a successful commodity, that is linked to their heritage.

2.2.5 Khat is a God blessed commodity

A research participant, Adem Aliyu Jaylan, as quoted in Gebissa (2004) asserted as follows: 'khat is a tree that is loved by God. It is a tree blessed by Rabi (God) and given to us. This is a tree that man cannot command. A lot of people with power have tried to control it especially the price of selling the leaves. None has succeeded so far. This tree is not just another ordinary plant; it is a leaf of Allah.' Woldu *et al.*, (2015) also support the above observation by indicating that khat was a God blessed commodity given to their locality.

2.2.6 Khat is a Poor Man's Crop, Life saver and Medicinal plant

Additionally, Woldu *et al.* (2015) points out that khat is also regarded as a poor man's crop which required low input and in turn gave high cash output and it did well under small scale management. Khat was also considered a life saver since its harvests were very frequent thus if one had a problem; it would be solved very fast (Woldu *et al.*, 2015). Woldu *et al.*, (2015) also noted that khat was valued as medicinal plant against various ailments including Sexually Transmitted Diseases (STDs).

III. METHODOLOGY

3.1 Study Area

Mbeere (Comprising of Mbeere South sub-County and Mbeere North sub-County) is located in Eastern part of Kenya and lies between Latitudes 0° 20' and 0°50' South and Longitude 37° 16' and 37° 56' East (Kithama *et al.*, 2013). Mbeere South sub-County covers a total area of 1,321.4 Km² (Republic of Kenya, 2005). In addition, Mbeere borders Embu to the Northwest, Tharaka to the North, Mwingi to the East, Machakos to the South and Kirinyaga to the West (Republic of Kenya, 2005). The Kenya Population and Housing Census of 2019 indicate that the Population in Mbeere South sub-County was 163,476 whereby the males were 83,311, the females were 80,159 and 6 were intersex. Additionally, the census indicates that in the sub-County there were 46,065 households with an average size of 3.5. The Mbeere South sub-County hosts the famous seven folk's dams which include: Masinga; Kamburu; Gitaru; Kindaruma and Kiambere. Additionally, the Mwea Game reserve in Embu County is located in Makima, Mbeere South Sub-county.

The Mbeere South Sub-County is characterized by hot and dry weather condition for the greater part of the year. The area receives bimodal pattern of rainfall whereby the long rains comes between March and May and the short rains between October and December, the latter being more reliable. The annual rainfall ranges between 640 to 1,100 millimeters with most parts of the area receiving 550 mm of rainfall per year (Kithama *et al.*, 2013). The rainfall received however is usually not very reliable giving the area a marginal status (MoALF, 2016). The highest percentages of the inhabitants in Mbeere South sub-Counties are the Ambeere followed by the Akamba, the Aembu and the Agikuyu. Christianity as a religion dominates the area even though Islam is also practiced but on a small scale. Mbeere residents are predominantly mixed farmers; with crops cultivated being maize, beans, pigeon peas, green grams, cow peas and sorghum. In addition, the Mbeere residents engage in *muguka* production and it is the second largest producer after Meru (Njiru *et al.*, 2013). Further, some of the people conduct small scale businesses in the area and mostly along the Kiritiri - Siakago road and Kiritiri - Embu Road. These small businesses are mainly sustained by the high turnovers from *muguka* selling.

3.2 Study Design

The study was largely qualitative and cross-sectional. The study was conducted in the field in the natural setting. The research question was answered from different perspectives rather than from a single perspective. This enabled the researcher to deeply explore behaviors, different perspectives and life experiences to discover the complexities of the

situation through a holistic framework (Holloway & Wheeler, 2002). This was because; extensive data collection from multiple sources is the backbone of any qualitative study (Khan 2014). This too assisted to authenticate the research findings. In this study therefore, the researcher used multiple data collecting techniques such as in-depth interviews, key informant interviews, focus group discussions and observation. Consequently, in this research no attempt was made to test a predetermined hypothesis, rather, the aim was to explore flexibly and in detail the area of concern.

3.3 Sampling

In this study, purposive sampling was employed in arriving at the administrative areas. *Muguka* production was the criteria upon which the specific area of study was selected. Mbeere (comprising of Mbeere South sub-County and Mbeere North sub-County) was the second largest khat producing area in Kenya after Nyambene in Meru County (Njiru *et al.*, 2013). Mbeere South sub-County produced *muguka* in large scale than Mbeere North sub-County. Therefore, purposive sampling was used to select Mbeere South sub-County since it had the required characteristics; *muguka* growing households. Further, Mbeere South sub-County has 4 Divisions namely; Gachoka, Mwea, Makima and Kiritiri. Gachoka Division was selected purposively since *muguka* was grown in large scale than in other divisions. Therefore, the target population comprised of all the households in Mbeere South sub-County, Embu County that participated in *muguka* production at the time this study was carried out. The unit of analysis in this study was households that produced *muguka*. Similarly, a non-probability technique was employed to select the *muguka* producing households. Specifically, purposive sampling was used to arrive at a sample size of 112 households and this was determined through saturation. Thus, 112 semi-structured interviews were conducted with household heads. In addition, the key informants and the participants of the Focus Group Discussions were selected purposively.

3.4 Data Collection

Data was collected through conducting 112 in-depth interviews. These were conducted using a semi-structured interview guide. In addition, 15 key informant interviews were conducted with people who were deemed knowledgeable about the phenomena. Further, 3 Focus Group Discussions were conducted. Data was also collected through direct observation and lastly, secondary data was collected from various sources such as; the journals, books, reports and Newspaper articles that were relevant to this study.

3.5 Data Analysis

Qualitative data was analyzed using a technique where the researcher went through all the field notes and interview transcripts severally. Additionally, the researcher listened severally to the Focus Group Discussions proceedings. Transcriptions of FGDs proceedings was also done. The researcher then went through the transcripts severally. This was done to identify the key patterns and major themes that emerged from the study. The major themes that emerged were then coded. After coding, the data was then organized into similar categories. The main themes were then summarized drawing on contextual data and other information that helped to better understand the findings. The qualitative findings were then presented using direct quotations and narratives. All the names that were used in direct quotations and narratives are pseudonyms since the respondents were assured of anonymity.

IV. FINDINGS & DISCUSSION

4.1 Response Rate

In this study, all respondents in the households that were purposively sampled consented to be interviewed showing a 100% response rate. However, since *muguka* is a sensitive crop in the area, in each village visited for the interviews, the researcher was accompanied by a person who was known in the area and this increased acceptance and willingness to participate. Additionally, the researcher cleared all doubts by answering the respondents' questions with regard to the purpose of the research.

4.2 *Muguka* means money (*Mbia*)

Many participants who were involved in the in-depth interviews perceived *muguka* as money locally known as *mbia*. It was perceived as money because households cultivated it purely for sale, it was a crop for earning cash. Most respondents perceived *muguka* as money because they did not chew it and it could not be cooked for household members since it was not food. Mugoiyo, a 40-year-old male, during an in-depth interview in Mbeti South Location observed as follows:

Muguka means money, it is for fetching us money because I don't chew it and no one does in my household. It's just for sale to earn money, which meets all our household needs since we do not get money from anywhere else (Mugoiyo, 19, May 2023).

In addition, Njeri, a 38-year-old female during an in-depth interview in Kianjiru Location illustrated as follows:

Muguka means money, we cultivate it for sale because it cannot be cooked for people to eat. If you go to the market and it is not bought, you can't bring it home to cook, it is useless, you throw it away. But once sold it earns us good money with which we meet all our household needs (Njeri, 10, May, 2023).

On their part, those who were formally employed fortified *muguka* as money since it added on to their monthly income and they further described it as 'an income booster' and 'a side hustle.' Kiura, a 41-year-old male and a primary school teacher during an in-depth interview in Kianjiru Location remarked the following:

Muguka means money; it is 'an income booster' which adds on to my monthly salary. It is 'a side hustle' just like the way an employed person will run a business such as a salon to earn extra income. You know that when one is formally employed; the pay slip is already committed to paying loans and there are so many other deductions. Thus, muguka income really boosts my household financially (Kiura, 29, June, 2023).

Further, it was perceived as money since most small scale businesses - selling edibles and non-edibles – were sustained by its turnover. Gacugu, a 49-year-old female during an in-depth interview in Mbeti South Location asserted as follows:

Muguka means money, because I run a small hotel at Kiamuringa center and my customers are muguka sellers and buyers. They sell muguka and earn money, then use that money to buy hot and cold drinks and also food in my hotel (Gacugu, 20, May, 2023).

Sufficing from the above observations, *muguka* was not useful to a household in its natural state – twigs - but only after it was sold and earned money. Poulton *et al.*, (2001) observes that crops that are cultivated entirely for the market are known as cash crops. Thus, *muguka* cultivated in Mbeere South sub-County fits in this definition of a cash crop. In addition, since *muguka* was not food and could not be cooked for the household members but was purely for sale; it fitted in the category of a non-food cash crop. This corroborates (Dessie, 2015) who also observe that khat is a non-food cash crop like cotton, tobacco, tea, coffee and cacao but that is worth cultivating for its benefits to farmers' livelihood. Consequently, in the course of the in-depth interviews, key informant interviews and even the Focus Group Discussions, it emerged that as a crop, *muguka* was less vulnerable to drought and compared to food crops has less cost for labour demand throughout its production (Girma & Challa, 2002) thus giving higher returns. This observation was in line with that of Mugendi (2017) who also found out that, *muguka* earned more money than the production of the main food crops cultivated in the area. The higher returns thus explain why many small holders embraced its production. However, even though, *muguka* just like *miraa* was an outstanding cash crop (Carrier, 2005a; Carrier, 2005b; Klein and Oni 2009) the respondents revealed that *muguka* was never exported but was sold within the Kenyan borders.

4.3 *Muguka* means Help (*Útethio*)

In addition, other respondents perceived *muguka* as help locally known as *útethio*. To start with, it was described as *útethio* which suppressed hunger and famines locally known as *mbúta* and *yúra* respectively. Due to the hot and dry weather condition that characterize Mbeere South Sub-County (Kithama *et al.*, 2013) and the unreliable rainfall (MoALF, 2016) the research participants observed that crop failure is frequently witnessed in the area. Crops failure coupled with limited job opportunities to earn cash with which to buy food resulted to the residents frequently experiencing hunger and famines. In the recent past, *mbúta* and *yúra* caused the Mbeere women to temporarily out-migrate to Embu and Central Kenya locally known as *Gíkúú* to work for food locally known as *kúthúgúra*. However, it emerged that when people started cultivating *muguka*, it provided them with income with which they bought food and also provided the members of the community with chances for *ibarúa* (work) in the *muguka* farms. Thus, even when a household did not have food, they did not have to go far to work for food or to work to earn money with which to buy food like it used to happen in the past. To illustrate the above observation, Mbogo, a 69-year-old male, during an in-depth interview in Mbita Location asserted as follows:

Muguka means help; it is all we look up to since we do not have any other crop that gives as much income as it does. Muguka brought yúra and kúthúgúra to an end. Our mothers used to go to kúthúgúra in Embu and Gíkúú but not anymore. Here in Mbeere, we used to live in abject poverty and experienced famines due to drought year in year out. Muguka has really helped us. Even if one does not have food, you do not go far; you work in your neighbour's farm or within the locality (Mbogo, 30, June, 2023).

His observation corroborated with that of Njuthe, a 71-year-old female who during an in-depth interview in Mbeti South Location narrated as follows:

Muguka means help, great help. If it were not for it, I don't know where we would be. We would still be experiencing hunger and famines and women would still be temporary out-migrating to other areas in search of food. You know it is the women who used to go to kúthúgúra and not men. This is because, when the children are hungry, they don't go crying to the father, they go to their mother thus women went looking for food. In the present time if we did not have muguka, by now we would have gone several times since the last four seasons we did not harvest because of in-adequate rainfall. At least this season we will get

something from the farms as you can see. Muguka, is the one that helped end the famines and the temporary out-migrating of women to other areas in search of food in Embu and Central Kenya. How can you go hungry when you have muguka in your farm? It is not possible unless you are lazy. Even if you haven't planted, you can still work in your neighbours farm and earn money. Additionally, when you sell muguka, you use the proceeds to buy chicken, goats or even sheep. When there is no money or food, you sell them and then buy food. Hunger and famines came to an end and the temporary out-migration of women to other areas in search of food doesn't happen anymore (Njuthé, 16, May, 2023).

It was apparent that the local perception of *muguka* as the help that brought to an end the temporary out-migration by women to Embu and Central Kenya in search of food could not be disputed since the narratives provided by both males and females in in-depth interviews (irrespective of their perception towards *muguka*), key informant interviews and focus group discussions articulated the fact very clearly. Almost all the respondents who participated in this study, were aware of the temporary out-migration by women to Embu, Central Kenya and other places to work for food, which was very rampant in the recent past. The practice was widespread such that even the immigrants confirmed that indeed the Mbeere women used to go to *kúthúgúra*. For instance, Gicobi, a 69-year-old male who migrated from Embu and was permanently settled in Mbeti South Location, confirmed during the in-depth interview that the Mbeere women indeed out-migrated to Embu in search of food by indicating as follows:

*When we were young, we used to see the Mbeere women come in Embu from time to time to work for food in our homes. In addition, there were those who came with baskets and ropes in exchange for food. When they had enough they left. This used to happen but along the way it stopped. From when I settled here, I wonder whether these people are the same ones who used to come to Embu in search of food. This is because there is plenty of food. People use muguka money for food, invest proceeds in food crop production and in other businesses that rely on its turnover. Today, It's like *kúthúgúra* has been reversed; the Embu people are now in Mbeere eking a living, something that was unheard of in the past; they have bought lands, settled, cultivate muguka and run different types of businesses that rely on muguka turnover (Gicobi, 16, May, 2023).*

In addition, *muguka* was described as *útethio* which enabled the people escape extreme poverty that previously was a feature of many local households in the drylands of Mbeere South Sub-County. The respondents across the Locations observed that in the recent past: most houses were mud walled and grass thatched; a majority of the residents were primary school dropouts from public schools; people wore parched clothes and a majority did not have a change of clothes; people were dirty since they could not afford soap and there were frequent hunger and famines; all these indicating the presence of extreme poverty. According to the key informants and from the FGDs, the extreme poverty was attributed to the limited income earning opportunities for both men and women that existed previously and which paid little. The opportunities available for the men were in quarrying, sand harvesting, and manual work in the few construction sites and in peoples' farms, charcoal burning, livestock keeping and food crop production. Further, due to the few income earning opportunities, it was observed that a majority of men would out-migrate to work in the urban areas whereby a majority of them worked in the informal sector. Other men migrated to other rural areas especially in Central Kenya to work as farm hands in the dairy, coffee and tea sector among others. Women on the other hand, engaged in subsistence farming, extracting fiber from sisal, weaving baskets and ropes, selling water and firewood, and engaging in manual jobs in peoples' farms. All these opportunities earned little income leaving no surplus to engage in developments leading to the endless cycle of poverty. However, *muguka* production came in handy as perhaps the best livelihood option to alleviate poverty at the local level. Thus, the description of *muguka* as *útethio úría wanyibirie thína na úthíní* (the help that reduced problems and poverty) and as *kínyibia kía úthíní* (poverty suppressor). Consequently, both men and women were proud to note that *muguka* income had enabled them invest in: better shelters (iron sheet roofed stone, brick or plastered houses, some cemented and others tiled); educating their children to tertiary level; lands, farms and plots; building residential and commercial buildings; better nutrition; businesses; gas cookers to prepare light meals and dress well among others. All this demonstrate that poverty to a large extent had reduced in households that cultivated *muguka*. The foregoing observation was vividly captured by Muciri, a 49-year-old male during an in-depth interview in Kianjiru Location in the following chronicle:

Muguka is my source of help, it has helped me in a great way. Muguka ended the poverty that I would be languishing in at the moment. In the times we did not have it, those who dropped out of school after standard eight like I did, used to engage in hard labour such as quarrying, working in construction sites, sand harvesting and loading lorries, working in the farms and grazing animals among other difficult jobs. Such jobs brought in low returns comparative to muguka production and some were seasonal, making us barely meet our subsistence needs. My status today isn't what it should be had I not ventured in its production, I would be so poor, I would not be owning anything, maybe I would be working in construction sites, quarry, working in people's farms or I would even be in Gikúú grazing. As you can see, with muguka I cannot be considered poor. With all the things that you can see here, do you think I am poor? No. All I

have here is from muguka: that car, this stone house, those grade cows and another farm where I exclusively grow muguka which I used its proceeds to buy. As you can see, we use biogas as cooking fuel. At the moment unless you are told, you cannot differentiate households with people in formal employment and those who cultivate muguka (Muciri, 10, May, 2023).

While supporting the above observation, Micere, a 55-year-old female narrated the following during an in-depth interview in Mbita Location:

Muguka is the help that reduced problems associated with poverty. The Mbeere we see now is a complete contrast of the old Mbeere that was characterized by extreme poverty. Those women whose husbands were unemployed eked a living through working as farm hands, selling firewood, fetching water in other households, extracting sisal fiber for sale, weaving baskets and ropes and other jobs that earned them little money. There was so much poverty, people used to walk around with patched clothes and it was easy to tell, household without members in employment, some used to have only one cloth. Even eating fried food was rare. Muguka is the help that took Mbeere out of extreme poverty and it partly equalized the members of the society. We fry food just like them and we do not eat chapatti once a year. Our household goods such as cups, plates, spoons, hot pots, flasks and cooking pans among others are as good as those used by the formally employed. At the moment, we can afford to use gas. At the moment, many people do not use firewood throughout, we live like people in town, we have electricity, water, brick and stone houses which are iron-roofed as opposed to the previous mud walled and grass thatched ones. All these things have been made possible by muguka (Micere, 25, May, 2023).

Consequently, *muguka* was also described as *útethio* for the widows. Its income was the one that helped with the payment of their bills and met all their basic needs since their husbands were deceased. It enabled them escape extreme poverty, hunger and famines. To illustrate the observation, Nduku, a 61-year-old widow stated as follows during an in-depth interview in Mbeti South Location:

Muguka is a great help to me, I don't know what I would be doing since I don't have someone to share the household burden with since my husband is deceased. It helps me to meet the household needs as a husband would. It enabled me to pay school fees for my children, I was able to build my house and that of my son as you can see (nicely done plastered houses) and I am able to pay my bills. Muguka proceeds does everything for me, we never go hungry. It has really helped us (Nduku, 16, May, 2023).

Muguka's construction as help for the widows was also supported by the Assistant Chief of Nyangwa sub-Location who during a key informant interview stated the following:

Muguka has helped so many women in the area including widows. I am a widow myself and I also grow it. It has helped widows to become independent and to stop begging for help. It took the place of their husbands since it is now the provider for those who are not formally or informally employed. Widows have been able to educate their children up to tertiary level, they are able to pay household bills, they are able to build decent houses and they are able to eat well. Muguka has facilitated all this. They do not suffer as much as they would if there was no muguka (Assistant Chief Nyangwa, 05, July, 2023).

From the key informants' interviews, the FGDs and even the in-depth interviews, respondents observed that initially *muguka* was cultivated by the poor – those who dropped out of school and did not have a means of livelihood and that was why a majority perceived it as what helped them escape poverty. The foregoing observations, portray *muguka* in line with Woldu *et al.*, (2015) assertions that khat was a poor man's crop which was considered a life saver since its harvests were very frequent thus if one had a problem; it would be solved very fast. However, as time went by, even the formally employed ventured in its production when they saw the amounts of income it was earning those who were involved in its production. Additionally, from the discussions, it emerged that Mbeere did not have any other cash crop and people observed that it was God who had remembered them by bringing *muguka* to help them. This also corroborates Woldu *et al.* (2015) finding that khat was a God blessed commodity given to locals to help themselves.

4.4 Muguka means Employer (Mwandikani)

In the study area, *muguka* was also regarded as *mwandikani* (employer). This corroborates Girma and Challa (2021) who also indicate that khat serves as an employment opportunity. As an employer, it was on one hand described as a *múthungú* (white man), in reference to the colonial employer or simply a boss. The term *múthungú* was in reference to British colonialists who formally introduced white collar employment and therefore implied a boss who provided a livelihood. Hence, *múthungú* (white man) was a metaphor commonly used in the study area to mean and imply an employer or a boss. On the other hand, as an employer, *muguka* was also described as *Nairobi* (the capital city of Kenya). *Muguka* as *Nairobi* was used figuratively to indicate a place of plenty job opportunities and where white collar jobs were not a problem. This is the perception among rural inhabitants that Nairobi provides limitless opportunities and hence rural-urban migration in pursuit of such jobs. Thus, *muguka* was likened to Nairobi since it absorbed a large number of people who earned money from its production and related activities in its supply chain. As an employer, it

employed first of all the farmers who engaged directly in its production in their farms. This was because they earned income from its sales. This was in line with Dessie (2013) study among the learned Ethiopians which asserts that khat is an employer because of the large numbers of farmers it employs. To illustrate this observation Mumbi, a 43-year-old female during an in-depth interview in Mbita Location opined as follows:

Muguka is our employer. I and my husband aren't employed anywhere; it is the one that gives us an opportunity to earn income. We have been able to pay children school fees ranging from Kshs 60,000 to Kshs 80,000 per year in different secondary schools and we are not in formal employment. Where would we be getting such kind of money if it were not for muguka? We would really be suffering to raise school fees. Thus, I liken it to a white man who employs (Mumbi, 27, May, 2023).

Her observation was in line with that of Gakunju, a 43-year-old male farmer who also captured the perception during an in-depth interview in Kianjiru Location when he stated the following:

Muguka is what I have made my Nairobi, it is the office where I work. It is my office since I am not employed and I do not work elsewhere. The way the employed go to work every day, so do I here in this farm. As you can see, I am here working (he was in the farm pruning while three workmen whom he paid monthly were digging itegú - digging a big hole at the stem ready for mulching and watering. This Nairobi that I am talking about gives me enough money. With the money I have bought a piece of land where I farm food crops using irrigation, I am building that residential house (a storied stone house), I have bought that Toyota Probox, I pay school fees for my children and I meet all our household needs including food (Gakunju, 12, May, 2023).

As an employer, *muguka* had provided employment opportunities to farmers who were college and university graduates who were yet to secure alternative employment. This observation was reinforced by a narration by Ngeranwa, a 30-year-old male during an in-depth interview in Kianjiru Location, who according to his own account had a Diploma in Community Development from a tertiary institution. He narrated as follows:

I view muguka as my employer, as I wait to secure alternative employment. I have a Diploma in Community Development and I have not been successful in getting a job for years. Thus, as I wait, muguka offered me employment and I accepted the terms and conditions. I have to be in my farm always so that my employer will not be displeased and fail to pay me. My employer pays me whenever I work and does so according to my effort. As I wait to formally secure employment in my field, muguka income has enabled me build and provide for my wife and children. With its income, we have been able to achieve a lot and life is good (Ngeranwa, 13, May, 2023).

In addition, as an employer, it had availed employment opportunities to all the people –locals and labour migrants - who participated in its production activities for income such as digging, watering, mulching, manure application, pruning, spraying and picking among others, the brokers, the drivers, the riders and the dealers among many other people. The foregoing observations are in line with those of Carrier and Klantschnig (2012) who indicate that khat provides employment to many people; farmers, middle men, businessmen, and transporters and those of Goldsmith (1998) who also opine that khat trade creates many jobs not only for local people living in the growing areas but also others who have migrated to the area due to its potentiality in business. Consequently, Girma and Challa (2021) also confirms that indeed, khat is an employer of the many people working directly or otherwise in the sector in its production activities including mulching, watering, weeding, pruning, spraying, picking, packaging, transporting and retailing among others. To reinforce this observation, Gitonga, a 38-year-old male, during an in-depth interview in Kianjiru Location observed the following:

For me, muguka is my employer since I don't work elsewhere, so it is my white man. Additionally, it has employed people in so many ways; first the farmers and all the people who are involved in its production activities. It has also employed the brokers, the dealers, drivers and riders among others. The brokers bargain and buy muguka at a low cost from the farmer and then increase the price as they sell to the dealers. Once the brokers sell it to the dealers, they also employ people to pack it in the Toyota Probox-the main mode of transport used in its transportation to the market (Gitonga, 11, May, 2023).

The above assertions of *muguka* as an employer were confirmed by a 50-year-old female, a village manager who during a key informant interview in Mbita Location narrated as follows:

Muguka has employed so many people in the villages. First, it has employed us the farmers, secondly, there are those who are employed as work men who are paid at the end of the month cash ranging from kshs 8000 to kshs 15000, others are given ibarúa (work) to pick (Kshs 150 to Kshs 200 per basin/per kg), water (Kshs 400 per day), spray (Kshs 400 per day), prune (Kshs 400 per day and dig (Kshs 500 per day) among other activities and they earn money at the end of the activity. People are always working in the muguka plantations; they take care of it, they sell and it earns them income. Its income is what has improved our standards of living. With its proceeds, personally, I pay school fees for my children, buy foods that we do not grow and other essentials and carry out all the developments you are seeing here

(Village manager Gikiiro, 07, June, 2023).

4.5 *Muguka* means *Mbiacara* (Business)

In addition to the perceptions already discussed, *muguka* was also perceived as *mbiacara* (business). It was perceived as business by farmers who also coupled as brokers and those who engaged in its production for profits. To illustrate the foregoing observation, Murithi, a 53-year-old male, during an in-depth interview in Mbita Location asserted as follows:

Muguka means business and in business there are usually producers, distributors, sellers and buyers who are the consumers. In my case, I am a producer since I cultivate muguka which I sell. I am also a broker, I buy muguka from the farmers at a lower price then I increase the price as I sell to the dealers and that is how I make my profits. A short while ago, I already sold to those who sell in Nairobi and I already made my profits. Thus, muguka means business to me as I plant it for sale and I also act as a muguka broker (Murithi, 24, May, 2023).

While, illustrating *muguka* as business since it made good profits, Mukundi, a 50-year-old male, during an in-depth interview in Mbita Location asserted as follows:

Muguka means business, it is the business that I have engaged in since retrenchment from formal employment. In business, people are out to make profits. When I first returned home, I ventured in food crop production and because of unreliable rainfall, I would use a lot of inputs and harvest little and sometimes nothing at all. When I realized that muguka was earning farmers' better returns, I decided to venture in its production. Though it uses a lot of inputs in its production, it makes profits. It is a profit making venture. Once I get my profits, I use them to pay bills, such as water, electricity, and also meet the health, education and food needs of my family (Mukundi, 27, May, 2023).

The foregoing was reinforced by Ibangara, a 54-year-old male who indicated the following in an in-depth interview in Mbeti South Location:

Muguka is business, it is the business that I do. It is what I cultivate and sell. I am a class five drop out, thus, I could not get meaningful job. Thus, I used to cultivate food crops and I realized I was making losses. In Mbeere, food crops don't do well because of erratic and therefore unreliable rainfall. So I entirely stopped food crop farming and I ventured in muguka farming. Muguka gives me better returns than the food crops and with those returns I have been able to accomplish a lot. I have built better houses for my two families-for your information I have two wives, who I have also initiated businesses for, a salon and a shop. I have commercial houses that earn my family returns, two cars, and these I have done in a span of about 15 years. All these are done from muguka proceeds which I save and then borrow a loan from our SACCO (Ibangara, 20, May, 2023).

Further, the key informants affirmed that indeed *muguka* means business because during its transactions, other businesses that relied on its turnover also thrived. To affirm the above observation, a 47-year-old female, a village manager from Mbeti South Location during the key informant interview observed as follows:

Muguka means business because in business we have sellers and buyers. There are farmers selling and brokers and dealers buying. That is how people earn their profits. It is also perceived as business because it has enabled people to thrive in other kind of businesses that rely on its turnover. For instance, in Mururu, one of the khat selling center, there are general shops, butcheries, grocery stores, stores selling clothes and household goods among others. These businesses thrive because when the farmers sell khat, they use the money to buy the items for their households. People who would otherwise be idle are in various businesses that earn them money (Village Manager Gachoka, 07, June, 2023).

The Assistant Chief in charge of Mbita sub-Location during a key informant interview also confirmed that *muguka* means business by observing the following:

Muguka means business. We have a lot of people making profits from it as sellers and brokers and so on. It is also business because, it has caused other businesses to thrive. In this area and especially in the muguka selling centers, there are so many locals and immigrants from different places who have invested in businesses that rely on its turnover such as hardware, bars, butcheries, grocery and general shops among others (Assistant Chief Mbita, 05, July, 2023)

The foregoing observations were also corroborated by the married women who participated in the Focus Group Discussion in Mbita Location. In her account, which was confirmed by fellow participants, a 47-year-old farmer observed as follows

While people are selling and buying muguka in the centers other people engage in other businesses that rely on its turnover. Some sell boiled eggs, coffee, tea, ndazi, chapatti, milk and gruel among others. Since the muguka sellers and buyers leave their houses very early in the morning, they buy the edibles which serve as food before they go back home to take breakfast (FGD participant, 03, July, 2023).

4.6 *Muguka* is our Coffee or Tea (*Kaúwa kana Manjani*)

Consequently, *muguka* was perceived as coffee or tea, crops that were cultivated by the people of Embu and Central Kenya. A majority of those who held this perception were of the opinion that coffee and tea earned the farmers' income in the areas where they were cultivated; and *muguka* just like the former two crops, earned income to the people of Mbeere hence the similarity. To illustrate the foregoing observation, Mutuanene, a 58-year-old male asserted as follows during an in-depth interview in Kianjiru Location:

Muguka is like my coffee or tea. Here in Mbeere we do not have cash crops like other communities who have coffee and tea and so we cultivate muguka just like the way they cultivate their coffee or tea. If you go to Manyatta and Kanja (highland parts of Embu County) you will find people busy in their tea farms, our muguka is the equivalent here. But the problem with tea unlike muguka is that with tea you must sell through a co-operative society and the returns come many months after you deliver the produce. With muguka, returns are immediate upon delivery to a buyer (Mutuanene, 11, May, 2023).

Mutuanene's observation was corroborated by that of Kibuti, a 48-year-old male who during an in-depth interview in Kianjiru Location indicated as follows:

According to me, muguka is like coffee and tea which are cultivated in parts of Kirinyaga County. Just cross over to Piai, Mururi and Kutus (areas in Kirinyaga County where coffee is grown) and you find the people tending their coffee trees. I remember how busy the people of Kiangai (in Mathira Constituency in Nyeri County) were in their tea estates when I briefly worked there...they earned their living through tea, just like we do here with muguka ...you know the climate is different and we have to engage in the production of the crop that suits local climate, that is muguka. But I like our muguka production because income is instant like the way you switch on electricity and you see light instantly, you earn instantly upon delivery (Kibuti, 12, May, 2023).

In addition, the immigrants from other areas including the highland parts of Kirinyaga County and Nyeri County, who had permanently settled in the study area – all in Mbeti South Location where land was available for sale - and who engaged in *muguka* production also perceived *muguka* as coffee or tea. Wang'ombe, a 55-year-old male immigrant from Kimunye in Kirinyaga County captured it in the following storyline during an in-depth interview in Mbeti South Location:

To me, I view muguka as tea. This is because, we moved from Kimunye in Kirinyaga County, and tea is the major cash crop. But due to scarcity of land, I had to permanently migrate and settle here in Gachuriri (Mbeti South Location). When I came here with my wife and children, I didn't know what to do with the dryland. But in a short while, we learned the tricks from the locals especially those who were growing muguka...we came here and found that Mbeere does not have any other crop whose returns were equivalent to the crop. Thus, we followed suit without looking back and so far we have no regrets whatsoever. It is the local 'tea' that is supporting families just like the real tea does in Kimunye. Muguka is good, since you are paid money once you sell, you don't have to wait (Wang'ombe, 16, May, 2023).

Wang'ombe's observation was in line with that of Wanjaú, a 40-year-old male, immigrant from Kiaragana (Coffee and tea growing area of Nyeri County) who had the following narration during an in-depth interview in Mbeti South Location:

I perceive muguka as coffee or tea, I planted it to earn money. Where we came from in Kiaragana before we settled here, coffee and tea are the cash crops; in Mbeere the rains are inadequate and engaging in coffee or tea production is not possible. Just like the way coffee and tea is grown in Runyenjes and elsewhere in the country, here we grow muguka as a livelihood. Thus, we view it as a cash crop from which we earn a living just like coffee and tea elsewhere. The good thing with muguka is you sell and go back home with your cash unlike coffee and tea (Wanjau, 16, May, 2023).

Though from the literature, the World Health Organisation classified khat as a drug of abuse that can produce psychological dependence (Hendricks & Radwa, 2018), in this study, there was no respondent who directly perceived it as a drug. All the respondents perceived it favourably due to the economic returns. However, as the interviews proceeded some respondents who did not chew observed that chewing in excess had negative health effects such as impotence which they shyly indicated that they were not confirmed. During the FGDs and key informant interviews it was observed that maybe chewing *muguka* in excess affected the reproductive health since in the recent past only men who were past the reproductive age chewed *muguka* and speculations were widespread that some young men who chewed *muguka* constantly took long before getting married because of erection problems. To a large extent, the respondents defended the negative health effects observing that they were not present in the lives of those who chewed *muguka* without mixing with other substances and who chewed it while performing manual jobs. They observed that *muguka* chewers did not chew it alone, they mixed it with other substances widely known as promoters and these were what increased other health problems. For instance, they chewed it alongside sweets, groundnuts, chewing gums and sodas among others. Since, they chewed for long hours and some never brushed their teeth, it exposed them to tooth

decays, thus the black teeth observed among the chewers. Additionally, other *muguka* chewers smoked bhang, used alcohol and other hard substances thus according to the respondents it was difficult to single out the negative health effects purely associated with *muguka* chewing.

From the in-depth interviews and the FGDs people did not perceive *muguka* negatively but were full of praises for it. This was because, it earned them income that was used to pay household bills such as water, electricity and health insurance (NHIF- in the present time SHIF) and also meet other household expenses such as those of schooling and food. Using *muguka* income to buy food improved food security in the households. Further, the incomes were invested in the production of food crops improving crop yields and was also invested in assets such as water tanks, farms, plots - where commercial and residential buildings were built and livestock among others and these helped the households to cope in times of crisis. Though, *muguka* enabled people educate their children to tertiary level, it also contributed to school drop outs in the area whereby school going children lost interest in education and dropped out to venture in its production due to the quick money earned. In addition, when some men sold, they misappropriated the proceeds through excessive drinking of alcohol and others through prostitution. This led to conflicts and at times marriage break ups since other members of the household were disadvantaged yet they had participated in the production activities. Prostitution put the men together with their wives at risk of contracting HIV/AIDS and other Sexually Transmitted Diseases. *Muguka* farming was also associated with early marriages and increase in the number of young widows – wives of the drivers and passengers who die during accidents due to over speeding while transporting *muguka* to different destinations within the country. However, the respondents observed that the advantages superseded the disadvantages thus the persistent cultivation.

This study established that both the uneducated, educated (highest education attained by respondents was a postgraduate degree), the poor and the wealthy embraced *muguka* farming. This contradicts the findings in Madagascar whereby those with relatively high level of western education and the wealthy disdained khat (Gezon, 2012). However, in Mbeere, the educated and the wealthy appreciated its cultivation but disapproved the chewing it themselves and by the residents which raised a moral question since once sold, it earns the farmers' money but it was sold to others to chew. Additionally, even though some farmers cultivated it for sale and also chewed it, they did not perceive it directly as a stimulant however they noted that when they chewed they remained alert and worked for long hours without getting fatigued. Further, as pointed out in literature, *miraa*, the variant cultivated in Meru is of great cultural importance since it was used during circumcision and marriage rites. On the contrary, this study established that *muguka* had no place in the Mbeere social and cultural practices, it was purely for earning income. Contrary to Woldu *et al.*, (2015) who observe that khat in Eastern Ethiopia had an accepted social value in performing religious rites; this study found out that *muguka* in its natural form had no place in religious circles and the only way it was of benefit was when it was sold and then the income was taken to church as tithes and offerings. Consequently, the immigrants observed that cultivating *muguka* gave them identity as Ambeere, they indicated that, 'you cannot be said to be a Mumbeere if you do not cultivate *muguka*.' This thus explains why the immigrants embraced its cultivation.

V CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

This study concluded that *muguka* was generally perceived as *mbia* (money), *úthio* (help), *mwandíkani* (employer), *mbiacara* (business) and *kaiúwa kana manjani* (coffee or tea). The above social constructions demonstrate that, *muguka* was perceived favourably by the farmers due to its economic benefits which they enjoyed as individuals, households and the community at large. This was because, many people did not chew it, it was not food thus could not be cooked and it only brought value when sold and when one engaged in its production activities and was paid or engaged in businesses that relied on its turnover. This was also attributed to the fact that *muguka* in its original form – leaves/twigs - did not have any place in the Mbeere traditions, cultural and even religious practices. Consequently, even those who chewed the twigs, perceived it in terms of economic benefits even though they observed that when they chewed, they worked without getting fatigued. Perceiving it favourably caused many small holders to embrace its production and this offered so many people opportunities to earn income which had positive implications for their households. These included, using its income to educate their children, buy food which they did not grow or when what was harvested was depleted, invest in food crop production, invest in assets such as household assets, farms, plots, residential and commercial buildings and paying household bills among others. On the other hand, its cultivation was blamed on other social evils such as school drop outs, early marriages, young men's deaths, impotence, negative health effects, alcoholism and prostitution among others. However, the respondents observed that the merits super seeded the demerits.

5.2 Recommendations

This study recommends that the people of Mbeere South sub-County be provided with water for irrigation since the rainfall was not reliable for effective farming. Though, they regarded *muguka* very highly, it also emerged that to a large extent, they embraced its farming for lack of an alternative, and since it had contributed to reducing extreme poverty in the area and improving livelihoods, they continued with the cultivation so as not to slip back. Thus, across the Locations, the respondents indicated that when provided with water, they would diversify to cultivation of other crops that earned cash and which also served as food and the ones that were not surrounded by moral controversy like *muguka*. In addition, the study recommends that the community members encourage the school going children to complete their education first before venturing in *muguka* cultivation. This was because, in case of any uncertainties regarding its cultivation in the future, educational skills will help them secure their livelihood. Further, the study recommends that the members of the community be trained on financial literacy so as to continue with the saving culture and so that those who misuse the proceeds can cultivate a culture of spending wisely. Additionally, banning the cultivation of *muguka* and leaving the farmers without alternatives of income earning opportunities will cause the community to slide back to absolute poverty and to the severe food in-security that caused women to temporarily out-migrate to Embu and Central Kenya in search of food. Consequently, the study recommends a study to investigate the non-*muguka* growers' perceptions towards it as a crop.

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Civil Society Organisations (CSO) and the monitoring of national elections in Uganda: Understanding the role of the Uganda Joint Christian Council (UJCC)

Nansikombi Proscovia¹

¹pnansikombi@umu.ac.ug

¹<https://orcid.org/0009-0003-6525-0115>

¹Uganda Martrys University Nkozi

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ABSTRACT

The recent government's limitation of the Civil Society Organizations (CSOs) that monitor national elections is in stark contrast to the critical role they play in the democratization process in Uganda. According to one of the Uganda Joint Christian Council (UJCC) Secretaries, this was more specifically with the 2021 national elections monitoring. Accordingly, the Civil Society Organizations (CSOs), like the Uganda Joint Christian Council (UJCC) and many others in Uganda, were not accredited by the Electoral Commission (EC), as had been the case before with the previous elections. This government suffocation of election monitoring was equally extended to the international election monitoring organizations, like the European Union (EU) and the Commonwealth Observation Group (COG), among others. While the role of some of these organizations, like the Foundation for Human Rights Initiative (FHRI) and the Human Rights Network for Journalists (HRNJ), among others in this regard, has been documented, there is little scholarship on the role played by UJCC in the monitoring of national elections. This article preferred to use the behavioral theory and the rational choice theory. This preference is because these theories complement each other in corresponding with the issue of national elections and monitoring. Similarly, both theories encompass the rationality aspect in decision-making used by the individuals or agencies that are monitoring elections. Based on the past national elections of 1994 and 1996 in Uganda, this article employed a historical research design, drawing on the archival sources and field interviews, to examine the role of UJCC in the monitoring of national elections in Uganda. To build a coherent interpretation of the primary and secondary sources, the collected raw data was analyzed through triangulation and then categorized according to the key research questions. This helped the researcher to make historical and qualitative sense out of the collected data. This article argues that the interference of the government in the monitoring role of the CSOs will complicate and undermine the otherwise good role they play in the democratization process of Uganda. Findings of this study indicate that UJCC played a significant role in the monitoring of national elections in Uganda.

Keywords: Civil Society Organisations (CSOs), National Elections, Monitoring, Uganda Joint Christian Council (UJCC)

I. INTRODUCTION

There are various CSOs that undertake the role of monitoring national elections. Such CSOs among others included UJCC, Uganda Human Rights Commission (UHRC), National Focal Point (NFP), Foundation for Human Rights Initiative (FHRI), Human Rights Network-Uganda (HuRiNet-U), Uganda Governance Monitoring Programme (UGMP), Human Rights Network for Journalists (HRNJ), African Union (AU), East African Community (EAC) and European Union (EU) among others.

Uganda Joint Christian Council (UJCC) which is a faith based organisation was formed in 1963. The Kampala Archdiocese Archives (KAA) indicates that, the member Churches that formed UJCC were the Protestants under Archbishop Leslie Brown, the Catholics under Archbishop Joseph Kiwanuka and the Orthodox under Archbishop Theodoros Nankyama. UJCC was established with a number of objectives which include among others that of enhancing democratic institutions in Uganda. In that regard, UJCC widened its focus on promoting democracy and good governance. Since the latter can hardly be realised without holding national elections, UJCC embarked on the noble work of monitoring national elections in Uganda.¹

Behind the establishment of UJCC, there were instruments of ecumenism. The ecumenical attempts which preceded the formation of UJCC were reflected in the formation of the International Missionary Conferences in 1910 in Edinburg. While others followed in 1921, 1925 and 1927, the central objective of these conferences were the need to settle doctrinal, cultural, historical and confessional differences in the various Missionary outreach internationally. It

¹ Kampala Archdiocesan Archives (1963; File No. 15)



was thought that ecumenical movements would be the solution for such noted disparities. Such proposed ecumenical organizations culminated into the formation of the World Council of Churches (WCC) in 1948 at a meeting of, 147 Churches in Holland. The major aim of the WCC was to promote the unity of the Churches which would ease the general missionary cooperation.²

Another ecumenical aspect reflected in the background of UJCC's formation was the second Vatican Council which started in 1962. Among the first local application of the principles emanating from the Second Vatican Council, was encouraging Catholics worldwide to cooperate with other Christians. Therefore, UJCC is considered to be a brain child of the Second Vatican Council. The latter dealt with many international issues and among which was that of emphasising unity (ecumenism), an impetus given by the efforts of Pope John XXIII who summoned the second Vatican to occur among believers. However, there were a number of Christian Councils that had been convened in many parts of the world as already noted, though Uganda's Council (UJCC) was probably the first of its kind in world history, to be composed of a combination of the Catholic and Anglican Churches.³

The impacts of the Second Vatican Council, was the establishment in 1975 of a Secretariat for promoting Christian unity. This council was officially inaugurated by the Ecumenical Movements in the Catholic Church worldwide. This was through the document entitled "*Ecumenical Collaboration at the Regional, National and Local levels.*" The Roman Catholic Church provided a framework for nurturing of the Ecumenical Spirit at all levels. This effectively opened the door into the Ecumenical Movements. Before that, it had been regarded only as an entity of the Protestant and Orthodox UJCC (2008)⁴.

There were a number of factors that led to the formation of UJCC and these include among others, forming a joint contribution to the building of a strong independent Uganda. This was due to the fact that Uganda was still new and young, which still needed guidance from the Church leaders. The latter believed that it is improper to put the headship of the government, into the hands of a person who is not firmly grounded in God/Religion.⁵ The need to witness to the Bible teaching of love, tolerance, unity and forgiveness was also another factor of that led to the formation of UJCC.⁶ The joint Catholic-Anglican statement issued during the eve of Uganda's independence was among the situations which led to the realisation that forming the UJCC was necessary.⁷ This was in such a way that, the joint statement deepened the joint Christian spirit of religious leaders and made them apprehend the need for a cooperative organisation. The urgency to form a formidable front against the introduction of the 1963 Education Act also encouraged the formation of UJCC. In this Act, the government aimed at taking over all the schools in Uganda irrespective of being owned by the religious bodies or not.⁸

It ought to be remarked that in spite of UJCC being established in 1963, the organisation started to exercise its objective of enhancing democratic institutions in Uganda in 1994. This was reflected in the monitoring of the Constituent Assembly (CA) delegates elections that were held in that year. This can be explained according to the research that has been undertaken. Accordingly, between 1963 and 1980, the only national elections held in Uganda were those of 1980. In those elections, UJCC never participated in their monitoring and the only body that monitored those elections was the COG. It was also the first time in the history of Uganda for national elections to be monitored. The research disclosed why UJCC missed monitoring of the 1980 elections. This was partially because during the Amin's regime of reign of terror in Uganda, viz, 1971-1979, freedom of worship was only granted to the Protestants, Catholics and Moslems. The other religious groups of the Orthodox and Pentecostals among others were all abolished. Consequently, UJCC's activities were incapacitated for a long time, since one of its members (the Orthodox), was not free to operate.⁹

Therefore, by the time the 1980 elections were held, UJCC had not yet organised itself to the level of being in position to monitor national elections. When President Museveni took over power in 1986, on top of his tactic of diplomatic handling of politics, he reinstated freedom of worship. This culminated into the revival of the Orthodox Church as one of the founders of UJCC. Consequently, UJCC decided to rise from an oblivion state, to that of being vibrant in advancing democracy, via monitoring of national elections in Uganda. One of the questions posed by this article is, why monitoring national elections? According to one of the respondents, this is due to the fact that election

² UJCC (2008), *UJCC 45th Anniversary Magazine; Growing and Serving Together* pp.4-5

³ Tourigny Yves (1979), *So Abundant a Harvest*, Great Britain pp.168

⁴ Op cit UJCC (2008), pp. 4-6

⁵ Kiwanuka Joseph (1961); *Pastoral letter to the Catholics in Uganda*, pp. 11-14; Nansikombi Proscovia (2005); *The Response of the Catholic Church to Political Conflicts in Uganda, A Case Study of Buganda 1945-1971*. A Dissertation Submitted in Partial Fulfilment for the Award of the M.A. in History of Makerere University pp.39-40

⁶ Holy Bible, John 17:20-23 and Romans 1:10-17

⁷ Op cit Tourigny Yves (1979) pp.167-169; Op cit Mudoola (1993), *Religion, Ethnicity and Politics in Uganda*. Fountain Publishers Kampala, pp.34-35

⁸ Mudoola (1993), *Religion, Ethnicity and Politics in Uganda*. Fountain Publishers Ltd Kampala p.28

⁹ Field Interview conducted at Nsambya Catholic Parish (15th-February-2020)



monitoring is considered as a crucial tool and an essential element that promotes genuine democratic elections and good governance¹⁰

1.1 Problem Statement

In consideration of the national election monitoring in Uganda, Civil Society Organizations (CSOs), notably the Uganda Joint Christian Council (UJCC) as a faith based organization, have been taking an active participation. However, despite their active involvement as noted above, Uganda continues to experience challenges related to electoral irregularities, limited transparency, and declining public trust in electoral outcomes. Since the magnitude of UJCC's monitoring efforts in promoting credible and accountable elections is less known, this study therefore is fronted to examine the role of the UJCC in the monitoring of national elections in Uganda.

1.2 Research Objective

The main objective of this study is to examine the role of the Uganda Joint Christian Council (UJCC) in the monitoring of national elections in Uganda, with a vision of perceiving how its activities contribute to promoting democratic national elections, reflecting transparency, accountability, and credibility in the electoral process.

II. LITERATURE REVIEW

2.1 Theoretical Review

This review is moored on both Behavioral and Rational Choice theories. These theories complement each other in explaining the role of Civil Society Organizations (Faith based) and their participation in election monitoring. The inclusion of these organizations adds a moral and religious dimension to understanding their motivation and conduct during electoral processes.

According to Anthony Downs (1957), it is indicated that the cornerstone of the Rational Choice Theory, explains that both voters and politicians act as rational actors¹¹. On the side of the voters, this is done by seeking to maximize personal utility and by choosing parties that best serve their interests. On the other hand, the politicians do this by formulating policies to maximize votes. It can be asserted in reference to Downs that the voters and monitors (in particular those of UJCC) of national elections focus on their strategic rationality and economic self-interest.

When Campbell, Converse, Miller, and Stokes (1960) are considered, they reflect that the Behavioral Theory is anchored in the electoral behavior, stressing that voting decisions are largely molded by psychological connectivity to parties, social group relatedness, and long-term attitudes, instead of calculated self-interest.¹² UJCC as one of the faith based organizations in Uganda, monitored the role of voters' decisions reflected in the monitored national elections.

Together, these works represent two dominant paradigms in election studies: while Downs attentions to strategic rationality and economic self-interest, Campbell, Converse, Miller and Stokes highpoint the psychological tendencies and social influences, offering complementary insights into the motivations that drive electoral choice. The latter was actually monitored by UJCC (a faith based), which supplemented a moral and religious dimension in the monitoring of the national elections in Uganda.

2.2 Empirical Review

The empirical review deliberates on the previous studies in various countries, reflecting how the CSOs (especially the faith based) involved in the national elections monitoring.

2.2.1 The Election Monitoring Mandate of the CSOs

When elections are held in various countries, many times there are some CSOs (which are religious organizations/faith-based) that do actively. The role of CSOs in the electoral process of the Democratic Republic of Congo (DRC) was portrayed in 2015. This role was explored in depth at an event organized by the National Endowment for Democracy (NED). The latter was in collaboration with the World Council for Churches (WCC). The country's leading religious leaders, through the Commission for Integrity and Electoral Mediation (*Commission d'Intégrité et de Médiation Électorale/ Commission for Integrity and the Mediation Electorate* (CIME), had an important monitoring role to play in the process of the national elections. In those elections, the delegates brought by the WCC included Bishop Mary Ann Swenson, who was the vice moderator of the WCC Central Committee, Bishop David Kekumba Yemba who was the head of the United Methodist Church in the DRC, the vice president of the DRC 's Commission of Integrity and the Electoral Mediation. There was also Rev. Andrew Milenge who was the vice president of the E'glise du Christ au Congo (The English Church of Congo). Those delegates were accompanied by Rudelman Bueno de Faria,

¹⁰ Field Interview conducted at Nsambya Catholic Parish (15th-February-2020)

¹¹ Anthony Downs (1957), *An Economic Theory of Democracy* pp. 36–50

¹² Campbell, Converse, Miller, and Stokes (1960), *The American Voter* pp. 128–132



the WCC representative to the UN. The WCC highlighted commitment towards “justice and peace” and showed a commitment to accompany DRC Churches as part of the pilgrimage in their mandate reflected in the monitoring of the elections. The CSOs in carrying out election monitoring in the DRC, do check and lessen the-would be election irregularities in the country.¹³ On the other hand, this study considered the role and mandate of UJCC as another faith-based organisation in the monitoring of the national elections in Uganda.

For the case of Tanzania, the CSOs (which are Faith based) organized a workshop of the Inter-Faith dialogue in November 2010. The topic of the workshop was about the mandate of the CSOs in promoting free and fair elections via election monitoring and observations. The organizations said that monitoring and observation involved close follow up on the election process, and finally come up with a report. They said the follow up ought to be based on existing standards, a kind of effort aimed at finding out whether or not the set objectives had been met. Some of the issues that are critically looked into in the course of observation are whether the elections are free and fair, and what implication could be brought by the announced election results. The organizations added that to ascertain free and fair elections, the CSOs must go beyond and include a look into the political parties’ manifestoes. For it is important for the CSOs to find out to what extent such manifestoes were really out to bring about the desired change in the society. In a nutshell, they said that free and fair elections start from political parties’ grass root organization to registration of voters, voting, counting of the votes and pronouncement of winners and losers.¹⁴ This study catered for the mandate of UJCC as one of the CSOs in its role of promoting free and fair elections via election monitoring and observation in Uganda, so as to promote the desired change in the society.

The CSO (which faith based) said that a random survey of the requisite factors for free and fair elections and their application in Tanzania showed that their fulfilment was wanting. They for instance said that it was clear to all and sundry that from the first multiparty elections in 1995 to 2005, Tanzania had, in the course of the exercise, been marred by many problems. They named the problems as weak and undemocratic nomination procedures, corruption, an unequal access to public resources, partial media coverage, especially in favor of the ruling party, and pro ruling party civil service. They named others as intimidation at individual, party and national level and the creeping in of politics of ethnicity, religion, racism and regionalism. Ndugu Mshana one of the speakers during the workshop enumerated some of the roles of FBOs in their mandate of ensuring free and fair elections. Mshana observed that the FBOs play an important role of complimenting the work of the National Electoral Commission (NEC). He explained that much as the NEC was legally empowered to provide civic education in the country, other organizations which included members of IRCPT, could also provide civic education after being cleared by the Commission. He named other roles that could be played by CSOs as participation in the electoral process as monitors and observers. Mshana added that although civic education was being taught in schools, there was a need to ensure it embraced the entire population, including adults, especially in the rural areas. He went on to say that timely and adequate provision of civic education would go a long way towards empowering the electorate in making informed choices when it came to electing their leaders. CSOs of Tanzania had the mandate of contributing to free and fair national elections via their monitoring. A number of issues, which aimed at promoting democracy in the country were addressed in the workshop.¹⁵ This study examined the mandate of UJCC reflected in its role of election monitoring, in Uganda. Some of the issues which were raised in Tanzania also by Mshana and others provided a basis for the critique of the work of UJCC, when Uganda’s case was put into consideration.

The CSOs in Tanzania gave an example of the 2015 general election. They said that the 2015 election was fraught with many problems. As such, the IRCPT members said that religious leaders had a large following and since it was their followers that formed the biggest chunk of electorate, it would only be fair if the religious leaders represented by IRCPT to stepped in to fill the void of conducting civic education needed prior to the national elections. The IRCPT members reiterated that the role of the CSOs in elections should not start during the electoral processes such as campaigns but before. CSOs should engage policy experts to examine and challenge the various political portfolios of the different political structures and personalities. They concluded that free and fair elections assist in entrenching a democratic culture, minimize conflicts, and contribute to political stability and peaceful development. They further noted that free and fair elections allow citizens to determine the political make up and the future policy directions of their government, and increase the chances of peaceful transfer of power. The members further commented that free and fair elections ensure the losing candidates accept the validity of the election results.¹⁶ In the interest of entrenching democracy and minimizing the electoral irregularities as commented by the CSOs of Tanzania, this study, as reiterated

¹³ Online library, <https://www.oikoumene.org/news/faith-based-communities-focus-on-electoral-process-n-democratic-republic-of-congo>

¹⁴Online Library; Konrad-Adenauer-Stiftung, P.O. Box 6992, Isimani Road Upanga, Dar es Salaam, Tanzania. kas.tanzania@gmail.com

¹⁵ Konrad-Adenauer-Stiftung, P.O. Box 6992, Isimani Road Upanga, Dar es Salaam, Tanzania. kas.tanzania@gmail.com, Op cit

¹⁶ Ibid.



in the previous sections, examined the mandate of UJCC reflected in its role of monitoring the national elections in Uganda.

When Zimbabwe is considered, the report of the Ecumenical Observer Team of the World Council of Churches (WCC)/All Africa Conference of Churches (AACC)'s mission to the 29th-March-2008, indicated that Zimbabwe harmonized elections which included the Presidential, Senatorial, Parliamentary and Civic Authorities. This election was significant in that it was the first time the country was concurrently holding the four elections for the first time. The elections were held after a constitutional amendment that introduced a new chamber; the Senate. The elections also harmonized all terms of office to five years and increased the number of representatives. The report of the WCC/AACC indicated that the people of Zimbabwe manifested immense maturity in the way they turned out in huge numbers to exercise their democratic rights.¹⁷

The WCC/AACC report listed the different political parties that took part in the Zimbabwe's harmonized elections as Zimbabwean African National Union Patriotic Front (ZANU PF), United Peoples Party (UPP), MDC of Mutambara, Zimbabwe African National Union (ZANU)-Ndonga, Zimbabwe Democratic People's Party (ZDPP), United Democratic Front (UDF) and the MDC of Tsavangarayi. The report of the WCC/AACC further showed that the elections were dominated by numerous cases of election violence, intimidation and outright confrontations between the two main sides, viz, the government side (ruling party) and that of the opposition parties. The political and administrative situation however favored the incumbent.¹⁸ It is the mandate of groups that monitor elections to expose such malpractices and unfair situations in electioneering. Thus, the study in this article reflected on the role and mandate of UJCC in the monitoring of national elections in Uganda, and how its report(s) cover the same aspects of the different political parties that do participate in the national elections of Uganda.

The equivalent of UJCC in Zimbabwe are local religious organizations such as the Zimbabwe Catholic Bishops Conference (ZCBC), the Evangelical Fellowship of Zimbabwe (EFZ), and the Zimbabwe Council of Churches (ZCC). The report of the WCC/AACC reflected those local religious organizations and the desirable changes they wanted to see, towards the national vision for Zimbabwe. Such desirable changes included, wanting a new Constitution for Zimbabwe, Land reforms, Economic recovery and growth, a Process of reconciliation and forgiveness, and that Zimbabwe be included in the world affairs. Generally, the reports show that Zimbabwean Churches stood with the people in their quest of the above desirable changes.¹⁹ As it was in Zimbabwe, this study indicated the mandate and role of UJCC in the monitoring of national elections and possibly its report to indicate the desirable changes to be realized in Uganda.

Further, the WCC/AACC report concluded that the role and effectiveness of the security agencies during an electoral process should be defined clearly. The security agencies should remain impartial, responsible, and sensitive to the plight of the electorate and agents within the polling premises. The process of voter registration, access to the media and freedom to campaign by the opposition were somehow encumbered, to some extent, by the incumbent and agents of the ruling party. The report observed that ZANU PF uniformed forces openly intimidated voters in the days preceding the polls. All these events are indicators that the electoral process was skewed in favor of the incumbent who openly utilized state resources to their advantage. Thus the 2008 elections were far from being free and fair. The reports reiterate that Zimbabweans, however, must be commended for displaying maturity on polling day as very few incidences of violence were witnessed or reported. The actual polling on the 29th of March, 2008 was conducted within a peaceful atmosphere that allowed voters to exercise their democratic rights as well as express their choice through the vote.²⁰ The concluding remarks of UJCC's report, in accomplishing its mandate of election monitoring in Uganda, was presented by this study.

When the case of South Africa is considered, the process of transition from the racist apartheid regime to a multi-ethnic and democratic South Africa led to the first non-racist and free elections in 1994. The period before the elections was marked by much violence in different regions of the country. After the elections, violence continued, specifically in KwaZulu/Natal where followers of the ANC and Inkatha fought, leading to the postponement of local elections in that province from November 1995 to the end of June 1996. This development provided the impetus for another monitoring project. During the elections in 1994 NGOs and intergovernmental organizations sent civilian monitors. The NGO mission with the largest number of monitors was the Ecumenical Monitoring Program (EMPSA) organized by the South African Catholic Bishops Conference and South African Council of Churches with the World Council of Churches. It ran from 1992 to 1994, with a total of 443 participants, about two thirds of them operating in the year of the elections. Three types of monitors were used: An Eminent Persons Group that was supposed to stay up to one week; a group of experts that stayed up to two weeks; and field monitors who served in small teams of two to four persons for a period of six weeks. These time periods included preparation and debriefing at the beginning and the

¹⁷ Online library, <http://www.oikoumene.org>, infdesk@aacc-ceta.org, Nairobi 21st-April-2008-Kenya

¹⁸ Online library, <http://www.oikoumene.org>, infdesk@aacc-ceta.org, Nairobi 21st-April-2008-Kenya, Op cit

¹⁹ Ibid.

²⁰ Online library, <http://www.oikoumene.org>, infdesk@aacc-ceta.org, Nairobi 21st-April-2008-Kenya, Op cit



end of the mission. The mandate of the EMPSA monitors included monitoring of politically motivated violence; investigating its causes and, if possible, preventing it from breaking out; monitoring and reporting on the negotiation process; and monitoring and reporting on the election process in its entirety.²¹ That being the mandate of the EMPSA as an election monitoring group in South Africa, this study presented UJCC and its mandate and role in the monitoring of national elections in Uganda.

In 1996, a coalition of local churches in KwaZulu/Natal (the KwaZulu Natal-Church Leaders Group- KCLG) organized a program called Ecumenical Peacemakers Program (EPP) in relation to the upcoming local elections in that province. The mandate of the peacemakers was not only to monitor and report, but to intervene actively and mediate between conflict parties. The volunteers –20 internationals and 80 South Africans – were deployed in five regions of KwaZulu/Natal for a period of three months per person. Each region was headed by a regional coordinator. The internationals received a one-week training in South Africa before beginning to work in teams of three internationals. One of their first tasks was to recruit 15 local peacemakers each, and train them with the help of experts.²² Such were the roles of the EPP in the monitoring of the elections in South Africa-Natal, this study however focused on examining UJCC, which carried out the same mandate and roles in the national elections.

III. METHODOLOGY

In the interest of understanding and examining the role of UJCC in the monitoring of national elections in Uganda, a qualitative research approach employed a historical research design. The latter was selected because of its endowed advantages. Among such advantages, there is that of allowing the researcher to investigate and report on a single or some few cases of a historical phenomenon. Since this design permits the use of various sources to perceive historical events, the researcher applied both primary and secondary sources.

The primary sources used archival documents from places like Kampala Archdiocesan Archival, Makerere University Archives (Africana Section) and Nsambya Catholic Secretariat. Other primary sources among others included field interviews, whereby a sample of 55 respondents was selected, in order to capture diverse perceptions into the UJCC's national elections monitoring role. Purposive sampling was applied to ascertain key informants with real experience in election observation such as UJCC officials, whereas simple random sampling was used to select field observers and other UJCC members. This was done in the interest of ensuring a balanced representation. The secondary sources that helped the researcher to acquire the needed data included books, pamphlets and magazines. The collected data was used in connection with the role of UJCC and the monitoring of national elections in Uganda.

IV. FINDINGS & DISCUSSION

4.1 UJCC'S (and the Other NGOs) role in the monitoring of national elections in Uganda

The findings deal with the role and contribution of the Uganda Joint Christian Council (UJCC) in the monitoring of national elections in Uganda. It ought to be emphasized that UJCC carried out that role in the interest of promoting democratic national elections, which are punctuated with transparency, accountability, and credibility especially in the electoral process.

It should be noted that UJCC carried out the activities of observing and monitoring the above elections under three umbrella bodies, namely; Civic Education Joint Coordination Unit (CEJOCU), National Election Monitoring Group (NEMGroup) and Democracy Monitoring Group (DEMGroup). According to one of the respondents, on top of advocating for peace, UJCC is the lead agency in Uganda's Democracy Monitoring Group (DEMGroup). The latter are a coalition of faith-based and non-government agencies working together to monitor and report on institutions and organizations such as the Judiciary, the Electoral Commission, the Media and the Police among others. Members of DEMGroup do so, with a view of ensuring that the elections in Uganda would be democratically free and fair.²³

To elaborate more on these NGOs that observe and monitor national elections, CEJOCU consisted of a number of CSOs which included UJCC, National Organisation for Civic Education and Election Monitoring (NOCEM), Action for Democracy (ACFODE) and Uganda Media Women Association (UWMA); NEMGroup consisted of UJCC, Uganda Journalists' Safety Committee (UJSC), ACFODE, and Federation of Female Lawyers (FIDA); then from 2006, DEMGroup consisted of UJCC, ACFODE and UJSC; and in 2011, DEMGroup consisted of UJCC, ACFODE, Transparency International and Centre for Democratic Governance.²⁴

²¹ Online library, <http://www.oikoumene.org>, infdesk@aacc-ceta.org, Nairobi 21st-April-2008-Kenya, Op cit

²² Ibid

²³ UJCC (2016), Building a better future for all Ugandans by fostering the culture of electoral accountability. pp. 1-2

²⁴ Ibid. pp. 1-2



As an ecumenical organisation, UJCC participates in election observation in other parts of the world including Kenya, Tanzania, the Democratic Republic of Congo, Sudan, South Sudan, Zambia, South Africa, Nigeria, Liberia, and Zimbabwe. In carrying out the election observation activities in those countries, UJCC operates in partnership with; All Africa Conference of Churches (AACC), the Fellowship of Christian Councils and Churches in the Great Lakes and Horn of Africa (FECCLAHA), as well as international and regional bodies such as the Commonwealth and the African Union (AU).²⁵

According to one of the respondents called Kaiso; the national election observers and monitors try to operate together during the course of carrying out their activities in the field. However, they must first be accredited by the EC before carrying out their roles of observation and monitoring of elections. They do their work in a non-partisan and objective manner. Election observation is such an important aspect of democratic elections in that, observers and monitors provide independent feedback on the work of the EC. The latter is then expected to appreciate and respect the role of the election observers. The EC cooperates with the election monitoring organisations and groups which seek accreditation as election observers and monitors. In that respect, the EC provides a Handbook containing the guidelines to be followed by the respective monitors and observers.²⁶

According to UJCC, apart from being accredited by the EC and being given a handbook of guidelines to follow during the process of elections, UJCC and other election monitoring NGOs are also guided by internationally accepted principles and guidelines which include;²⁷ The government and its agencies shall promote and safeguard the freedom of association, assembly and expression of all citizens and shall ensure the enforcement of duties and responsibilities. The state shall be governed on democratic principles which empower the active participation of all citizens at all levels in their own governance. All the people of Uganda shall have access to leadership at all levels subject to the constitution. The EC lives up to its legal mandate of organizing free and fair elections. Based on the principle of equality, there should be no discrimination against female candidates and women generally during the electoral process. Every registered voter shall have the right to participate in the elections and vote for the candidates of their choice, free from intimidation and or violence of any kind. Equal access to state owned print and electronic media shall be availed to all the candidates and will not be subjected to censorship or editing and equal space and time shall be availed to all candidates to give them equal opportunity to air their views to the electorate. In the course of election, all election officials, candidates, agents of candidates and voters shall desist and or refrain from initiating or committing any election mal-practice as stipulated by the electoral laws.

4.2 Process of UJCC's Election Monitoring

According to UJCC (2006), it was noted that, apart from the EC accrediting and giving UJCC a handbook of rules to follow during monitoring and observing of the national elections, there are other procedures followed by UJCC and other CSOs. Such measures include among others, the international election monitoring standards, the government policy and the Constitution of Uganda. Besides the Constitution, they follow a legal framework which entails laws governing elections in Uganda, which include the Electoral Commission Act of 2005, the Political Parties and Organisations Act of 2005, the Presidential Act of 2005, the Parliamentary Elections Act of 2005 and the Local Government Act, as amended in 2005.²⁸

UJCC monitors the pre-election processes (viz, registration, nominations and campaign period), the polling day and post-election period. The latter include the petitions of the dissatisfied candidates that may be filled in various courts of law. UJCC with the other members of CEJOCU, NEMGroup and DEMGroup with which it operates, recruits, train and deploy districts and constituency monitors and poll watchers. In this respect, the district and constituency monitors are responsible for monitoring the nomination of candidates, display of voters register and the campaigns in those respective areas.²⁹ According to one of the respondents, UJCC monitors and observers are given the tools/instruments they use during the course of monitoring and observing elections (where the monitored data is collected), they include;³⁰ A booklet from the EC which consists of the guidelines to be followed during the course of monitoring and observation of elections. A booklet containing international principles and guidelines to be followed during election monitoring.

Monitors are also guided by the Constitution of Uganda, a legal framework which entails laws that govern elections in Uganda which include; EC Act 2005, Political Parties and Organisation Act 2005, Presidential Act 2005, Parliamentary Election Act 2005 and the Local Government Act as amended in 2005. A booklet consisting a number of forms/ checklist for observing the various aspects of the electoral process where data is recorded like; form for observation of voting, that for observation of the counting, for recording ballot papers availed to each polling station,

²⁵ Op Cit UJCC (2016), Building a better future for all Ugandans by fostering the culture of electoral accountability pp.1-2

²⁶ Rev. Canon Grace Kaiso, former Chairman of UJCC executive committee, he was met on the 12th- March-2021, at Mengo

²⁷ UJCC (2006), UJCC-DEMGroup Election Report. pp. 4-6

²⁸ UJCC (2006), Pamphlet pp. 6-7

²⁹ Op cit UJCC (2006), Pamphlet p.5

³⁰ Rt. Rev. Constantine Mbonabingi, during an in-depth interview on 25th-February-2021 at Nsambya



for recording the balance of the ballot papers after voting, for recording other general observations (like any outstanding behavior) in a short time and a form for recording the final results of the elections and tallying of votes. Monitors and observers are availed with two tables, viz, one for observing of voting and another for counting. They are given strong Cameras and Phones to effectively carry out their role during the process of observing and monitoring elections. The respondent reiterated that;

The guidelines consisted in some of the booklets given to the UJCC monitors and observers, contain basic information on the roles of various stakeholders including the Government, Parliament, the EC, the Political Parties and Organizations, Candidates, Agents of the respective candidates, returning officers, Presiding officers, Polling assistants, the Police and other Security Organs, the Judiciary and the Media. The guidelines also underscored the importance of impartiality, objectivity and non-partisan on the part of the election observers as well as the obligations of an election observer, to respect the authority of the Electoral Commission and agencies responsible for law and order in the course of discharging their work. Election Observers were also equipped with special identification tags prepared by UJCC and accreditation documents issued by the Electoral Commission and the returning officers in the respective districts.³¹

In order to monitor and report on the polling day activities, a scientifically representative sample of all the gazetted polling stations countrywide is designed. The above sample is drawn taking into consideration the total number of the gazetted polling stations and the total population figures per district. Reference is also made to the National Census data and the corresponding projections prepared by the National Bureau of statistics³². In the same way, a team of entrants and analysts is usually recruited to prepare a data set on the polling day activities. A statistical cross analysis of the different issues with respect to locale, like regions as observed on the polling day is carried out to determine the extent of fairness of voting and counting.³³ Under Monitoring and Evaluation, the Database management is worked on by an ICT consultant and members of UJCC staff who are trained on how to use the database management system. The latter enables the timely inputting and retrieval of any required data on the UJCC activities like the tallied election results. With the new strategic plan of UJCC, the management system was updated, taking into consideration changes in certain aspects like in the indicators which produced both hard copies and soft copies of the necessary information about national elections.³⁴ In reiteration to the above, one of the respondents said that; UJCC has a centre from where election results are tallied and after the elections, all the monitors and observers and poll watchers who were dispatched to various polling stations throughout the country districts, have to present their recordings and comments to the UJCC headquarters for tallying.³⁵ UJCC headquarter is located on plot 1554, Block 15 Gogonya Bypass, Kibuga-Nsambya East Zone.

The respondent went on to reiterate that;

*After the tallying of the Election Results and making the necessary Reports and Recommendations accordingly, UJCC makes arrangements to meet all the stakeholders who are responsible to ensure free and fair national elections or referenda and present their findings. The stakeholders include the Parliament, the EC Chairperson, Inspector General of Police and some Candidates who contested for various posts among others. The stakeholders are informed that the purpose of UJCC's monitoring and observation of national elections or referenda is to assess their compliance with the law and regulations in accordance with the Constitution of Uganda. In the meetings, UJCC also identifies certain areas in the election administration that need to be rectified in order to improve the electoral processes in the future Uganda.*³⁶

This article therefore has considered the monitoring role of UJCC for the elections of 1994 and 1996 respectively. It should be reminded that UJCC did not operate independently, but it worked in unison with some other CSOs.

4.3 Monitoring of the 1994 Elections

After noticing the various NGOs that UJCC operates with, in the course of monitoring the national elections and the operational procedures followed in the above sub-section, it is better to embark on the real elections beginning with the 1994 elections. It should be remembered that the 1994 elections were the first elections to be monitored and observed by UJCC in conjunction with NOCEM. It should be remembered that this was the pioneer elections to be locally monitored and observed. This is due to the fact that the 1980 elections acknowledged no local observers and monitors; instead, international ones were received.

³¹ Op Cit, Rt. Rev. Constantine Mbonabingi met on the 12th-June-2020 at Nsambya

³² UJCC- NEMGroup (2001) Election Report; "Promoting Good Governance Through Election Monitoring." pp. 4-5

³³ Ibid pp. 4-5

³⁴ Ibid pp. 6-19

³⁵ Op cit Mbonabingi met on the same date and venue

³⁶ Ibid



The implication with this was that UJCC and NOCEM observers were a bit unexperienced since they were making that attempt for the first time in their life history. However, the above monitoring groups should be credited for having pioneered in the accomplishment of that commendable endeavour. Another implication with these elections was that they were a landmark in Uganda's history in that they were the first ones to elect members of CA who were purely Ugandans. This implied that the Constitution was to be made without any influence from the British as compared to the 1962 Constitution. According to one of the respondents, she said that;

After only four years of independence, the government of Obote changed the 1962 Ugandan Constitution and introduced the 1966 Constitution (the Pigeonhole Constitution). The latter was taken to be a temporally one as another Constitution was being organized. The 1966 Constitution was replaced by the one of 1967. The Constitutional changes that were made by Obote in 1967 were all based on the 1962 as the foundation. The 1967 Constitution stayed in operation until when it was replaced by the 1995 Constitution.³⁷

Therefore, the 1994 elections were the first ones to be carried out in Uganda, with the intention of electing the delegates of the Constitutional Assembly. In the same regard, the 1994 elections were the first ones to be organized without the interference from the British. It should be remembered that the election results of the 1958, 1961 and those of 1962 were very much determined by the British.³⁸ When the 1980 elections are considered, it can be said that they also had the British influence in one way or another. According to one of the respondents;

This was specifically reflected in the monitoring role of the COG during the 1980 elections. The report made by the COG after monitoring of the 1980 national elections, was not a fair representation. This was due to the fact that the 1980 elections were marred by irregularities like bloodshed, vote stuffing and rigging among others. Yet the COG election monitoring report never indicated such irregularities.³⁹

Another respondent reiterated that;

The 1980 elections had the British influence due to the fact that after Milton Obote rigging the 1980 elections and becoming the president of Uganda for the second term, Yusufu Lule of DP and former president of Uganda wrote to the British government. He was complaining about the rigged elections and the atrocities that followed. The British government unfortunately remained adamant and, in that way, showed that they had no problem with the election irregularities that were spearheaded by Obote. This possibly was due to the fact that they had worked with Obote, during the 1962 independence elections, which were believed to have been tampered with in favor of Obote.⁴⁰

It can be emphasized that the 1994 elections, gave a monitoring experience to the UJCC members, which obviously must have helped them tremendously in their role of monitoring the national elections that followed. Therefore, the 1994 elections laid a strong foundation, upon which UJCC could depend, to monitor and observe the future elections in Uganda and elsewhere in some other countries.

4.4 UJCC and the monitoring of the 1994 Constituent Assembly

As a result of the 1980 elections, Obote became the president of Uganda once again, in what came to be known as the Obote 11 Regime as already noted above. The latter was from 1980-1985, when Tito Okello became the Ugandan president after staging a successful coup against Obote 11's government. Due to the rigged elections of 1980, Museveni decided to wage a guerrilla war which toppled Tito Okello Lutwa's regime in 1986. Museveni became the president of Uganda under the NRM government up to the present date. The NRM government for that matter, introduced a number of changes in the electoral laws, which thus involved the people of Uganda in the making of their own Constitution. The latter was preceded by organizing the 1994 elections for the Constituent Assembly delegates. The latter consequently debated the Constitutional Proposals which formulated a new Constitution in October 1995.⁴¹

In reference to Amaza (1998), the NRM government organized a Constitution Commission (CC) before the 1994 CA elections. According to the Statutes of the Constituent Assembly (1993), the CC was placed under Odoki and it had to consult the public about the various issues to be put in the new Constitution. After the process of Odoki's

³⁷ A politician who preferred his name to be reserved, he was met in an in-depth interview on the 3rd-September-2020

³⁸ Karugire S.R. (1980); *A Political History of Uganda*, Heinemann Educational Books, P/O.Box 45314, Nairobi Kenya. pp. 177-187

³⁹ Op cit A politician met on the 3rd-September-2020

⁴⁰ A certain respondent who was met during an interview on the 3rd-September-2020

⁴¹ Kasozi A.B (1999), *The Social Origins of Violence in Uganda*. Fountain Publishers Kampala, pp.145-167; Karugire Samwiri (1996); *Roots of instability in Uganda*. Fountain Publishers Kampala, pp.98-114; Kabwegyere Tarsis. B (1995); *The Politics of State Formation and Destruction in Uganda*. Fountain Publishers Kampala, pp.203-207



committee of the CC, a number of proposals were gathered and drafted into what came to be known as the Draft Constitution. The latter was thus to be debated upon by the CA delegates.⁴²

Basing on one of the respondents, among the Non-Government Organisations (NGO) that monitored and observed the 1994 CA delegates' elections was the National Organisation for Civic Education and Election Monitoring (NOCEM) and UJCC. It should be emphasized that UJCC operated together with NOCEM in the monitoring and observation of the CA delegates' elections in 1994. Therefore, NOCEM and UJCC were allowed and accredited by the Electoral Commission, to conduct civic education which preceded undertaking the role of election monitoring.⁴³

4.5 UJCC-NOCEM Report of the 1994 Elections

The CA elections were held on the 28th-March-1994 and one ballot box was used at every polling station. The IEC was under the chairmanship of Steven Akabway. Before voting, civic education was carried out throughout the country, in the interest of sensitizing people about the importance of the CA elections and also to make them aware of their own rights. In the same way, each voter was to present the Voters' Card which was a prerequisite to voting and after that, he/she was then checked in the Voters' Register.⁴⁴

In reference to Kakeeto (2001), the Ugandans with the voting age who registered to vote were 7.180.514. Yet the candidates who were nominated to be voted for were 1200. They were given only one month for campaigning and they moved to almost all corners of the country with the exception of Gulu and Kitgum, due to the insecurity of Joseph Konyi rebels. The voting started at 8.00am and ended at 5.00 pm and after the voting, presiding officers at all polling stations started the counting of votes. The latter was done in the open before the voters and the election observers and results were announced publicly there and then. It was supposed to be that a Candidate with the highest number of votes was declared winner at that respective polling station.⁴⁵

From there, the Polling Officials and the Candidates' agents signed three copies of Declaration forms. This was to confirm whether the voting exercise was free and fair or not. The declared results were then forwarded to the Sub-County, then to the district and finally to the Election Commission offices, which officially announced the very final results of the elections nationwide. The Electoral Commission was under the mandate of Steven Akabway and the Committee with which he operated.⁴⁶

UJCC-NOCEM (1994) states that since there was one ballot box at each polling station that reflected an improvement in organizing elections as compared to the 1980 elections, where each elected candidate had a particular ballot box. The report went on to say that generally there was no government interference in CA elections and that they were democratically free and fair. There were also some international observers according to Cooper and Stroux (1996). These were members of the International Election Observers in Uganda. According to the Report of UJCC, the outcomes of the 1994 CA elections reflected those 214 delegates were directly elected, 60 were indirectly elected and 10 members were appointed by the president of Uganda his Excellency Yoweri Kaguta Museveni. The CA discussed the Draft Constitution and passed it in October 1995.⁴⁷

Section 264 of the Provisional Constitution prescribed that the general elections for the new government was to be held within 9 months of the date of promulgation. The Provisional Constitution continued to put a ban on Political Party activities as had been enshrined by the current political system of the NRM government. The latter had all along emphasized a one-party system of "Movement." Accordingly, president Museveni's main argument against a multi-party system was that he believed that the long-lasting political conflicts in Uganda, depended upon the Political Parties of UPC and DP. Museveni claimed that the "Movement Political system", would minimise Uganda's ethnic and religious differences, and ultimately unite the different political tendencies. All of this was translated in the 1995 Constitution which was broad-based, inclusive and nonpartisan.⁴⁸

The issue of "decentralization" was also enshrined in the 1995 Constitution. Decentralization facilitated an increased level of participation of all the people of Uganda. This implied that ordinary Ugandans would contribute to the decision-making process through their membership in Local Councils (LCs) which were formerly called the Resistance Councils (RCs). Local Councils (LCs) were responsible for administrative and security matters on villages.⁴⁹

⁴² Ondoga Ori Amaza (1998), *Museveni's Long March from Guerilla to Statesman*. Fountain Publishers, Kampala pp. 180-188; Mawazo, *The Journal of the Faculties of Arts and Social Sciences Makerere University* Vol. 9-February 2010, p.198

⁴³ Op cit Canon Grace Kaiso, contacted on phone on 21st – March – 2020 at Mmengo

⁴⁴ NOCEM-UJCC (1994), CA Election Report

⁴⁵ Kakeeto Arthur Noel (2001); *MA Dissertation; An assessment of the freedom and fairness of general elections in Uganda 1961-2001*, pp. 52-53

⁴⁶ Op cit UJCC-NOCEM (1994) Election Report; Ibid Kakeeto Arthur (2001), pp. 53-54

⁴⁷ Ibid; Op cit Laurie Cooper and Daniel Stroux (1996), *International Election Observation in Uganda Compromise at the Expense of Substance*. pp. 201-202

⁴⁸ Op cit UJCC-NOCEM (1994), Election Report; Op cit Kakeeto (2001) pp. 50-57

⁴⁹ Op Cit, Kakeeto Arthur (2001), pp. 50-51

According to one of the Respondents,

*One of the unique features of the Constitution of 1995 was the establishment of the Uganda Human Rights Commission (UHRC) and the Inspectorate of Government. The new Constitution also sought to limit the powers and privileges associated with the Presidency by providing for presidential term limits. It is any way so absurd that the Constitutional provision on term limits was however removed in 2005.*⁵⁰

It ought to be remembered that the first Parliamentary and Presidential elections that followed those of 1980, were the 1996 elections as presented by the following analysis.

4.6 UJCC-NOCEM and the 1996 Elections Monitoring

The 1994 CA elections were followed by the presidential elections of 1996 which were the first ones to be organized under Museveni's NRM government. The latter by then had stayed in power for 10 years, viz, from 1986-1996. Cooper and Stroux say that the 1995 Constitution imposed the date of 8th-July-1996 for the completion of elections. The seating of the new parliament signaled the intent of the Assembly to finally end a nine-year-lasting transition process.⁵¹

However, the period for the election preparations were substantially limited by the Political debates. Consequently, the electoral law that was issued to the Interim Electoral Commission (IEC) was deprived of enough time to review the electoral law. Due to that factor, the IEC did not sufficiently and effectively prepare the election staff. To make matters worse, the electoral law contained more specific restriction of the freedom of assembly, especially for the Parliamentary election. This was reflected in the no-party system and the ban of the party activities embedded in the electoral law. The latter prohibited any contesting candidate to use political party color or symbol, tribal or religious affiliation or any other sectarian ground as a basis for campaigning. The law therefore contained more specific restriction of freedom of assembly, especially for the parliamentary elections. These rules actually brought considerable disadvantages for the opposition candidates like Paul Ssemogerere of DP and Mohammed K. Mayanja, who was considered to have represented the Moslem electorate community.⁵²

The *New Vision* noted that sixteen years after the 1980 national elections, Ugandans again went to polls to elect their leader. There were still a few new faces around. Ssemogerere was still chief of DP and Obote was also still leading UPC from Zambia where he had sought refuge. UPM which was under the leadership of the incumbent Museveni, had evolved into a Movement embracing all Ugandans. It should be noted that the faces had not changed but the rules of the game had. Candidates were now required to stand on their own merit, not on the party ticket. The only new comer in the race, was Muhammed Mayanja, an economist from Makerere University. Like the case in the 1980 elections, the opposition campaigned about the unlevelled playing field. The opposition candidates were given a short time for campaigning, lack of civic education and inaccurate vote registers. The 1996 election race was actually a two-horse race between Museveni and Ssemogerere. Mayanja was simply ignored, since supporters of the two main candidates went for each other's throats, each side determined to see their candidates through.⁵³

While campaigning in Mukono, Museveni was given a grinding stone (Olubengo) by one of his supporters, Kitaka. The grinding stone soon became Museveni's campaigning slogan and symbol, using it to show his willingness to continue carrying Uganda's burdens on his head. Ssemogerere also adopted a thumbs up sign as his campaigning symbol, which was a big contradiction in the reality of his camp. As the race became tougher, violence broke out mainly in the western parts of the country. In Rukungiri, Bushenyi, Kibaale and Mbale, hooligans disrupted DP rallies. Security organs also got involved. This was reflected when fiery Makindye MP Yusufu Nsambu was soon in trouble with police, over his allegations that candidate Museveni was not a Ugandan. During a rally in Rakai, Nsambu had described Museveni as a *Mujjananyina*, (a child who follows its mother when she gets married to another man). As the violence escalated, the army high command promised to step in and contain the situation. In that way, there was more controversy in involving the army.⁵⁴

As matters transpired, candidates Ssemogerere and Mayanja wanted to hold rallies in military barracks all over the country. However, permission was not granted on the grounds that it would affect the army's discipline. Then there was a question of UPDF soldiers deployed far from their polling stations, and had to vote by proxy. Ssemogerere wanted their list to be made public. The army command insisted that the list was a matter of national security, and therefore could not be made public. On May 9th-1996, eight million eligible Ugandans went to polls. The polling exercise itself was relatively peaceful, most of the anticipated violence did not take place and the turn up was overwhelming. It was noted that exactly 8,498,383 registered to vote, about 72.94% of them turned up to vote, to set up a new record of sorts.

⁵⁰ One of the Respondents who never wanted to be disclosed, interviewed on the 18th -February-2020

⁵¹ Op cit Cooper and Stroux (1996), pp.2003-2004

⁵² Ibid

⁵³ The New Vision; 12th- March-2001; Lwanga-Lunyiigo Samwiri (2015); *A History of the Democratic Party of Uganda, The First Thirty Years (1954-1984)*. Fountain Publishers Kampala, pp.123-148

⁵⁴ Op Cit, New Vision; 12th-March-2001



The results released by the Interim Electoral Commission (IEC) headed by Stephen Akabway, placed Museveni first, with 75% of the total votes. However, both Ssemogerere and Mayanja immediately rejected the results. Rejections that came too late, and were largely ignored as Museveni headed for the history books of Uganda's first directly elected president.⁵⁵ According to the newspaper of *Munno*, it was shown that Ssemogerere and Mayanja were sure that Museveni rigged the 1996 Presidential elections. Ssemogerere is quoted to have *stated* this, as reported by *Munno*⁵⁶ (See Annex I).

The information in Annex I of Ssemogerere is about the 1996 elections, which were presented by the newspaper of *Munno* as seen above. It indicated that the government of Museveni took no chances, but started right away with the first organized elections, to make an exact replica of what was done by the former government of Obote in 1980 elections. Therefore, the 1996 national elections enabled Ssemogerere to realize and understand the true colors of President Museveni, and how he was ready to use whatever means possible to retain power.⁵⁷

In reiteration of Ssemogerere's complaint about the irregularities of the 1996 elections, it is surprising to be that the issue of hurriedly creating new polling stations on the eve of the elections started right away. It was reflected in the 700 polling stations which were created on the 8th-May-1996. Unfortunately, there was no communication to the public, the Presidential candidates like Ssemogerere or the election monitors. If they had been informed in advance about that plan, possibly they would have sent their respective agents, as it had been done with the other polling stations elsewhere in the country. That was among the many election irregularities that influenced Ssemogerere and others on the opposition side to reject the election results of 1996. However, their rejection of the election results could not change anything. Museveni remained in power, he has remained in power and possibly he will remain in power using the same tricks.

Therefore, among the NGOs that were accredited by the EC, was that of UJCC-NOCEM. According to one of the respondents;

*Those opponents of Museveni actually faced it rough. This was due to the fact that party campaigning was not possible since the campaign was restricted to 39 days prior to the elections and this meant that each candidate had a period of only one day for each district. Yet Museveni had instead already visited almost all district during the months before the election.*⁵⁸

In reference to the above respondent and also as confirmed by Kakeeto (2001), voting for presidential elections was to be held on Thursday, 9th- May- 1996 from 7.00a.m to 5.00p.m. Prior to the nomination day, viz 27th and 28th-March-1996 respectively, DP and UPC had made an alliance, in which they agreed to jointly support a single presidential candidature of Paul Kawanga Ssemogere. The opponents viz P.K Ssemogerere and M.K Mayanja of the Conservative Party (CP), were disfavored by the road conditions that complicated their campaigns. As the electoral law explicitly allows the incumbent as the current president to use all the government logistics, the opponents were given an allowance of 15 million shillings (15,000\$) and a four-wheel drive.⁵⁹

4.7 UJCC-NOCEM Report of the 1996 Elections

The Report indicated that UJCC-NOCEM recruited and trained various observers and monitors. The latter helped in carrying out a number of activities which included; observing the registering of voters, nomination of Candidates, campaigning meetings, polling day activities and the post-election activities.⁶⁰

On the polling dates, viz 9th- May- 1996 and that of June 24th-28th-1996, secrecy of the vote was secured by the use of the ballot box and the whole process seemed to be transparent. Ballots were seen being counted in the open and there was immediate announcing of the votes in the presence of everybody, including all the candidates' agents. This increased the voters' confidence in the system since even the agents of the candidates approved the results by signing on the declaration forms. Indelible ink was universally applied as a measure for fraud prevention. All tallying of votes was done openly before the observers. The international and local observers had access to any election related post or centers.⁶¹

However, the major problem of the Presidential elections was the issue of inconsistent voter register. This was due to the fact that at nearly every polling station, there were up to 20 cases of unregistered voters appeared. The voters in question complained that their names which were originally part of the 1994 Register, had been phased off in the 1996 corrected version of voters. In the same way, logistical problems with distribution of the registers also delayed the operation of polls in several centers. To this problem the IEC responded by directing the election staff to use their old

⁵⁵ Ibid

⁵⁶ *Munno*, Publication, Monday-Wednesday, 13th-15th-May-1996

⁵⁷ *Op cit Munno*, Publication, Monday-Wednesday, 13th-15th-May-1996

⁵⁸ One of the UJCC-NOCEM election observer who was an eyewitness and never wanted to be exposed, he was met on the 12th - January-2020

⁵⁹ *Op cit* a respondent who was a former UJCC-NOCEM election observer; *Op cit* Kakeeto Arthur (2001), pp. 58-59

⁶⁰ *Op cit* UJCC-NOCEM (1996), Election Report

⁶¹ *Op cit* UJCC-NOCEM (1996), Election Report



or their new registers so as to enable voters to cast their ballots. In the same way, non-adult voting was observed in several constituents, and stolen voter cards were seen being used by some voters. There was an insecure distribution of blank voter cards that had obviously provided an opportunity for fraud.⁶²

The 1996 elections were also observed and monitored by the international bodies like the COG, IFES, UN Secretariat, JSSIOG and others. According to their election Report, the 1996 elections were organised in such a way that presidential candidates, members of parliament, women representatives among others were elected on different dates. For that matter the International Observers remarked that the decision of the IEC to hold separate elections meant that certain election materials were lost between elections. Their absence was not noticed until the Election Day. They said that to avoid the purchase of entirely new materials for each election, it is better for the elections to be held on the same day.⁶³

As far as the IEC is concerned, the Observers of UJCC-NOCEM noted that it was obvious that the IEC did not totally control several electoral processes at the same time. In the first place, there were inconsistencies mainly in the conduct of the special representatives of the elections. Nevertheless, given the polarization of political interests, the Commission acted as impartially as it could. In one way it was unable to examine every pro-NRM incident, as a result of lack of resources. Yet in another way, the opposition committee known as the Inter Political Forces Cooperation (IPFC) under the leadership of Paul Ssemogerere which clearly represented the political parties, was protected and facilitated by the Commission. The Consultative Committee (CC) for the Presidential Campaign was the main organ to allow the different political camps to articulate any election related problems. These problems were usually resolved in consensus of those concerned. Accordingly, the complaints of the IPFC against the Commission after the landslide victory of Museveni and its then-announced boycott of the parliamentary elections seemed not to be based on solid facts. The IPFC confirmed how an Electoral Commission, representing only one political camp on the decision taking level, could easily fall victim of political attacks. This was in such a way that according to the electoral law, the president was free to appoint as well as nominate its members without much explanation. The impartiality of the Commission was attributed to the head of the IEC, Steven Akabway, who had already organised the 1994 CA elections.⁶⁴

The Report went on to remark that the IEC allowed them and other international observers to verify the various stages of the electoral process, including the verification of the impartiality and the functioning of the IEC itself. In spite of the process of debriefing, a common conclusion of the election process gathered into a one-page statement, it turned out to be very complicated. This was due to the fact that the group was formed of several smaller observer delegations, each with its own interpretation of the terms of reference. The character of three different types of delegations, contributed to the different interpretation of the task of observation. Among the groups were those subjected to the directions from the sending government with special interests in Uganda; other delegations were with an independent stand, although sent by a government institution; yet other delegations were coming from an NGO-structure with independent standing.⁶⁵

It should be remarked that two main positions of the Observers were identified with nuances or disparities between them; one of these represented a self-restricting position that focused just on technical issues on several days around the polling day. The “quantitative position” was characterized by the standard argument viz “we can only judge what we have seen.” The latter succeeded in limiting the scope of the statement, for the Presidential election to the polling stations visited. This group refused any conclusion drawn by the sample of polling station visited over the whole election. In the same way, structural disadvantages given by the electoral law and the electoral system for the campaign, on which the group had been briefed before, were not regarded as part of the statement.⁶⁶

The second group of Observers then considered that any election was part of the small process. This group had the “qualitative position,” they believed and comprehended that election monitoring and observation consists not only “to see”, but to hear, to read, to discuss and to understand. It wanted to consider and include the pre-election process and some other relevant facts of the elections into the statement. This was due to the fact that at least some Observers had been in Uganda two weeks before the presidential election, and remained until the parliamentary election was over, viz, they wanted to judge and felt capable of evaluating the whole process.⁶⁷

Therefore, the first group was not ready to accept the seniority of the long-term Observers (like UJCC-NOCEM) and their knowledge. There was an obvious lack of cooperation between the majority of the short-term Observers and the long-term ones, which was the major drift encountered in the drafting of the statement. The above problem was especially with the International Foundation of Electoral Systems (IFES), with five persons involved in the observation.

⁶² Ibid

⁶³ Commonwealth Observation Group (COG), the International Foundation of Electoral Systems (IFES), UN Secretariat, Joint Secretariat for Support of International Observer Group (JSSIOG) and others, (1996) Election Report

⁶⁴ Op cit UJCC-NOCEM (1996), Election Report

⁶⁵ Ibid

⁶⁶ Op cit UJCC-NOCEM (1996), Election Report

⁶⁷ Ibid

The former had spent all in all two months in the country and had attended on top of the polling day activities, campaign meetings, training sessions and had had close contact to local observers as well as the election officials. IFES had further provided the UN Secretariat, the Joint Secretariat for Support of International Observer Groups (JSSIOG), with necessary information and had been formally or informally asked to brief other Observers.⁶⁸

Although the respective interest of each delegation in the character can only be assumed, the position of the British observer group taken during the discussion for the Presidential election, seemed to be guided by the wish to a low-profile statement. These observer groups wanted to avoid the possible political damage to donors' policy towards Uganda, committed by an independent (too positive or too negative) opinion. This impression prevailed among several observers that the independence of the observer mission was compromised by this position.⁶⁹

Following the preparation of the Presidential Election Statement, representatives of the donor community met and discussed more specific roles and functions of Observers and Monitors. In this way the donors outlined another mandate for diplomats accredited to Uganda. They suggested that they should be "Resident Observers" and that they were not supposed to participate in the drafting of the statement for the Parliamentary elections. It appeared that during the discussion of the statement for the parliamentary election, a more independent position emerged. This was in such a way that the multidisciplinary composition of the drafting committee, three long-term-observers of the IFES- team, one British and one German observer, favored a more complex statement.⁷⁰

Nevertheless, the Report indicated that, the main conflict remained on the question of how far the statement could go, especially when the draft was presented in the plenum. In this respect, part of the delegations remained reluctant of judging substantial questions. For instance, they refused any comment on indirect vote of the women election or the in-transparency of the elections of the army in the restricted areas. In this perspective a minimal compromise could be reached. This was in such a trend that the two last sentences reflect the different views, viz, the elections observed from 24th- 28th /June/ 1996 were transparent, as representing the "self-restricting" position. The latter suggested that despite the deficiencies that have been outlined, the International Observer Group believed that the Parliamentary election mark a further positive step with in the transition in Uganda. The second sentence was daring judgement on the whole election, but when avoiding at the same time any comment on the direction of the transition process.⁷¹

The International Observers therefore concluded their remarks by stating that, although the election observation did not fail as it did in some other African countries like Tanzania (where Monitors and Observers come in the last hour only to bless the election results without taking into consideration the political developments and circumstances preceding the elections which are in most cases skewed in favor of one group against others), the elections were organised well enough in a way not to get the observers too much in trouble, that mission and its outcome must be criticized for a number of reasons;⁷²

In the first place, as regards Cooper and Stroux (1996), it is stated that a more qualitative statement would have strengthened the credibility of the International Observers viz-a-vis the public. In certain circles, the impression prevailed that the International Observers were dropping in for some days, when they knew nothing about the pre-election period; they observed only the Election Day and departed after legitimizing the incumbent. To a certain extent, the design of both statements tends to confirm that opinion since these hardly include any relevant pre-election facts.⁷³

Secondary, the opportunity of a broader statement was necessary because long-term and short-term observers were available. Lack of cooperation was less due to the fact that the UN-Secretariat was only necessary for logistics and to provide a forum for the observers to cooperate with each other. It was rather the unwillingness of certain observer delegations and their respective sending institutions to concede the independence of the observer mission⁷⁴

UJCC-NOCEM finally remarked, as it was with Laurie Cooper and Daniel Stroux (1996), that the Conclusion Statement of both domestic and international election Observers and Monitors, apart from observing the Election Day activities, should have considered the main effects of the electoral law and electoral system of the whole election process. The problem of having general elections into a series of two events and the Parliamentary elections to be composed of six discrete processes could also have been emphasised and addressed. They said that re-organizing these events to take place on a single day could lead to more transparency and more cost-efficiency. This "broader-based" statement could have given the Ugandans a direction for future elections.⁷⁵

⁶⁸ Ibid

⁶⁹ Ibid

⁷⁰ Ibid

⁷¹ Ibid

⁷² Op cit Cooper and Stroux (1996), pp. 203-207

⁷³ Ibid

⁷⁴ Op cit UJCC-NOCEM (1996), Election Report

⁷⁵ Ibid



V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

This chapter presents a summary of the key findings, the main conclusions drawn from the study, and practical recommendations for strengthening the role of Civil Society Organisations (CSOs), particularly the Uganda Joint Christian Council (UJCC), in monitoring national elections in Uganda.

The study in this article sought to understand how UJCC (faith-based) CSO contribute to the monitoring of the national elections in Uganda. It has generally encompassed the issue of UJCC not operating in isolation, but with a number of CSOs as a coalition. It has been established that, the reason is that of getting enough monitors/observers and poll watchers to be posted effectively, throughout the polling stations nation-wide. The electoral process that is monitored in the national elections, requires enough workers to undertake the hectic task of election monitoring in the whole country. The operational procedures such as the pre-election processes, the activities of the Election Day and the post-election period, have been considered. These procedures are followed by UJCC during the course of monitoring and observing the elections. It has been remarked that the Reports and Recommendations which are made by UJCC, are accordingly presented to the various stakeholders of the national elections. It has been seen that such stakeholders include the EC Chairperson, Inspector General of Police, the Parliament and a number of Candidates who contested for various posts, among others.

The Reports that UJCC makes after elections are intended to assess the compliance of the stake holders, with the laws and regulations in accordance to the constitution of Uganda, the EC laws and guidelines and the international principles at large. It has been noticed that the 1994 CA elections were the first ones to be monitored by UJCC, in the struggle of overseeing democracy in Uganda. Accordingly, UJCC operated under the umbrella of NOCEM during undertaking the role of monitoring those elections. UJCC-NOCEM described the 1994 elections as being free and fair, with no government interference and thus promoted the desired democracy that Ugandans had never witnessed before.

The 1994 elections produced the CA delegates who made the 1995 Ugandan Constitution. According to the Constitution; Uganda remained a one-party state as had been retained by the NRM government, the issue of decentralization was promoted, it prescribed that the general elections for the new government were to be held within 9 months from the date of promulgation, it put in place the UHRC and an Inspectorate Government. The Constitution also advanced the issue of the two term limits for the President. Therefore, such were the fruits of the 1994 CA elections which were monitored by UJCC-NOCEM and need to be commendable.

According to the report of UJCC-NOCEM observers and monitors, the 1996 elections were punctuated by the positive and negative characteristics. When the positive characteristics are considered, they included; use of only one ballot box at each polling station. It should be remembered that during the 1980 elections, there were four ballot boxes each representing a political party. With a one ballot box during the 1996 elections, was a reflection of an improvement, which minimized vote rigging. There was also secrecy and transparent in voting in the course of the 1996 elections. This implied that there was individual private voting, counting and announcing of votes before everybody and signing of the declaration forms by agents of candidates. It was also noticed that there was impartiality of the IEC. Accordingly, that impartiality was attributed to the head of the IEC Steven Akabway, who had done a commendable job during the 1994 CA elections.

Since in normal circumstances there can hardly be a perfect situation, the negative characteristics of the 1996 elections included the following; inconsistency in the voter registers like missing names of voters, there was non-adult voting that was seen in some centers, there was distribution of blank voter cards, some stolen cards were seen being used by some voters. There were also logistical problems reflected in the distribution of registers, which delayed voting in a number of polling stations.

It has been asserted that, since these were the second elections to be monitored and observed by UJCC-NOCEM, a certain experience was manifested in the detailed ways in which they carried out their role, as compared to the 1994 CA elections. It appeared in this way that members of UJCC-NOCEM, had gone to the field a bit earlier. They were therefore, able to train their own observers who witnessed the registering of voters, nomination of candidates, campaigning meetings, polling day activities and post-election activities. In this way, they made a qualitative election report which must have helped the EC in the future elections.

The UJCC-NOCEM Report concluded by discouraging the IEC under Steven Akabway from having general elections organised into series of two events (Presidential and Parliamentary elections). They instead proposed that in the interest of reducing costs and promoting transparency, Presidential and Parliamentary elections ought to be organised on the same day.

Therefore, UJCC-NOCEM is commended for the portrayed mandate and role in monitoring the 1996 national elections. The monitoring report that was made was presented to the concerned stakeholders, like the IEC and the government among others. Therefore, it is believed that the organizers of the future elections were expected to pick a



leaf from what was recommended, by putting them into action. The efficaciousness of the UJCC-NOCEM recommendations was proved by the 2001 elections and other elections that followed;

-The issue of the unregistered voters was worked upon, whereby during the 2001 elections, majority of Ugandans were registered and exercised their franchise.

-UJCC discouraged the IEC from having general elections organized into series of two events that is to say presidential and parliamentary elections, instead, the elections should be organized on the same day. This was rectified during the 2006 national elections.

NB; It should be asserted that, when the efficaciousness percentage of the UJCC election recommendations made after the 1996 elections is considered, it was only 17%.

It can be concluded that in spite of that, UJCC should be commended for the Reports that were made during the 1994 and the 1996 national elections. It is therefore believed that, the recommendations in those Reports helped in improving the future electoral process, though to a minimal extent. Possibly, the situation would have been worse, if it were not for those reminders in the UJCC Reports. Consequently, this has helped the stakeholders of the national elections in one way or another, to be compliant with the Constitution of Uganda, the EC laws and guidelines, and the International Principles, though to a slight extent, viz, (17%).

5.2 Recommendations

In the final analysis, it is recommended that CSOs (UJCC in particular), which undertake the noble task of monitoring national elections, should be provided with a conducive working environment by the government and the EC, instead of being suffocated and throttled. This is due to the fact that they are the representatives of the society, by acting as a watch dog to the casted votes of the populace. In other words, CSOs like UJCC use national elections as an opportunity to actively supervise the process of democracy via election monitoring and observation. This is because, election is a democratic mechanism available to the members of a society, to express their approval or disapproval of the government policies. Yet election monitoring acts as a democratic tool, geared towards promoting the principles of good and democratic governance. At the same time, election monitoring is expected to encourage and promote the value of integrity and quality of elections in the country.

It is again recommended that UJCC, in corporation with the other CSOs (faith-based and non-government agencies), ought to activate for reforms that defend freedom of association and access to information for election monitors. This is due to the fact that such organizations do monitor and report on institutions and organizations such as the Judiciary, the Electoral Commission, the Media and the Police among others. If this is done, it would reduce the bureaucratic limitations and foster confidence amongst CSOs and government institutions. In the same way, UJCC and other CSOs will be ensuring that the elections in Uganda would be democratically free and fair. This would in return help UJCC to be exercising one of its objectives of enhancing democratic institutions in Uganda.

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ANNEX 1



Dr. Paul Kawanza Ssemogerere.

Ssemogerere w'ayimiridde ku kulonda

wa
sabye
tirize
ne ku
a mu
ngula
dewo
a mu
lw. J.
naye
abaka
za mu
a CP,
iguzi
obwa

ir

ilimu
isaba
a na
akole
ozesa
zaala

tunda
teeko
uma
a mu

Bivudde ku I

ng'ateekawo ebintu ebiberako nga mwe muli n'okulonda okw'amazima n'obwenkanya.

Nga tusinziira ku kino, nze ne bannange twetaba mu gavumenti ye, mu kukola konsitityusoni n'okulonda kwa pulezidenti okwakomekkerezebwa.

Okuva nga March 27, okutuusa ku Lwokubiri nga May 7, mbadde ntambula okwetoolola Uganda. Wabaddewo obukakafu obulaga nti Bannayuganda baagala wabeewo okukyusaako.

Wabula, ebigendererwa byabwe bitisiddwatisiddwa abakozi ba gavumenti n'abantu abali mu bifo ebya waggulu. Ku Lwokusatu era nnalaga nga bwe nnali ntidde nti waliwo obujulizi okukola kino. Okulonda kuno kulaze bulungi obumalirivu bwa Museveni okwesigariza obuyinza mu buli ngeri yonna nga mwe muli, okubbirira, okubuzaabuza, okugulirira, n'okugingirira.

Abo abeetabye mu kulonda olunaku lw'eggulo (ku Lwokuna) bayinza okujulira obubbi obw'amaanyi obwabaddewo.

Kyabaddde kisuubirwa nti wadde wabaddewo emiziziko okulonda kuno kwandisobozesezza abantu okw'endera omuntu gwe baagaddde mu mazima n'obwenkanya. Okusuubira kwabwe kuno kubetenteddwa.

Bulijjo nkikaatiriza nti okulafuubanira eddembe ly'obuntu kikaluba nga naye kirina okugenda mu maaso. Nkimanyi nti abo bonna abampagira mu kwewawo kuno n'okulafuubana kwange.

bateekwa okuba nga 'bayeriddwa' era nga baweddemu amaanyi.

Kyensobola okukola kyokka kwe kubasaba baleme okuggwamu omwogyo wadde essuubi naye beyongere okulafuubanira okufuna ebigendererwa by Demokulase nga bayita mu mirembe.

Okutakabana kw'abavubuka abajumbira ennyo okwetaba mu kulonda kuno nga kukwasa omubabiro era nga kuzzaamu nnyo amaanyi. Balaze wa gye balaga mu biseera byabwe ebijja wamu ne Bannayuganda bonna. Niwala akakisa kano okulaga okusiima kwange eri abawagizi bange bonna, ba agenti bange, n'abantu bonna, n'abantu bonna ababadde mu tiimu enkubidde kampeyini.

Tulina obuwanguzi bw'omutima omulungi kubanga ebigendererwa byaffe bituufu.

Nkubira omulanga obukadde n'obukadde bw'abawagizi bange wamu n'abantu abanjagaliza emirembe n'abo abaalaga Uganda emirembe okubeera abakkakkamu wadde nga zasosonkerezeddwa.

Eky'omukisa omubi, okusuubira kw'abantu kw'engeri eno kubetenteddwa. Kaakati tulina obujulizi obw'amaanyi obulaga nti okulondebwa kwa pulezidenti okwakomekkerezeddwa olunaku lw'eggulo (ku Lwokuna) kwabaddemu okubbira okw'amaanyi. Njagala mu kaseera kano okunokolayo eby'okulabirako ebitonotono;

I. Ebiragiro eby'oluvannyuma ebyayisiddwawo IEC

Akawungeezi k'olunaku olwaddirira olw'okulonda n'olunaku lw'okulonderako

lwenyini akakiiko akakola ku by'okulonda Interim Electoral Commission kaayisaawo ebiragiro eby'okugoberera ebirala. Nga May 8, 1996 ku ssaawa 5.50 (ttaano n'eddakiika ataano) ez'oku makya, offiisi yange yafuna ebbaluwa ng'eriko omukono gwa kamisona Idro Philip, ng'eraga ebifo omutakirizibwa bantu ba bulijjo abajaasi ba UPDF gye baali bagenda okukubira akalulu enkeera era ebbaluwa eno yali ewa amagezi offiisi yange okuweereza ba agentu mu bifo bino eby'enjawulo mu ggwanga ebitaayatulwa wa gye biri. Ku lwa May 9, (Olwo kulonda) IEC yafulumya ebbaluwa ng'ewa ebiragiro abakulira eby'okulonda ku disitulikiti (Presiding officers) ng'egamba "abalonzi amanya gaabwe agaali ku lukalala lw'abalonzi nga baweebwa kaada naye nga kati amannya gaabwe tegali ku lukalala, bakkirizibwe okulonda." Enteekateeka eno, ng'oggyeko okulaga nga IEC bwe yali tesobola by'ekola yaygyako abalonzi bangi omukisa gwabwe ogw'okulonda. Ng'ebiragiro ebipya bwe byali tebisobola kutegezebwa abantu abaali mu byalo.

II. Ebifo by'okulonderamu ebipya ebiberera ddala 700 byateekebwawo ng'enkya okulonda nga tewabaddewo kutegezebwa kumatiza bantu ba bulijjo era n'abeesimbyewo okusobola okuweerezaayo ba agentu baabwe.

III. Mu bifo bingi, mwalimu obutabo bw'obululu obwaze mu kakiiko akakola ku by'okulonda, obululu buno obwali mu bifo

eby'enjawulo by'okulambibwako Museveni n'ekifaa nga bwakwatibwa gavumenti.

Mu bitundu by'eggwanga, abalambibwako ebirala ebya NRM kampeyini za Museveni kiseera kye kimu okukulira okulonda. Ebifo ebimu bya mu budde byabifunirako ddala bingi awakubirwa abantu bw'obululu tebwalibye bangi ne basubwawo. Awalala empapula nkakalala z'abalonzi tezi New Vision owa May 1996.

Ebyo waggulu kw'ebyo ebintu ebibikulu, wamu n'obuyinza byonna awamu by'okulonda okubamu okukyamu.

OKUWUMBAWUMU

Mu kuwumbawumu nti enkola ey'okulonda demokulase mu ggwanga ettiddwa. Njagala eby'okulonda abantu bonna nti okubabaddewo;

i) Tetukkiriza okulonda pulezidenti nti...

ii) Era mu ng'okulonda twagala okulanga tuggyiddemu ddala okulonda kwonna okulonda kuli wansi w'enkole eno eriwo. Mu kaseera bwe tugumira ebyo by'okulonda mu ggwanga lyaffe nsabi bakkakkamu era abateekwa



The influence of socio-demographic factors on the adoption of improved toilets in Dodoma City, Tanzania

Emanuel Amon Kikwale^{1*}
Robert Ndobori Pauline²
Luhuvilo Lupondo³

^{1*}ekikwale@irdp.ac.tz

^{1,2,3}Institute of Rural Development Planning (IRDP), Tanzania

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ABSTRACT

Tanzania encounters significant challenges related to sanitation with limited access to improved toilets. Despite government efforts such as the national sanitation campaign, only 67.76% of the households have access to improved toilets. This study was guided by the Diffusion of Innovation Theory (DIT). The research used a cross-sectional design to gather data on the influence of socio-demographic factors on the adoption of improved toilets at Mbabala in Dodoma City. The research was conducted with 250 randomly selected household heads through a survey and in-depth interview with the ward executive officer. IBM SPSS Version 27 was used in analyzing quantitative data whereby descriptive statistics and binary logistic regression were performed. On the other hand, content analysis was used in analyzing qualitative data. The research found that pit toilets without slabs (28%), pit toilets with slabs (27.2%), and ventilated improved toilets were common types of toilets adopted, while few used pour flush toilets connected to sewer systems (19.2%). The research further found that a higher level of education, income, access to clean water, the frequency of listening to the radio, and the frequency of watching television (TV) increased the likelihood of adoption of improved toilets among household heads. The study concludes that education, access to clean water, income, the frequency of listening to the radio, and watching TV influenced the adoption of improved toilets. The study recommends that the City Council of Dodoma, in collaboration with nonprofit organizations and media houses, should keep on promoting the use of improved toilets through awareness campaigns in order to create a more hygienic environment.

Keywords: Dodoma City, Improved Toilet, Sanitation, Socio-Demographic Factors, Tanzania, Toilet

I. INTRODUCTION

Access to improved toilets is a basic human right which is vital for public health, however, limited access to toilets continues to be a widespread global issue. In this research, the term 'improved toilets' encompasses flush or pour-flush toilets linked to piped sewer systems, septic tanks, or pit latrines, including those with slabs and composting toilets (World Health Organization [WHO], 2023). The United Nations (UN) has been actively advancing initiatives linked to Water, Sanitation and Hygiene (WASH) globally. In particular, Sustainable Development Goal 6 (SDG 6), which was espoused in 2015, seeks to ensure universal access to safe water and sanitation services. Target 6.2 aims to provide adequate and equitable sanitation and hygiene for everyone, with the objective of eliminating open defecation by 2030 (UN, 2015).

The World Health Organization (WHO) also highlights the vital role of having safe and clean toilets for the sake of public health (WHO, 2019). In 2022, despite ongoing initiatives, 3.5 billion people still did not have access to safely managed sanitation, with 1.9 billion utilizing basic services, 570 million relying on inadequate services, 545 million depending on poor services, and 419 million engaging in open defecation in the gutters of the streets, behind bushes, or in natural water bodies (WHO & UNICEF, 2023). The majority of those using unimproved sanitation facilities are located in rural regions (Legge et al., 2021; Asrate et al., 2022; Mondal, 2022; Ali & Khan, 2024; UNICEF & WHO, 2023).

Limited access to improved sanitation facilities negatively impacts public health, individual dignity, and safety. Inadequate sanitation conditions lead to diseases such as diarrhoea, typhoid and cholera leading to preventable deaths and health complications (UN, 2018; Asrate et al., 2022; Mondal, 2022; Brahmanandam and Bharambe, 2023; Kelly, 2024). According to WHO (2023), unsafe sanitation was responsible for more than 1 million deaths due to diarrheal diseases in 2019.

In 2020, there were still 208 million individuals in Africa practicing open defecation. The countries with the largest populations engaging in this practice are Nigeria, Democratic Republic of Congo, Madagascar, Niger and

Ethiopia (United Nations Children's Fund (UNICEF) & WHO, 2022). Poor sanitation, including the use of inadequate toilets, is frequently associated with ineffective development planning by governmental bodies. This has led to uncontrolled population growth, unregulated urbanization, a lack of coordination, unsuitable habits and low-income levels among the populace (Mshida et al., 2017).

In 2015, the financial impact of inadequate sanitation was estimated at 222.9 billion US dollars, which includes healthcare costs associated with illnesses resulting from poor sanitation practices, including the use of substandard toilets and open defecation (Tamene & Afework, 2021). Nevertheless, efforts aimed at improving Water, Sanitation and Hygiene (WASH) have shown positive results. The percentage of people with access to better sanitation facilities in Sub-Saharan Africa rose from 8% in 2000 to 31% in 2017 (Asrate et al., 2022).

Since gaining independence, the government of Tanzania has made significant efforts to promote the use of improved toilets. One of the key initiatives was the *Mtu ni Afya* (Man is Health) campaign, which took place from 1973 to 1978 and raised basic sanitation coverage from 20% to 80% (Mwesongo & Mwakipesile, 2023). Another significant initiative, the Health through Sanitation and Water (HESAWA) was launched in 1983/84 and carried out from 1985 to 2002 to enhance access to water and sanitation (Andersson, 2013). In 2012, the government introduced the National Sanitation Campaign (NSC) aimed at increasing sanitation coverage, particularly in rural regions. The second phase, initiated in 2018, was known as the *Nyumba ni Choo* (A House is not Complete Without a Toilet) campaign, which ran from 2017 to 2021. This campaign focused on motivating communities to construct and utilize improved toilets instead of relying on traditional options (Mwakalikamo et al., 2023). Furthermore, the government embraced the Community-Led Total Sanitation (CLTS) strategy to improve solutions for WASH (UNICEF, 2023). Despite these initiatives, only 67.76% of households have access to improved toilets (DHS, 2022).

While there have been significant advances, such as the decline in open defecation from 16% in 2010 to 9% in 2022, ongoing efforts are required, especially in rural and peri-urban areas to achieve a universal access to improved toilets. Thus, a comprehensive understanding of factors influencing adoption of improved toilets at Mbabala Ward in Dodoma is of paramount importance in designing interventions to tackle the problem.

1.1 Statement of the Problem

Inadequate access to improved toilets is a problem which confronts many regions in Tanzania, Dodoma in particular. Statistics indicate that still 32.24% of households use unimproved toilet facilities (DHS, 2022). Inadequate toilet facilities lead to spread of diarrhoeal diseases, typhoid and cholera (Prüss-Ustün et al., 2019; González-Rodrigo et al., 2022). The government of Tanzania has made various efforts to encourage adoption of improved toilets in the country, Dodoma city in particular. Such efforts encompass 'Mtu ni Afya' (Man is Health) campaign (Mwesongo & Mwakipesile, 2023), Health through Sanitation and Water (HESAWA) (Andersson, 2013). National Sanitation Campaign (NSC) (UNICEF, 2023). Despite the aforementioned efforts, still about one-third of the households use unimproved toilets (DHS, 2022).

Previous studies mainly relied on broader national demographic and health survey data (Belay et al., 2022; Zakayo et al., 2024) or examined the effects of the *Nyumba ni Choo* campaign (Mwakalikamo et al., 2023). This study specifically explored socio-demographic factors influencing the adoption of improved toilets in Mbabala Ward, Dodoma City. It adds to the existing knowledge concerning sanitation and guides future actions and policies regarding toilet improvement in Dodoma and similar contexts.

1.2 Research Objective

To examine socio-demographic factors influencing the adoption of improved toilets at Mbabala Ward in Dodoma City.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Diffusion of Innovation Theory

This theory was advanced by Everett Rogers in 1960s. It mainly focuses on innovation, communication channel, time and social system. Based on the theory, adoption of a new idea or product occurs gradually through communication over time. Individuals go through five stages when they adopt an innovation such as getting knowledge, forming an opinion, making decision, implementing the change and confirming the choice (Rogers, 1962). The theory explains characteristics including observability, relative advantage, trialability, compatibility and complexity which have influence on adoption. For example, household heads are more inclined to adopt improved toilet facilities if they regard them as having greater advantages such as enhanced safety compared to traditional toilets.

2.2 Empirical Review

Researches conducted in African countries such as Ethiopia and Tanzania reveal that households with greater incomes showed higher rates of adoption of improved toilets than those with lower incomes (Temene & Aferwork, 2021; Malima et al., 2022; Tesfaw et al. 2023). Research conducted by Nyambe et al. (2020) in Lusaka, Zambia found that households having improved toilet facilities were positively correlated with households with improved drinking water, hand washing facilities, regular income and private toilet facilities. Thus, access to water as one of the components of WASH was one of the determinants for the adoption of improved toilets.

A mixed community based cross-sectional study conducted by Belete et al. (2024) revealed that awareness on latrine construction, use and maintenance, sex, occupation and income were the factors that were significantly associated with households' latrine adoption in Eastern Ethiopia. A study conducted by Lee (2017) in India found that women with regular access to mass media and accurate health information have a higher likelihood of having toilets. This is well supported by Zakayo et al. (2024) found that in Tanzania, households with televisions had a greater likelihood of using improved toilets compared to those without televisions.

III. METHODOLOGY

3.1 Study Area and Design

The research was done in Mbabala Ward located in Dodoma City, the capital of Tanzania. The geographical coordinates of the ward are 6.1667° S, 35.7500° E. In the year 2022, the ward had a population of 16,929 consisting of 4385 households (National Bureau of Statistics (NBS), 2022). A cross-sectional design was employed allowing for data collection from household heads and key informant at one point in time. The design was selected due to its cost-effectiveness and relatively short time frame (Kothari, 2006; Bryman, 2012; Creswell, 2014).

3.2 Sampling

The study's sampling frame consisted of a list of all household heads while the sampling unit consisted of an individual household head at Mbabala ward. The study utilized probability specifically systematic sampling approach to obtain household heads. The approach was carried out by paying a visit to every 10th household until the target sample size was achieved. The method ensured that the study represented all households in the area of interest. In terms of non-probability sampling, judgmental sampling was utilized to select key informants like the ward executive officer and community development officer. The sample size was determined by Yamane (1967) formula for known population:

$$n = \frac{N}{1 + Ne^2}$$

Where:

n = sample size

N = population (4,385 households)

e = Margin of error (6.14%) = 0.0614

$$n = \frac{4385}{1 + 4385(0.0615)^2}$$

$$n = 250.124 \cong 250$$

$$n \cong 250$$

The study's sample size included 250 household heads from Mbabala ward.

3.3 Instrument and Data Collection

Surveys, key informant interview and documentary review were used in gathering data from primary as well as secondary sources. Primary data were obtained directly from household heads regarding how socio-demographic factors influence the adoption of improved toilets in Mbabala. Secondary data came from government reports, scholarly articles and census information. These data were utilized to provide context and background regarding the study area, its population and the research subject. A checklist was employed in the key informant interview method incorporating questions that aligned with the study objectives to gather information from key informants including the ward executive officer as well as community development officer. Each key informant received different questions tailored to their specific obligations. Furthermore, a survey utilizing questionnaire was used to gather data concerning respondents' socio-demographic features, toilet types and factors influencing adoption of improved toilets. Utilization of questionnaires ensured consistency in the questions posed to respondents to facilitate easier statistical analysis. Documentary review guided by a checklist was conducted to obtain relevant information pertaining to the study objectives from published sources.



3.4 Data validity and Reliability

Data collection tools were pretested to ensure validity by identifying and correcting potential issues, including modifications to some sections of the questionnaire. To maintain reliability, all enumerators received comprehensive training in data gathering and adherence to research ethics. Furthermore, triangulation was utilized to ensure the consistency of the data obtained from key informant interviews, surveys and documentary reviews.

3.5 Data Analysis

IBM SPSS Statistics version 27 was used in the analysis of quantitative data whereby descriptive statistics were employed to analyse the types of improved toilets used by household heads, while inferential statistics (binary logistic regression) examined the relationships between independent variables (access to clean water, age, access to information (television, radio, newspaper, internet), marital status, income, level of education and the adoption of improved toilets. Content analysis technique was employed in the analysis of data collected from in-depth interviews.

3.5.1 Binary Logistic Regression Model

$$(p) = \ln (p / (1 - p)) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3... + \beta_nX_n$$

Whereby:

P: is the probability of the event (e.g., probability of adoption of improved toilets)

ln: is the natural logarithm.

p / (1 - p): is the odds of the event.

β_0 : is the intercept (constant term).

$\beta_1, \beta_2, \dots, \beta_n$: are the regression coefficients for each independent variable.

X_1, X_2, \dots, X_n : are the independent variables (predictors).

Table 1

Description of Variables in the Logistic Model Variables

Variable	Variable description	Measurement	Expected effects
Y (P)	Dependent variable (adoption /otherwise)		
Xs	Independent variables		
Age	Age of respondents	Years	+
Sex	Sex of respondents	Dummy 1 male 2 otherwise	+/-
Marital status	Marital status of respondents	Dummy1 married 2 otherwise	+/-
Education	Education level	Years in school	+
Information	Access to information	Dummy 1 Access 2 otherwise	+/-
Hh Size	Household size	Number of members	+
Water	Access to water	Dummy 1 Access 2 otherwise	+/-
Television	Frequency watching television	Number of days	+
Radio	Listening to the radio	Number of days per week	+
Newspaper	Frequency of reading the Newspaper	Number of days per week	+
Internet	Frequency of using the internet	Number of days per week	+
Income	Income level of respondents	In Tsh shillings	+
Cost	Cost of construction of a toilet	In Tsh shillings	+

The study dependent variable is the adoption of improved toilets. This was measured by asking respondents if they were aware of improved toilets, how they were informed, and the types of toilets available in the study area. The questionnaire included seven response options for the types of toilets: bucket toilets, hanging toilets, pit toilets without slabs, ventilated improved pit toilets, pour-flush toilets connected to a piped sewer system and pit toilets with slabs (washable). A binary coding system was used whereby “1” stand for improved toilets and “0” for unimproved toilets.

The study used various independent variables identified through literature review such as household size, education level, age, marital status, access to clean water, access to information (television, radio, newspaper, internet) and income.

3.6 Ethical Considerations

Respondents were thoroughly informed about the study's objectives and guaranteed that the data gathered would be utilized solely for academic purposes. The emphasis was placed on their voluntary involvement, and they were made aware of their right to withdraw without facing any repercussions. The responses from participants were maintained strictly within the confines of the study to ensure confidentiality and were not disclosed to any third parties. Prior to the commencement of the study, participants signed a consent form acknowledging their informed agreement. Their

identities were kept confidential to avoid any connection to their responses. Throughout the study, the privacy rights of the participants were respected and protected.

IV. FINDINGS & DISCUSSION

4.1 Socio-demographic Characteristics of the Respondents

The study determined socio-demographic characteristics of the respondents including age, sex, monthly income level, marital status and education level as presented in Table 2.

Table 2
Socio-demographic Characteristics of the Respondents (n=250)

Variable	Category	Frequency	Percent
Age	18-24	10	4.1
	25-44	138	55.1
	45-64	89	35.7
	65+	13	5.1
Sex	Male	77	30.6
	Female	173	69.4
Monthly Income level	Less than 50,000 Tshs	41	16.4
	50,000 - 150,000 Tshs	94	37.6
	160,000 - 250,000 Tshs	69	27.6
	More than 250,000 Tshs.	46	18.4
Marital status	Married	125	50
	Single	67	26.8
	Separated/Divorced	10	4
	Widower/Widow	10	4
	Living with a partner	38	15.2
Education level	Primary	75	30
	Secondary	109	43.6
	Post-secondary	66	26.4
Awareness of toilet programs	Yes	225	90
	No	25	10

The results presented in Table 2 reveal that the largest proportion (55.1%) of the respondents were in the 25-44 age bracket, suggesting a relatively young and productive population. Also, over half of the respondents (69.4%) were female. The predominance of female respondents reflects the significant role women play in household sanitation. Concerning educational attainment, a significant portion of the respondents (43.6%) had completed secondary education, which may influence their awareness and adoption of improved toilets. Furthermore, 50% of the respondents were married, followed by 4% who were widowed, separated or divorced. The higher number of married respondents suggests a higher likelihood of adopting improved toilets, as they can decide together and share the responsibilities. This result is similar to a study conducted in Eastern Ethiopia by Tamene and Afework (2021).

Regarding household income, Table 2 indicates that, the largest group (37.6%) of respondents earned between 50,000 to 150,000 Tshs, indicating economic constraints that could affect the ability of household heads to invest in improved toilets. This result is consistent with Belete et al. (2024), who found that households adopt different types of latrines depending on the economy of the household.

4.2 Types of Toilets Adopted

The study sought to determine types of toilets adopted by the households in the study area, and the findings were presented in Figure 1.

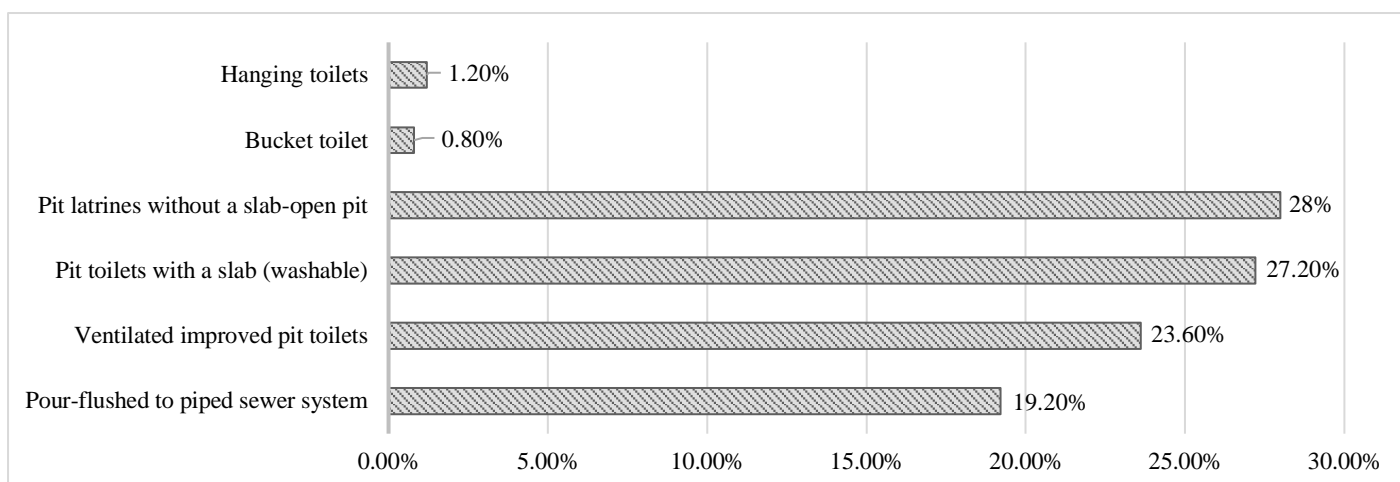
**Figure 1***Types of Toilets Adopted*

Figure 1 shows that 28% of the respondents adopted pit toilets without slabs followed by 27.2% of the respondents who adopted pit toilets with slabs (washable). It further shows that 23.6% of the respondents adopted ventilated improved pit toilets while 19.2% adopted pour-flushed toilets to piped sewer systems. Only 1.2% and 0.8% of the respondents adopted hanging and bucket toilets respectively.

In addition to that, during the key informant interview in the ward executive office, one of the key informants revealed that:

“The ward development committee members have been providing education on the importance of improved toilets through meetings. These efforts have enabled households to build toilets ranging from pit latrines without slabs to even pour-flush toilets to piped sewer systems in the ward.” (KII with ward executive officer, August, 2025).

These findings partly agree with Zakayo et al. (2024), who found that in Tanzania, pit toilets with slabs, pit toilets without slabs/open pits, flush to pit toilets, and ventilated improved pit toilets were common. These findings underscore the need to upgrade toilets, for instance, from pit toilets without slabs to pit toilets with slabs (washable).

4.3 Descriptive Results for the Dependent Variable (Adoption of Improved Toilet) by Socio-demographic Factors

The study sought to examine the adoption of improved versus unimproved toilets by key socio-demographic factors, illustrating the relationship between the dependent variable (adoption of improved toilets) and independent variables such as education level, income, access to clean water, and frequency of media exposure.

Table 3*Descriptive Results for the dependent variable (Adoption of Improved Toilet) by Socio-demographic factors*

Socio-demographic Factors	Category	Adopted Improved Toilets n(%)	Unimproved Toilets n(%)
Education Level	Primary education	10(4)	65(24)
	Secondary education	60(24)	49(19.6)
	Post-secondary education	59(23.6)	7(2.8)
Income Level (Tshs)	<50,000	3(1.2)	38(15.2)
	50,000 – 150,000	5(2)	89(35.6)
	160,000 – 250,000	46(18.4)	23(9.2)
	>250,000	46(18.4)	0(0)
Access to Clean Water	Yes	89(35.6)	33(13.2)
	No	5(2)	123(49.2)
Frequency of Watching Tv	Not at all	50(20)	26(10.4)
	Daily	15(6)	23(9.2)
	Weekly	20(8)	31(12.4)
	Never	40(16)	44(17.6)
Frequency of Listening to Radio	Not at all	60(24)	29(11.6)
	Daily	15(6)	22(8.8)
	Weekly	20(8)	23(9.2)
	Never	25(10)	56(22.4)



The descriptive statistics in Table 3 show that households with higher education levels, greater income, access to clean water, and frequent exposure to television and radio are more likely to adopt improved toilets. For instance, 23.6% of household heads with post-secondary education adopted improved toilets compared to only 4% with primary education. Similarly, 18.4% of households earning above 250,000 Tshs used improved toilets, while only 1.2% of those earning less than 50,000 Tshs used improved toilets. These findings are similar to studies conducted in Ethiopia and Tanzania (Belete et al., 2024; Zakayo et al., 2024).

4.4 Socio-Demographic Factors Associated with the Households' Adoption of Improved Toilets

The study examined the association between socio-demographic factors (independent variables) with the adoption of improved toilets (dependent variable) at Mbabala Ward. The dependent variable, adoption of improved toilets, was measured as a binary outcome (1 for improved toilets, 0 for unimproved toilets). The independent variables included sex, education level, income, access to clean water, household size, access to information (television, radio, newspaper, internet), and toilet construction cost. Each factor was examined to determine its statistical association with the likelihood of a household adopting improved toilets, as presented in Table 4.

Table 4

Socio-Demographic Factors Associated with the Households' Adoption of Improved Toilets

Variable	Categories	Improved Toilet		Chi-Square (χ^2)	P-Value
		Yes	No		
Age	18-24	13	10		
	25-44	58	76		
	45-64	28	52		
	65+	8	5		
	Total	107	143	4.613	0.202
Sex	Male	25	51		
	Female	87	87		
	Total	112	138	14.172	0.001
Marital status	Married	38	87		
	Single	27	40		
	Divorce/Separated	4	6		
	Widow/widower	3	7		
	Living with a partner	6	32		
	Total	78	172	7.831	0.098
Education level attained	Primary education	10	65		
	Secondary education	60	49		
	Post-secondary	59	7		
	Total	129	121	67.514	0.001
Access to information	Yes	59	38		
	No	36	117		
	Total	95	155	13.695	0.001
Household size	1-3	25	23		
	4-6	23	19		
	7+	43	117		
	Total	91	159	9.068	0.011
Access to clean water	Yes	89	33		
	No	5	123		
	Total	94	156	49.494	0.001
Frequency of watching Television	Not at all	50	26		
	Once a week	15	23		
	At least once a week	20	31		
	Daily	40	44	11.824	0.008
Frequency of Listening to radio	Not at all	60	29		
	Once a week	15	22		
	At least once a week	20	23		
	Daily	25	56	23.834	0.00003
Frequency of reading newspaper	Not at all	30	72		
	Once a week	20	29		
	At least once a week	25	13		
	Daily	45	16	36.183	0.034



Frequency of using internet	Not at all	40	87		
	Once a week	15	8		
	At least once a week	25	6		
	Daily	60	9	66.25	0.001
Income level	less than 50,000 Tshs	3	38		
	50,000 - 150,000 Tshs	5	89		
	160,000 - 250,000 Tshs	46	23		
	more than 250,000 Tshs	46	0	68.48	0.001
Toilet construction cost	100,000 -300,000 Tshs	5	127		
	400,000 - 600,000 Tshs	32	28		
	700,000 - 900,000 Tshs	23	0		
	above 1,000,000 Tshs	35	0	85.836	0.001

Results in Table 4 show that, factors that were associated with the adoption of improved toilets were the sex of respondents, access to water, education level, access to information, household size, access to water, frequency of using the internet, listening to the radio, income level and toilet construction cost at 95% level of significance. These factors were finally tested in the multivariate regression to determine their significance on the adoption of improved toilets at Mbabala ward.

4.5 Socio-Demographic Factors Influencing the Adoption of Improved Toilets

The study determined the influence of socio-demographic factors on the adoption of improved toilets at Mbabala ward by using binary logistic regression. The results were presented in Table 5.

4.5.1 Findings and Discussion of Socio-Demographic Factors Influencing the Adoption of Improved Toilets

Table 5 shows that the household heads with post-secondary education (AOR: 5.8, 95% CI: 2.12- 15.85, $P=0.001$) and secondary education (AOR: 3.5, 95% CI: 1.40-8.75, $P=0.007$) had higher odds of adopting improved toilets than household heads with primary education. This suggests a strong link between education and the use of improved toilets. These results align with research done in Ethiopia and Tanzania, which demonstrated that individuals who finished high school or higher were more likely to use improved toilets compared to individuals with no formal education (Leshargie et al., 2018; Malima et al., 2022; Tesfaw et al., 2023).

Concerning access to clean water, Table 5 shows that, household heads with access to clean water (AOR: 2.7, 95% CI: 1.55-11.65, $P = 0.012$) were more likely to adopt improved toilets compared to household heads who had no access. These results align with Ahmed and Ali (2024) and Tesfaw et al. (2023), who found that water availability had a considerable impact on sanitation practices. In contrast, Nyambe et al. (2020) emphasized the role of handwashing facilities alongside water access in Zambia, which was not explicitly examined in this study, indicating a potential area for further research.

Regarding household income, Table 5 indicates that households with income levels Tshs 160,000/= to Tshs 250,000/= (AOR: 2.9, 95% CI: 1.20- 7.02, $P=0.002$) and above Tshs 250,000/= (AOR: 4.25, 95% CI: 1.55- 11.65, $P=0.005$) had greater odds than household heads with income less than Tshs 50,000/= and between Tshs 50,000/= to Tshs 150,000/=. These results underscore the necessity for targeted financial assistance and subsidies to promote the uptake of improved toilets, particularly among lower-income households in Mbabala Ward. These results agree with studies conducted in Ethiopia and Tanzania by Belete et al. (2024), Tesfaw et al. (2023), Tamene and Aferwork (2021) and Malima et al. (2022), which collectively demonstrate that households with greater incomes showed higher rates of adoption of improved toilets than households with lower incomes.

Based on media exposure, results in Table 5 indicate that household heads who watch TV daily (AOR: 3.6, 95% CI: 1.41- 9.9.21, $P=0.008$) or at least once a week (AOR: 2.2, 95% CI: 1.02- 4.75, $P=0.045$) were more likely to adopt improved toilets compared to household heads who do not watch TV. Also, those who listen to the radio daily (AOR: 2.5, 95% CI: 1.26- 4.96, $P=0.009$) or at least once a week (AOR: 1.8, 95% CI: 1.03- 3.13, $P=0.042$) had higher odds compared to those who do not listen to the radio. Furthermore, household heads who read newspapers daily (AOR: 3.1, 95% CI: 1.25-7.71, $P=0.015$) were more likely to adopt improved toilets compared to heads of households who read newspapers weekly or not at all. These results are consistent with Zakayo et al. (2024), who reported that household heads with televisions had a greater likelihood of using improved toilets compared to those without televisions. In addition, these results are partly consistent with Lee (2017), who discovered that in India, women with regular access to mass media and accurate health information are more inclined to have toilets. However, unlike Lee (2017), who focused on women's media exposure, this study found that media exposure influences adoption among both male and female household heads, indicating the broader applicability of media campaigns in Dodoma.

Table 5
Binary Logistic Regression for Household Heads' Adoption of Improved Toilets

Variable	Category	AOR	95% CI	p-value
Age (ref: 18–24)	25–44	1.3	[0.85, 1.98]	0.21
	45–64	1.1	[0.72, 1.69]	0.48
	65+	0.9	[0.51, 1.60]	0.62
Sex (ref: Male)	Female	1.05	[0.76, 1.48]	0.74
Marital Status (ref: Married)	Single	0.95	[0.60, 1.51]	0.66
	Divorced/Separated	0.85	[0.51, 1.43]	0.42
	Widow/Widower	0.9	[0.51, 1.57]	0.54
	Living with a partner	1.1	[0.63, 1.92]	0.7
Education (ref: Primary)	Secondary	3.5	[1.40, 8.75]	0.007
	Post-secondary	5.8	[2.12, 15.85]	0.001
Access to Information (ref: No)	Yes	1.4	[0.91, 2.16]	0.12
Household Size (ref: 1–3)	4–6	0.95	[0.61, 1.47]	0.51
	7+	0.85	[0.52, 1.38]	0.44
Access to Clean Water (ref: No)	Yes	2.7	[1.25, 5.86]	0.012*
Income (ref: <50,000 Tshs)	50k–150k	1.75	[0.96, 3.20]	0.065
	160k–250k	2.9	[1.20, 7.02]	0.02*
	>250k	4.25	[1.55, 11.65]	0.005*
TV Frequency (ref: Not at all)	Once/week	1.6	[0.86, 2.99]	0.13
	At least once/week	2.2	[1.02, 4.75]	0.045*
	Daily	3.6	[1.41, 9.21]	0.008**
Radio Frequency (ref: Not at all)	Once/week	1.2	[0.81, 1.85]	0.32
	At least once/week	1.8	[0.73, 2.13]	0.42
	Daily	2.5	[0.88, 2.23]	0.29
Newspaper Frequency (ref: Not at all)	Once/week	1.5	[0.78, 2.89]	0.21
	At least once/week	2	[0.91, 4.39]	0.08
	Daily	3.1	[0.95, 3.45]	0.37
Internet Use (ref: Not at all)	Once/week	1.1	[0.68, 1.77]	0.51
	At least once/week	1.2	[0.75, 1.93]	0.39
	Daily	1.5	[0.80, 2.81]	0.21
Latrine Cost (ref: 100k–300k)	400k–600k	1.1	[0.70, 1.74]	0.49
	700k–900k	1.3	[0.74, 2.29]	0.34
	>1M	1.4	[0.76, 2.60]	0.27

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The research focused on socio-demographic factors influencing adoption of improved toilets at Mbabala ward in Dodoma City. The research revealed a high level of awareness on the importance of adoption of improved toilets among the households. Pit toilets without slabs, pit toilets with slabs (washable), ventilated improved pit toilets and pour-flushed toilets to piped sewer systems were the common types of toilets adopted at the ward. Moreover, the study concludes that household heads who had access to clean water, higher level of income, higher level of education, who watch TV and listen to the radio daily and at least once a week were significantly more likely to adopt improved toilets compared to their counterparts. Hence, continued provision of education on the importance of the use of improved toilets is essential.

5.2 Recommendation

The city council of Dodoma in collaboration with Non-Governmental Organizations (NGOs) and Media houses should keep on promoting the use of improved toilets through awareness campaigns to create a more hygienic environment.

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Inclusive leadership as a catalyst for employee and team performance: A systematic review of empirical evidence

Kipara Japhert Kipara^{1*}

^{1*}kipara992@gmail.com

¹Institute of Accountancy Arusha, Tanzania

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ABSTRACT

This study offers a systematic review of empirical research examining inclusive leadership as a driver of employee and team performance across various organisational contexts. It analyses studies published between 2015 and 2025. The initial search retrieved 138 records, which were then screened down to 22 studies for the final synthesis. The review outlines key mechanisms through which inclusive leadership impacts performance, including innovative work behaviour, work engagement, organisational commitment, and effective diversity management. The review outlines key mechanisms through which inclusive leadership impacts performance, including innovative behaviour, work engagement, organisational commitment, and effective diversity management. This study relied on Social Identity Theory (SIT). Results consistently show that inclusive leaders foster supportive and psychologically safe environments, allowing employees to share ideas, take risks, and collaborate, which boosts creativity, adaptability, and overall job performance. At the team level, inclusive leadership addresses challenges related to workforce diversity, promotes cohesion, and enhances collective problem-solving skills. Evidence also indicates that inclusive leadership produces better outcomes compared to traditional autocratic or directive styles. The review highlights the importance of inclusive leadership in expanding social exchange and self-determination theories while providing practical insights for organisational policies and leadership development. By embedding inclusive practices, organisations can turn diversity into a strategic advantage, encourage sustained engagement, and improve individual and team performance. This review presents inclusive leadership as a transformative approach that can drive innovation, foster equity, and support sustainable organisational success across diverse sectors and cultures. The study recommends that organisations should adopt inclusive leadership as a strategic approach to enhance their performance, engagement, and innovation.

Keywords: Employee Performance, Inclusive Leadership, Innovation, Team Performance

I. INTRODUCTION

In today's fast-paced and highly competitive business environment, organisations face increasing pressure to maximise employee and team performance while managing workforce diversity. Managing workforce diversity effectively requires leadership approaches that not only admit these differences but also consider them to achieve strategic objectives (Williams, 2023). Leadership, therefore, plays a critical role in organizational success as it shapes culture, influences employee behaviour, guides performance expectations, and fosters collective purpose.

Traditional leadership styles, such as autocratic or purely directive approaches, have been increasingly criticized for their inability to address the complexities of modern organizational life. These approaches often limit communication, discourage employee participation, and suppress innovation, ultimately constraining organizational adaptability (Abdul Basit et al., 2017). As workplaces become more diverse and complex, there is a growing need for leadership models that prioritise openness, fairness, and inclusion. This has led to a greater emphasis on inclusive leadership. This style values diversity and actively involves employees by fostering a sense of belonging and recognition for their unique contributions (Randel et al., 2018).

Inclusive leadership is described as a set of behaviours that promote both belonging and individuality, helping individuals feel valued while fully contributing to organisational processes and outcomes (Shore & Chung, 2022). Research indicates that inclusive leaders foster psychologically safe environments where employees feel comfortable sharing ideas and taking risks, which drives innovation and improves performance (Javed et al., 2017). This leadership approach is vital in diverse teams, where differences in background and perspective can either be harnessed for creativity or lead to conflict. Ashikali et al. (2020) found that inclusive leadership moderates the challenges of cultural diversity by nurturing an inclusive climate, enabling team members to collaborate effectively and perform at higher levels.

Furthermore, inclusive leadership influences performance through various mediating mechanisms. Qi et al. (2019) demonstrated that inclusive leadership enhances perceived organisational support (POS), encouraging employees



to engage in innovative work behaviour (IWB). Likewise, Choi et al. (2015) emphasised that inclusive leadership raises work engagement and affective organisational commitment, both essential for sustaining individual and collective performance. These findings suggest that inclusive leadership is not only a direct factor affecting performance but also a catalyst for creativity, adaptability, and employee well-being.

In high-pressure sectors such as healthcare, the importance of inclusive leadership is even more apparent. Minehart et al. (2019) emphasised that inclusive leadership enhances interprofessional collaboration and decision-making, both vital for ensuring patient safety and quality of care. Similarly, Bataineh et al. (2022) showed that inclusive leadership predicts adaptive performance in healthcare teams by fostering innovative behaviours among staff. These insights highlight the broader significance of inclusive leadership in achieving better organisational outcomes.

Despite the increasing body of research, there remains a need to synthesise further and understand the pathways through which inclusive leadership influences performance at both individual and team levels. This study addresses this gap by reviewing empirical literature to examine the role of inclusive leadership in improving employee and team performance. In doing so, it offers a comprehensive understanding of how inclusive leadership contributes to organisational success, providing practical and theoretical insights for leaders, managers, and policymakers aiming to maximise performance in today's diverse workplaces.

1.2 Research Objectives

The study reviewed systematically the empirical literature on inclusive leadership and its impact on employee and team performance.

II. THEORETICAL FRAMEWORK

Inclusive leadership is grounded in Social Identity Theory (SIT), which explains how leadership behaviours like inclusion, fairness, and recognition enhance individual employee and team performance. It further provides a strong conceptual foundation for understanding mechanisms linking inclusive leadership to individual and collective outcomes.

2.1 Social Identity Theory (SIT)

Social Identity Theory (Tajfel, 1986) explains how individuals derive part of their self-concept from their membership in social groups. Inclusive leadership aligns closely with this theory by fostering a sense of shared identity and belonging within diverse teams. By acknowledging and valuing individual differences, inclusive leaders reduce intergroup biases and promote unity around common goals. This inclusive climate enhances team cohesion, communication, and collaboration essential conditions for collective performance (Ashikali et al., 2020; Meng et al., 2022). Moreover, inclusive leadership weakens subgroup divisions enabling employees to identify more strongly with the team as a whole. As a result, teams led inclusively demonstrate higher trust, mutual respect, and cooperation in performance.

III. METHODOLOGY

This study adopted a systematic review approach to examine inclusive leadership and its impact on employee and team performance. The method was selected to gather empirical evidence from published articles while ensuring transparency and reproducibility throughout the review process. The study focused on empirical publications from 2015 to 2025, covering both earlier and contemporary perspectives on inclusive leadership as a factor influencing organizational outcomes. The main objective was to consolidate findings showing how inclusive leadership practices affect employee behavior, teamwork, and organizational achievement. To maintain methodological rigor, the review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, which provides a structured procedure for identifying, screening, and reporting research evidence. This framework helped to ensure clarity in documentation, consistency in evaluation, and reliability in the synthesis of studies on inclusive leadership and performance.

A detailed and systematic search strategy was conducted across four major academic databases: Scopus, Web of Science, ERIC, and Google Scholar. These databases were selected for their broad coverage of peer-reviewed journals in leadership, management, organizational behavior, and social sciences. Boolean operators and keyword combinations were applied to generate relevant results using search terms such as inclusive leadership, employee performance, team performance, innovation, work engagement, and diversity management. The search initially retrieved 138 records published between January 2015 and May 2025. After the removal of duplicate records, 122 articles remained for screening. Following title and abstract review, 97 articles were retained for detailed examination. After applying inclusion criteria and verifying full-text availability, 59 articles met the initial requirements for full-text analysis. Following the quality appraisal stage, 22 studies met all inclusion standards and were selected for the final synthesis.



The screening process followed a structured two-stage approach designed to ensure that only studies meeting the eligibility criteria were retained. In the first stage, the titles and abstracts of the 122 articles were reviewed to exclude irrelevant materials that did not focus on inclusive leadership or performance outcomes. The second stage involved full-text screening guided by inclusion and exclusion criteria adapted from the SPIDER framework, which considers Sample, Phenomenon of Interest, Design, Evaluation, and Research Type. Studies qualified for inclusion if they investigated inclusive leadership in organizational contexts, examined employees or teams as participants, and presented empirical results derived from quantitative, qualitative, or mixed-methods designs. Studies excluded at this point included theoretical commentaries, dissertations, conference papers, and those examining leadership in educational settings unrelated to organizational performance.

The quality of the 22 included studies was assessed using the Mixed Methods Appraisal Tool (MMAT), which evaluates methodological transparency and reliability across various research designs. Each study was appraised for appropriateness of sampling, data collection procedures, and analytical methods. Additional evaluation criteria included clarity of variable definitions, alignment between research objectives and chosen methodologies, and logical presentation of findings. Only studies published in reputable journals indexed within Quartile 1 to 3, or those demonstrating clear scholarly merit, were retained. The application of MMAT ensured that the final set of studies represented strong methodological quality and credible evidence suitable for synthesis. This procedure minimized bias and enhanced the reliability of the conclusions drawn from the reviewed materials.

Data extraction and synthesis were guided by a thematic analysis approach that identified recurring themes and patterns linking inclusive leadership to employee and team performance. Each study was coded based on publication year, research design, country of origin, and thematic focus to facilitate comparison across different contexts. Major themes identified included psychological safety, innovative work behavior, organizational commitment, diversity management, and employee engagement. These categories captured the main pathways through which inclusive leadership enhances collaboration, creativity, and commitment among team members. The thematic organization of results provided an orderly presentation of how inclusive leadership operates within organizations to foster performance improvements and employee growth.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Direct Influence of Inclusive Leadership on Employee Performance

The reviewed studies consistently affirm that inclusive leadership directly enhances employee performance through trust-building, recognition, and empowerment. Bataineh et al. (2022) reported that inclusive leadership predicts adaptive performance among healthcare workers, with innovative work behavior mediating this relationship. Similarly, Nguyen et al. (2019) found that inclusion improves intrinsic motivation, person–job fit, and employee well-being, leading to stronger task performance. Ke et al. (2022) observed that inclusive leadership improves public-sector performance through workplace spirituality, suggesting that inclusive leaders cultivate meaning and accountability among employees. Umrani et al. (2024) extended this evidence by showing that psychological capital mediates the relationship between inclusion, well-being, and performance. Taken together, these findings converge on the view that inclusive leadership drives job performance by shaping supportive environments where employees feel valued, capable, and engaged in achieving organizational goals.

4.1.2 Innovation as a Mechanism Linking Inclusive Leadership and Performance

Innovation emerged as a key process through which inclusive leadership contributes to improved performance outcomes. Lei et al. (2019) demonstrated that inclusive leadership enhances perceived organizational support, which stimulates innovative work behavior that translates into higher productivity. Ye et al. (2019) confirmed that team voice mediates the link between inclusion and team innovation, with performance pressure further strengthening this relationship. Saleem et al. (2023) found that inclusive leadership moderates the connection between knowledge sharing and innovative work behavior, indicating that inclusiveness amplifies the effect of collaboration on creativity. Javed et al. (2019) showed that vigor at work mediates the influence of inclusive leadership on adaptive performance, demonstrating that inclusion sustains energy and persistence. Collectively, these studies align in establishing that inclusive leadership operates as an enabling mechanism for innovation by promoting openness, experimentation, and shared responsibility.

4.1.3 Work Engagement, Commitment, and Psychological Capital

A prominent pattern in the reviewed literature is the influence of inclusive leadership on work engagement, affective commitment, and psychological well-being. Choi et al. (2015) found that inclusion enhances work engagement by fulfilling employees' needs for belonging and recognition, which leads to increased creativity and persistence. Umrani et al. (2024) demonstrated that psychological capital mediates the relationship between inclusive leadership,



well-being, and performance, emphasizing that inclusion strengthens optimism, confidence, and resilience. Gong et al. (2024) identified that inclusive leadership fosters work meaningfulness and resilience capacity, which together enhance task performance. Similarly, Ke et al. (2022) discovered that workplace spirituality transmits the positive effects of inclusive leadership on performance through a sense of shared purpose. Synthesizing these findings reveals that inclusive leadership improves both the emotional and psychological resources employees need to remain engaged and productive, confirming its central role in sustaining organizational vitality.

4.1.4 Team-Level Inclusion, Diversity Management, and Collaboration

At the team level, inclusive leadership was found to be crucial in turning workforce diversity into a source of productivity and collaboration. Ashikali et al. (2020) showed that inclusive leadership mitigates the challenges of cultural and demographic diversity by creating climates of respect and belonging. Meng et al. (2022) demonstrated that inclusive leadership reduces identity faultiness and strengthens team identification, which promotes cohesion and cooperation. Minehart et al. (2019) provided evidence that inclusiveness enhances communication and collaboration within healthcare teams, improving coordination and shared decision-making. Kuknor and Bhattacharya (2022) further explained that inclusive leadership strengthens organizational inclusion by aligning individual uniqueness with collective objectives. When viewed together, these studies reveal that inclusive leadership transforms potential sources of division into assets for creativity and unity, leading to stronger team-level performance and improved organizational integration.

4.1.5 Boundary Conditions and Diverging Effects of Excessive Inclusiveness

Although most studies highlight the positive effects of inclusive leadership, some evidence indicates that excessive inclusiveness may weaken performance outcomes. Saleem et al. (2023) identified an inverted U-shaped relationship between inclusive leadership and task performance, where moderate inclusiveness enhances performance but excessive inclusion leads to slower decision-making and role ambiguity. Nguyen et al. (2019) also noted that while inclusion increases well-being and recognition, overly accommodative leadership without clear performance direction may reduce accountability and focus. These findings diverge from the dominant trend by highlighting that inclusiveness must be balanced with goal orientation and performance clarity. Together, they suggest that inclusive leadership functions optimally when it combines openness with firm expectations, ensuring that empowerment does not compromise organizational discipline.

4.2 Discussion

The results of the review show that inclusive leadership enhances employee performance by creating environments characterized by trust, recognition, and empowerment. This improvement occurs because employees feel valued and motivated, which supports adaptability and stronger task outcomes. Evidence from healthcare settings suggests that adaptive performance is influenced by inclusive leadership through mechanisms such as innovative work behavior (Bataineh et al., 2022). Inclusion also strengthens intrinsic motivation, person-job fit, and employee well-being, which collectively lead to higher performance, a point highlighted in the work of Nguyen et al. (2019). Further implications include the role of workplace spirituality, through which employees experience meaning and accountability, as discussed by Ke et al. (2022). Moreover, the development of psychological capital mediates the relationship between inclusion, well-being, and performance, illustrating how optimism and resilience support sustained employee engagement (Umrani et al., 2024; Ain et al., 2023). Taken together, these findings suggest that inclusive leadership operates not only through task-directed strategies but also by shaping supportive organizational climates that foster engagement and capability.

The review indicates that inclusive leadership stimulates innovation by promoting openness, knowledge sharing, and collaborative practices, which ultimately enhance productivity. Organizational support nurtured by inclusion encourages employees to explore new ideas, translating creative thinking into actionable results, a process described by Lei et al. (2019). Team-level mechanisms such as team voice also mediate the relationship between inclusion and innovation, particularly when performance expectations encourage accountability, as highlighted by Ye et al. (2019). The interplay between knowledge sharing and innovative work behavior is amplified under inclusive leadership, reinforcing the importance of collaboration in fostering creativity, as noted by Saleem et al. (2023). In addition, employee vigor, supported by inclusive practices, sustains adaptive performance, reflecting how inclusion maintains energy and persistence during challenging tasks (Qurrahtulain et al., 2022). Collectively, these observations demonstrate that inclusive leadership functions as an enabling factor for innovation by providing social and psychological conditions conducive to experimentation and shared responsibility.

Results show that inclusive leadership strengthens work engagement, commitment, and psychological resources by fulfilling employees' needs for belonging and recognition. Increased engagement contributes to creativity and task persistence, and these effects are observed when psychological capital such as optimism and confidence is developed through inclusive practices, as highlighted by Umrani et al. (2024). Work meaningfulness and resilience also improve



under inclusion, which enhances overall performance outcomes (Gong et al., 2024). Employees experience a sense of shared purpose that amplifies engagement and strengthens their capacity to meet organizational objectives, an effect further supported by Ke et al. (2022). These findings indicate that inclusive leadership sustains performance not only through operational guidance but also by reinforcing the emotional and cognitive resources necessary for employees to remain productive and committed over time.

The review demonstrates that inclusive leadership turns workforce diversity into an asset for collaboration and cohesion. By fostering climates of respect and belonging, inclusion reduces challenges linked to cultural and demographic differences, which strengthens team identification and cooperation, as shown by Meng et al. (2022) and Ashikali et al. (2020). Improved communication and shared decision-making emerge when inclusiveness aligns individual uniqueness with collective objectives, a point noted by Minehart et al. (2019) and Kuknor and Bhattacharya (2022). These dynamics reveal that teams led inclusively can convert potential divisions into collective advantage, resulting in higher cohesion and enhanced performance. This suggests that team-level benefits of inclusion extend beyond social harmony, directly influencing coordination, productivity, and organizational integration.

Although inclusive leadership generally enhances performance, the review highlights potential drawbacks when inclusiveness becomes excessive. Moderate levels of inclusion optimize task performance, but overly accommodating leadership can slow decision-making and create role ambiguity, a phenomenon discussed by Qi et al. (2019). Without clear guidance, inclusion may reduce accountability and focus, diminishing the effectiveness of empowerment strategies, as observed by Nguyen et al. (2019). These results imply that inclusive leadership is most effective when combined with goal-oriented practices and structured expectations. Balancing openness with clarity ensures that employee autonomy does not undermine organizational discipline, demonstrating that the benefits of inclusion are contingent on thoughtful application.

4.2.1 Implications of the Findings

The findings of this review have significant implications for Human Resource Management (HRM) practices and organizational performance in Tanzania. Inclusive leadership emerges as a key driver of employee engagement, motivation, and psychological capital. This suggests that HRM strategies should include leadership development programs that focus on empowerment, recognition, and participatory decision-making. Recruitment, promotion, and performance appraisal systems should incorporate inclusiveness as a central principle. Ensuring that employees feel valued and supported enhances productivity and strengthens adaptability. HRM policies that encourage innovation through knowledge sharing, collaboration, and team voice can improve problem-solving capacity and responsiveness. At the team level, promoting diversity management and inclusion allows organizations to transform differences in skills, experience, and perspectives into cohesion and competitive advantage. HRM interventions must also balance empowerment with clear performance expectations. This approach prevents ambiguity, maintains accountability, and ensures that inclusive practices lead to tangible results. Strategically designed inclusive HRM practices can enhance employee well-being, strengthen team effectiveness, and improve organizational outcomes in Tanzania. They provide a clear pathway for sustainable growth and stronger overall performance.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The review demonstrates that inclusive leadership plays a vital role in enhancing employee performance, innovation, engagement, and team collaboration. The findings show that HRM practices in Tanzania need to integrate inclusive approaches in leadership development, recruitment, promotion, and performance management to create supportive work environments. Inclusion strengthens psychological capital and well-being while enabling teams to leverage diversity as a source of cohesion and productivity. At the same time, maintaining clear performance expectations ensures that empowerment translates into tangible results. Strategically embedding inclusive practices within HRM systems can improve organizational effectiveness, foster sustainable growth, and strengthen competitiveness across public and private sectors in Tanzania.

5.2 Recommendations

The study recommends that organizations should adopt inclusive leadership as a strategic approach to enhance their performance, engagement, and innovation. This can be achieved through leadership development programs that enhance empowerment, active listening, and diversity management skills among managers. Human resources management systems like recruitment, promotion, and appraisal, should incorporate inclusiveness as a key aspect to promote fairness and recognition. Encouraging knowledge sharing, teamwork, and employee voice will foster innovation and collaboration among diverse groups. However, leaders need to balance inclusiveness with clear goals and accountability to prevent ambiguity and maintain efficiency. Promoting diversity management and psychological safety can further enhance cohesion and adaptability.



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The analysis of Nyerere’s philosophy of education for self-reliance on Kenya’s competency-based curriculum (CBC)

Salim Muengele¹
Joseph W. Nasongo²
Juma Injendi³

¹smuengele@yahoo.com

²jwamocha@mmust.ac.ke

³ijuma@mmust.ac.ke

^{1,2,3}Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

This paper discusses the relevance of the Kenyan Competency-Based Curriculum (CBC) in the philosophy of Education as Self-Reliance by Julius Nyerere. This study is guided by a theoretical framework based on constructivist theory. A descriptive qualitative research design was used, and document analysis and phenomenological hermeneutical methods were required. The research examined government policies, curriculum, supporting scholarly literature, and unstructured teacher interviews. Some of the key thematic comparisons that existed between the CBC and the ideals of Nyerere have been learner autonomy, values education, communion with the community, and acquisition of practical skills. In these findings, it is seen that there is quite a lot of overlap between CBC and Nyerere’s vision, especially in the aspect of emphasizing practical learning and community-based education. Nevertheless, there are persistent implementation gaps, including inequality in resources, an enduring emphasis on exams, and inadequate teacher preparation. Notwithstanding these problems, CBC is seen as an initiative to change education in Kenya towards one that is more inclusive and self-reliant. In order to fully achieve the vision of a self-reliant, morally upright people by Nyerere, there is a need to restructure, empower teachers, and engage the community more broadly. The paper ends by giving a solution to this problem and ways of ensuring that the policies and practices bring the country close to what Nyerere envisioned about education.

Keywords: Competency-Based Curriculum, Community Involvement, Education Reform, Nyerere, Self-Reliance, Teacher Empowerment

I. INTRODUCTION

The Competency-Based Curriculum (CBC) in Kenya represents a radical paradigm shift in education by abandoning the old-fashioned model, based on the substantial emphasis on course content acquisition and performance on exams. Rather, the goal of the CBC is to instigate the growth of values, skills, and competencies essential to learning over a lifetime (Kenya Institute of Curriculum Development [KICED], 2017). In this transformation, students are expected to be turned into individuals, armed with practical skills, which not only guarantee a place in the workforce but also mobilize them to be an engaged and self-reliant part of society. Self-reliance is among the fundamental aims of the CBC, and it is an issue that is close to the heart of Julius Nyerere, whose ideology of Education for Self-Reliance stresses the use of education as a means of self and social emancipation (Nyerere, 1967).

Self-reliance in the vision of Nyerere is more than the attainment of academic knowledge, but involves the attainment of skills that one can use to address some real issues in this world. Nyerere, the first president of Tanzania, was of the opinion that education must be a means of learning and working wherein community service is emphasized, responsibility, and respect that tend to develop good citizens. Unlike the colonial development of education, which favored the few by alienating them from the local reality, the model by Nyerere stipulates an education system where individuals are empowered to establish employment, address issues, and make a significant contribution to the society they live in. This comprehensive view on education is reflected in the CBC's focus on practical learning, local community participation, and the acquisition of skills that will be useful in the daily life of students (Kagoire et al., 2024).

The emphasis on learner autonomy as well as the facilitation of independent thinking and problem solving is key to the success of the CBC. An educational philosophy that is represented by John Dewey, who promotes the concept of experiential learning, can also support the values of CBC. Dewey stressed that learning must be self-reliant by enabling students to connect with the world they live in, enhance their moral disposition, and acquire some practical



knowledge that they would use to go through their lives. In so doing, the thoughts of both Nyerere and Dewey have contributed to the present direction of the CBC by promoting the idea of an education system with practical and value-based principles.

Nonetheless, even with these common ideals, there exist loopholes in the execution of the CBC that are against the comprehensive realization of the vision of Nyerere. Although CBC sees some elements of entrepreneurship, innovation, and problem-solving in the curriculum, in reality, there are limited levels of resources, with an emphasis still to be offered on exams, and limited amounts of teacher preparation, which affects the actual results of studying the curriculum. These aspects compel a mismatch between the intended theoretical meanings of the curriculum and its practical implications in Kenyan classrooms.

This paper discusses to what degree the CBC in Kenya reflects the ideals of Nyerere and Education for Self-Reliance. This paper seeks to examine the ideological congruity as well as ideological incongruity with regard to the practicality of the application of the CBC in relation to the philosophy of education under Nyerere. Examining the intended aims of the curriculum, teacher readiness, and the practical experiences on the ground, the paper will reveal the successes or failures of CBC in making a self-reliant, productive, and ethical citizenry.

The independent variable used in this research is the implementation of the CBC, whereas the dependent variable is the principles of Education for Self-Reliance. In the study, these two variables are considered, and they can be interactively used to affect each other in the practice on educational practice in Kenya. The important discourses used in the study are learner autonomy, involvement in the community, development of practical skills, and the importance of teacher training in promoting the goals of the curriculum. The interaction of these variables will be essential in obtaining the strengths and weaknesses of the CBC in achieving its intended outcomes.

The paper reveals that there are also serious shortcomings in the implementation of CBC. Although the curriculum aims to be transformational in its approach, the reality of such implementation can be easily complemented by system-wide difficulties, including an insufficiency of materials, a lack of continuous training of teachers, and a residual focus on assessments. There are gaps in tension between what the curriculum is supposed to be and what is experienced by teachers and learning-in-progress on the ground.

1.1 Statement of the Problem

The Competency-Based Curriculum (CBC) in Kenya was established to change the educational system that is focused on the content-rich exam-oriented approach to one that is oriented to increasing the skills, values, and competencies required in lifelong learning (Mauki, et al., 2020; Ryan, & Cox, 2017). The reform aims to prepare students in order to become self-reliant, working citizens, as was the philosophy of the Education for Self-Reliance presented by Julius Nyerere (Nyerere, 1967). Nyerere argues that it is not enough to have an academically oriented education, but one that would develop practical skills needed in the development of a community and in self-reliance (Nyerere, 1967).

Implementation, however, is a major challenge despite the well-guided objectives of the CBC. These are the inequalities in the resources, inadequate teacher preparation, and a more exam-based curriculum associated with the lack of practical skills and learning (Heto et al., 2020; Isaboke et al., 2021). Also, the empirical evidence on the extent to which CBC has managed to ensure self-reliance, moral character, and community involvement as prophesied by Nyerere is narrow.

The most significant problem is the distance between the CBC's hypothetical purpose and its actual application in the classroom, especially in under-resourced, rural regions (Sifuna, & Obonyo, 2019). This paper aims to discuss how this is possible as CBC may effectively fulfill the revolutionary educational ambitions under the stand of Nyerere, or whether there are still systemic constraints that disable its potential. It is of paramount importance to understand these gaps so as to ensure that the design of the curriculum would be an accurate reflection of the outcomes of the same in the real world, hence engendering the self-reliant, ethically responsible citizens as would be perceived by Nyerere.

1.2 Research Objectives

The research objectives are as follows:

- i. To examine how well the ideals of Education for Self-Reliance are integrated into CBC as detailed by Julius Nyerere.
- ii. To find out the obstacles that have been encountered in the process of introducing CBC, such as disparities in resources, teacher readiness, and the persistent cult of exams.
- iii. To determine how CBC has affected self-reliance, ethical decision-making, and community participation among students.
- iv. To make recommendations intended to help in the enhancement of CBC towards working better towards Nyerere's philosophy of Education in Self-Reliance.



II. LITERATURE REVIEW

2.1 Theoretical Review

This study is guided by a theoretical framework of constructivist theory, which argues that meaning and understanding are constructed through interaction with surroundings, interaction among learners, and reflection on the same (Piaget, 1970; Vygotsky, 1978). Constructivism nullifies the conventional approach towards education in which students are regarded as knowledge acquirers; rather, constructivism argues that learning is an interactive process involving learner creation and requires students to learn knowledge through working and exemplifying activities. Here, the duty of the teacher is seen further as the facilitator of the learning process, as the controller of the pool activities, as the teacher whose tasks are to teach to work as a team and to challenge the issues of the real life by their thought process (Fosnot & Perry, 1996).

This theory matches well with the missions of the Kenyan Competency-Based Curriculum (CBC), which focuses on the skills that could be applied in reality, development of critical thinking, and autonomous learners (KICD, 2017). The CBC will be a departure from rote learning and promote what individuals need to succeed in a lifestyle of lifelong learning, which is problem resolution, communication, and flexibility. Being a constructivist method, CBC promotes the application of knowledge to real-life scenarios, as opposed to a passive acquisition of information. The principle is similar to Vygotsky's (1978) theory of social development that puts emphasis on social interaction and cultural setting during learning. Vygotsky's focus on collaborative learning, or the scaffolded learning approach, where more knowledgeable peers or adults tutor learners, is similar to the problem-solving features of the CBC (United Nations Environmental, Scientific and Cultural Organization [UNESCO] and International Bureau of Education (2017).

In addition, the constructivist theory mentions numerous similarities with the philosophy of Education for Self-Reliance coined by Nyerere. Nyerere (1967) promoted a school system that produces individuals with intellectual, as well as practical skills, education that has to serve the people, and also makes them responsible and accountable to each other. Nyerere considered that education is not limited only to classroom learning, but it should be connected to real-life education where learners can be able to interact with their surroundings and even solve community problems. This is reflected in the constructivist like, in which the learners are fully involved in the process of their learning environment and reflect on what they have done to gain deeper knowledge.

The CBC thus can be viewed as a constructivist approach, in which learning is regarded as a complex, continuous process to be learned in a form of assimilating experience, culture, and critical reflection. The effective application of this approach fails, however, to depend on the capacity of the curriculum to bypass the practical difficulties in the classroom, including resource shortages and inadequate measures on teacher training. According to Fosnot and Perry (1996), without suitable guidance, the learners might have difficulties aligning the theory with the practice, thus may trigger a lack of transformative potential of the curriculum.

2.2 Empirical Review

The introduction of the Competency-Based Curriculum (CBC) in Kenya has caught the interest of scholars who are attempting to assess the congruence of the program with the Nyerere philosophy, as well as whether it would bring self-reliance. The Kenya Institute of Curriculum Development (KICD, 2017) suggests that CBC was implemented to promote critical thinking, solving problems, and building personal initiative. These are the goals that Nyerere envisioned in his education system with an aim of ensuring that it is not only about academic knowledge, but also character, self-reliance, and societal development.

A number of studies have examined how CBC fosters learner control, which is one of the principles of the curriculum and curriculum philosophy of Nyerere. As an example, we can refer to Kagoire et al. (2024), who emphasize that CBC promotes the growth of individual initiative and the ability to solve problems, which is a part of the concept of self-reliance proposed by Nyerere. It is also a learner-centered method through which practical skills that students can apply to the real-life problems of their communities can be developed. Likewise, another article by Isaboke et al. (2021) points out that CBC integrates some teaching methods that include project-based learning and formative assessment, which are consistent with the idea of learning through doing preached by Nyerere. These approaches encourage creativity, thoughts, and independent activities among learners, which are critical to the self-reliant citizens envisaged by Nyerere.

Nevertheless, although the theoretical basis of CBC might seem rather successful, its application remains problematic. Micheni (2021) and Cheruiyot (2024) highlight that the CBC is impeded by both systemic and logistical barriers. In most schools, teachers complain that they receive insufficient training on competency-based education, restricting them from applying the curriculum to the fullest extent. In addition, rural schools are characterized by a dire state of resources, such as a lack of teaching materials and infrastructure that poses a challenge to getting students involved in the hands-on practical learning that CBC should seek to encourage. It is compounded by the fact that students continue to focus on exams, and they are still an important component of the education system, even though the

curriculum now emphasizes skills and competencies rather than academic curricular knowledge (UNESCO and International Bureau of Education (2017).

The cultural fit problem is also still present, where CBC will be forced to deal with the conventional education system in Kenya, which might not necessarily hold the community-based, self-help values that Nyerere promoted. In order for an educational reform to be effective, as Nyerere (1967) underlined, it should be based on the values and standards of society; otherwise, reform can be dismissed or shallow. This poses a challenge to the CBC because its effectiveness lies in policy-practice consistency and the dedication of the communities and teachers to the ends of the curriculum.

Moreover, empirical research on the efficacy of CBC in promoting self-reliance is sparse. Although there is CBC evidence indicating that it promotes skills and critical thinking, it is not clear that the results have been associated with more community involvement and independence for the students. The scarcity of research highlights the importance of future research devoted to the long-term consequences of CBC on the capacity of students to become independent citizens capable of developing society (Owuor, 2022).

III. METHODOLOGY

A qualitative research design was chosen in this study, and it was appropriate to conduct this study as it involved investigating the compatibility of the Competency-Based Curriculum (CBC) with self-reliant Education as introduced by Julius Nyerere. The study has used both document analysis and phenomenological hermeneutical approaches to examine the extent to which CBC was in tandem with the tenets of self-reliance as spelt out by Nyerere. This was a way of having a comprehensive insight into the theoretical and practical aspects of the process of the CBC and implementation of the CBC in light of the educational philosophy explicated by Nyerere.

3.1 Research Design

The research was conducted in line with the document analysis method, whereby significant policy papers, programmes, and papers were analysed using scholarly works regarding the CBC. The documents involved the Basic Education Curriculum Framework (KICD, 2017), documents released by the government with regard to matters related to CBC, and papers carried out to determine whether CBC helped achieve the values and competencies needed to become self-reliant. In the documentary study, it was possible to analyze the design of the CBC and the way it was supposed to operate within the education system in detail, providing information about the theoretical compatibility of the curriculum with the vision of Nyerere (KICD, 2017; Nyerere, 1967).

Besides the analysis of documents, a phenomenological hermeneutical approach was implemented in the study as well, wherein the emphasis was made on the interpretation of *in vivo* experiences of educators and students interacting with the CBC. It was this method that was applicable specifically to comprehending how educators understood and practiced the curriculum in an actual sense and how far these were in line with the transformative aims of the curriculum. The study sought to meet the gap between theoretical motivations and effectual practical context by examining the meanings that their teachers and students gave to their academic experience (Gadamer, 1975; Freire, 1970).

3.2 Study Population and Sample

This study targeted secondary and primary school teachers in Kenya who participated in the rollout of the CBC. It was important that the teachers became the participants of the scheme since they were the first swimmers, who would convert the paper-based curriculum into an everyday learning activity. A purposive sampling method was also employed during the study to make sure that the sample used was adequately informed and knowledgeable regarding the issues and the accomplishments of the implementation process of the CBC.

Five teachers were interviewed, and this was to give a cross-section of both urban and rural schools. Such a varied sample provided a full description of the implementation processes in various environments and enabled the detection of possible differences in resource access, teacher education, and community coverage. To achieve this, the interviews were unstructured so that the interviewees (teachers) could give open-ended answers that would furnish rich qualitative data on what the teachers had experienced in relation to CBC, and how aligned it was to what Nyerere had termed as self-reliance philosophy.

3.3 Data Collection Methods

The information was obtained by means of an unstructured interview with the teachers, which allowed them to speak on their own opinions concerning the strengths and weaknesses of the curriculum. The central themes of the interviews were related to: Learner autonomy and how it was fostered within the CBC framework (Kagoire et al., 2024). Community engagement and how well the CBC incorporated Nyerere's idea of education for community development (Nyerere, 1967). The practical skills that were promoted by the CBC and their relevance to local needs (Owuor, 2022).



Challenges faced in the implementation of CBC such as inadequate resources, insufficient teacher training, and the persistent focus on exams (Teachers Service Commission [TSC], 2019; Isaboke et al., 2021).

Along with the interviews, policy documents and curriculum guidelines were considered in order to obtain a complete picture of the theoretical basis of CBC and its correspondence to self-reliance principles. This analysis of documents relied on formal reports and publications by the Kenya Institute of Curriculum Development (KICD), government announcements, and research papers about CBC (KICD, 2017; Micheni, 2021).

3.4 Data Analysis

Thematic analysis was used to analyze the data obtained after conducting the interviews because it provided the opportunity to identify patterns and themes in the qualitative data collected. Thematic analysis helped the researcher to group the responses according to their dominant themes that aligned with the research interests, including self-reliance, community involvement, practice skills training, and readiness of teachers.

The data collected during the interviews was contrasted with information acquired during the analysis of the documents in order to evaluate the compliance of the design of the curriculum with the way it is realized in practice. It also took into account the social and cultural situation against which CBC is being enforced, and based on that, it relied on the idea of fusion of horizons by Gadamer (1975). This was done so as to help the researcher gain knowledge on how the cultural and educational background of education in Kenya affected the interpretation and execution of CBC.

3.5 Ethical Considerations

This research focused on ethical aspects. The participants were told the purpose of the study and signed their consent before the interviews. The study was done confidentially, and the participants were free to cease participating in the study without repercussions at any time they wished. All materials, including direct quotes, were reported as aggregate to guarantee the anonymity of the information sources, and all quotes with identifiable sources were reported as quotes to an anonymous source.

IV. FINDINGS & DISCUSSION

4.1 Findings on the Alignment of CBC with Nyerere's Philosophy

The main aim of this research was to determine the degree to which the competency-based curriculum (CBC) in Kenya meets the philosophy of education, Julius Nyerere Education for Self-Reliance. Judging by the information retrieved involving the interviews and document survey, it can be seen that some parts of Nyerere's philosophy have found a way into the CBC, especially concerning self-reliance, community participation, and the honing of practical skills. Nevertheless, the practice of such principles in schools presents a set of major difficulties, mainly caused by the inequality of resources, teacher preparedness, and persistence of classical exam-type practices.

4.2 Self-Reliance and Practical Skills Development

The concern to equip students with practical skills to enhance their communities was one of the essential tenets in Nyerere's Education of Self-Reliance. The subjects present under the curriculum in the CBC are agriculture, law skills, entrepreneurship, and pre-technical courses, which all align with the vision of education that the shaper of Nyerere had, namely, making students ready to be productive citizens. The Kenya Institute of Curriculum Development (KICD) reports that CBC will promote critical thinking, problem-solving, and practical application of learning skills that will make learners independent and self-sufficient (KICD, 2017).

This correspondence was verified by the results of the interviews with teachers, with the majority of educators admitting this bias towards hands-on learning, including project-based work and community services. These factors stimulate students to practice in real life, a feature that Nyerere valued since he thought that learning occurred when one did (Nyerere, 1967). Nevertheless, some of the teachers said that in as much as the school has practical subjects, practical subjects are usually sidelined by the more academic subjects, which have high coverage in examinations. It is in line with the fact that Micheni (2021) states that there is a discrepancy between the theoretical and classroom practice of the curriculum. Although the curriculum is founded on practical skills, agriculture, home science, and similar may not get attention in exam-mongering type of assessment, and thus there is no continued interest in these subjects. One of the rural schoolteachers wrote:

"Even though the curriculum emphasizes practical learning, there is still the tendency in the curriculum to neglect some subjects, such as agriculture and home science, when it comes to exam preparation. What will be tested is what we discuss in my school, not what can be useful to the students in their everyday lives."



4.3 Community Engagement and Social Responsibility

The emphasis on community participation and social responsibility in the CBC can be connected with the vision of Nyerere, since he believed in community-based education. The curriculum incorporates both community service and project-based studies that would motivate learners to study their local areas, reflecting the concept that education should relate to community building as propagated by Nyerere (Nyerere, 1967). Nevertheless, the interviews with teachers demonstrated that the complete adoption of community-based education was not easy. Urban teachers pointed out more community collaboration and availability of resources, and rural teachers reported fewer community engagement opportunities as they lacked leadership support and resources. A rural teacher described:

"In our school, the CBC motivates students to work with their communities; however, we do not have the resources and the support of the leadership to make these projects meaningful. Community participation is simpler in urban schools as they can access more resources and partnerships."

This is in line with the observations of Kagoire et al. (2024), whose study pointed out the necessity of learner autonomy and community engagement according to the achievements of the CBC; however, the communities are hampered by resource disparity. Evidence at the national level indicates that this is compounded by a lack of adequate leadership and teacher training to make the curriculum the fulfillment of assisting in community building.

4.4 Teacher Preparedness and Training

One of the main problems that were found in the study was the absence of teacher training and the lack of available resources to make the CBC implementable. A far majority of the teachers also displayed excitement towards the learner-based approach that CBC preaches, but expressed uneasiness in being prepared to work within the curriculum because of a lack of professional development training. Isaboke et al. (2021) emphasized that CBC entails a transition of teachers to more hands-on and interactive learning styles, whereas it is challenging to do so without proper training and resources.

According to teachers, the teaching resources and infrastructure necessary to enable practical learning activities are usually not present. An example is a situation in the rural schools, where the lack of adequate technical facilities and learning materials restricts the students' practicability of hands-on practical learning, e.g., in agriculture or in life skills.

This unpreparedness and shortage of resources correspond to the Mauki et al. research (2020) on how the system and logistical issues are the obstacles to the complete integration of CBC in Kenya schools. Another theme that was repeated by the teachers was fed up with top-down administration and the centralized decision-making system. Basing its philosophy on the student-centered approach to learning, CBC, however, frequently results in discrepancies between policy expectations and the practices in classrooms; this inhibits the teacher autonomy as well as his/her scope of innovation in instructional techniques.

4.5 Mismatch and Inconsistencies in CBC Implementation

Although the CBC has a promising design, the implementation into practice at the school level, especially in rural schools, has a severe mismatch and inconsistencies. As previously mentioned, although the CBC encourages a culture of learner-centered methods and acquisition of practical skills and working with the community, it is commonly neglected because of resource disparity and the constant emphasis on exams.

In keeping with teacher reports, we have seen that the examination culture still prevails, particularly in urban schools where students have to perform impressively in national tests. Such a focus on tests contradicts the objectives of CBC to nurture creativity, problem-solving, and self-reliance. Instructors also complained that the focus on assessments diminishes the chances of comprehensive education of students because they are being evaluated based on their academic knowledge, but not their skills of being able to apply practical skills to real-life situations.

This problem also follows in the footsteps of the critique of colonial systems of education by Nyerere, who emphasized that such educational systems focused on academic rather than practical knowledge that would have helped local people. Nyerere (1967) asserted that education must not be elitist but geared towards the greater good of society so that students become self-reliant and productive members of society in which they live. Although the CBC was crafted in order to be free of these constraints, the concept has continued to struggle to safeguard the application of its most fundamental ideals, self-reliance and community service, in practice.

The results of the research correlate largely with current literature conducted on the conformity of CBC with the philosophy of Nyerere; however, the findings also prove highly essential gaps. Although the curriculum supports the autonomy and applied skills of learners, the issues of teacher preparedness and inequality in resources as well as the exam-oriented culture remain, constraining the potential of this curriculum to reflect the vision of Nyerere. Micheni (2021) and Cheruiyot (2024) also highlighted the divergence between the intentions and reality of the policies, particularly in rural settings where access to resources is scarce. Owuor (2022) and Kagoire et al. (2024) also mention the value of communities in the education process, where the CBC has potential, yet implementation is complicated.



Whereas, the CBC promotes students taking part in community service, as teachers in this study observed, unless leadership support and incompetent teacher training are removed, it is unlikely that this will be achieved.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This paper has discussed ways in which the Kenya Competency-Based Curriculum (CBC) fits or suits the philosophy of Education for Self-Reliance, as advocated by Julius Nyerere, in terms of its unique contribution to the development of practical skills by the individual and a sense of community involvement in this process. The research showed that the CBC contained some parts that corresponded with the ideals of Nyerere, especially relating to active learning, teaching of values, and the inculcation of practical skills, which could help to build the local community. Nevertheless, regardless of the theoretical compatibility of CBC with the philosophy of Nyerere, the research showed the implementation to be quite a problematic task. The unification of resources and the preparedness of teachers, as well as an ongoing stress of exams, remained a challenge that prevented the achievement of the transformative objectives of the curriculum. According to the teachers, the CBC promoted the autonomy of the learners, as well as community involvement; however, implementation of these aspects was problematic due to the lack of resources, poor teacher training, and the inability of leaders to support the process. Connection with exam-based practices and traditional learning in the curriculum, or the skills, and a learner-centered vision, were also the major directions that contradicted each other. The study was able to illustrate the fact that, even though CBC paved the way to the creation of self-reliant citizens, the discrepancy between the policy design and reality in the classroom was a major obstacle. It was through resolving these issues that the completion of the entire vision of Nyerere's education in self-reliance would have been achieved, and that the CBC should have been used in a manner that would have served to empower both the teachers and the students.

5.2 Recommendations

There are various measures that must be undertaken to improve the process of implementing the Competency-Based Curriculum (CBC) and make it more conducive to the Nyerere perspective of self-reliance. To begin with, there is a need to advance teacher education and professional growth processes so that teachers will work with a learner-focused, practical teaching process. In this training, the ability to learn through projects and practically use available resources should be at the center of attention. Second, the solution of inequality of resources is necessary since inequalities prevail between urban and rural schools, which impede the practical utilization of the curriculum. The poorly equipped schools should be given the necessary resources to facilitate the involvement of all learners in practical learning exercises. Third, it is necessary to change the focus and make it more about training practical skills rather than passing exams, and focus more on assessments that test creativity, problem-solving, and real-life applications, as Nyerere advocated in his educational philosophy. Lastly, enhanced community participation in education will improve schools and make them more attached to the local context, ensuring education addresses the community's needs and further enhances self-reliance.

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The impact of sustainable initiatives on Generation Z consumers' behaviour: A serial mediation analysis

¹Joseph Akanyako
²Leticia Amana
³Samuel Adadi Akapule

¹jakanyako@bolgatu.edu.gh
²lamana@bolgatu.edu.gh
³sakapule@bolgatu.edu.gh

¹<https://orcid.org/0009-0007-8536-5525>

²<https://orcid.org/0009-0009-6152-7547>

³<https://orcid.org/0009-0008-6641-0965>

^{1,2,3}Bolgatana Technical University, Ghana

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ABSTRACT

Generation Z's awareness of environmental issues has risen high of late, necessitating businesses to strategise to meet the values of GZ. This study, therefore, is intended to examine the impact of sustainable initiatives on Gen Z consumer behaviour and the mediating role of ethical and perceived marketing strategies. The Theory of Planned Behaviour serves as the anchor for the study. A quantitative method was employed for the study. A simple random sampling technique was used to select 120 respondents who are students and fall within the age group of 15 to 35 years for the study. Partial least squares Structural equation modelling (SmartPLS4) was used to analyse the data. The structural model shows significant paths: SUS → EM ($\beta = 0.570$, $p < 0.01$), SUS → PMS ($\beta = 0.289$, $p < 0.01$), PMS → GZ ($\beta = 0.538$, $p < 0.01$), and EM → PMS ($\beta = 0.497$, $p < 0.01$), while EM → GZ is positive but not significant ($\beta = 0.156$, $p = 0.122$). Findings support the predictive power and practical relevance of the model, offering valuable insights for policymakers and managers aiming to enhance sustainable consumer engagement among Generation Z. Also, ethical marketing and perceived marketing strategies serially mediate sustainable initiatives and Gen Z consumer behaviour, underscoring their importance for corporate marketing decisions. The Q^2 predict revealed that both EM and PMS had the same predictive power (0.294) in influencing the dependent variable (GZ). However, EM had a less comparable MAE (0.615) to PMS (0.680), indicating EM's superiority in terms of predictive power. The PLS predictive performance revealed that both EM and PMS had predictive power in influencing the dependent variable (GZ); however, EM was found to be superior in terms of its predictive power. The study suggests practical contributions and implications for corporate business management to integrate ethical and marketing strategies in a sustainability drive.

Keywords: Ethical Marketing, Gen Z, Serial Mediation, Sustainable Initiatives, Theory of Planned Behaviour

I. INTRODUCTION

Consumer behaviour across the various demographics has been greatly reshaped with the advent of sustainable initiatives (Ali et al., 2023; Trudel, 2019). This paradigm shift has significantly affected Generation Z (Gen Z) (Kushwaha, 2021), particularly, factors that influence Gen Z purchase intentions of green products (Ghouse et al., 2025). Societal environmental awareness and social consciousness have led most people, especially Gen Z, to prioritize brands that have shown commitment to sustainability and ethical practices (Elgammal et al., 2024; Djafarova & Fouts, 2022). Among factors that have led to this phenomenon are the increased access to vital information through various digital platforms and the quest for supporting companies that cherish and adhere to such values (Hosta & Žabkar, 2016). Such development has driven businesses to include sustainable initiatives in their broad marketing strategies to attract and retain individuals and groups that hold to environmental consciousness and influence their purchasing decisions (Fathinasari et al., 2023) and brand loyalty (Cagnin & Nicolas, 2022; Ayuni, 2019) while making such individuals ambassadors of their brands (Da Fonseca, 2023).

Moreover, among the broad spectrum of sustainable practices are eco-friendly product development, clear lines of supply chains, corporate social responsibility issues, etc (Khandare, 2024; Panigrahi et al., 2019). Such initiatives have reduced environmental impact on the populace (Tang & Zhou, 2012). Aside from that, it also enhances the company's reputation, especially with those demographics who constantly scrutinize business ethics (Hsu et al., 2016).



Sustainability has become crucial in the consumer purchasing decision process and especially for Gen Zs, whose consumer behaviour is mostly driven by their moral and ethical considerations (Chaturvedi et al., 2020). The cumulative effect is that brands that embrace sustainable practices attract and win the trust of young consumers (Shetty et al., 2019)

Ethical marketing plays an important role in attracting Gen Z purchases (Djafarova & Fooks, 2022) and considerably impacts sustainable initiatives (Anuradha et al., 2023). Communication of sustainable messages, therefore, should be authentic and transparent, since Gen Zs easily doubt greenwashing (Urbanski, 2020). Besides, companies can strengthen consumers' perception about their brands through effective storytelling and embracing sustainability practices to attract Gen Z (Junior et al., 2023; Andhini & Andanawarih, 2022). The question this paper postulates is, does sustainable initiative impact Gen Z consumers' behaviour? Also, do ethical marketing and perceived marketing strategies mediate the relationship between sustainable initiatives and Gen Z consumer behaviour?

It is believed that ethical and deceptive marketing communication strategies have negatively affected Gen Z trust in sustainable practices (Abdulsalam & Tajudeen, 2023). Despite the numerous studies on sustainability and Gen Z (Theocharis & Tsekouropoulos, 2025; Ghouse et al., 2024; Kara & Min, 2024), this paper presents a serial mediation analysis involving ethical marketing and perceived marketing strategies that link sustainability and Gen Z consumer behaviour. The gap will be filled by examining the mediating role of ethical marketing and perceived marketing strategies on the relationship between sustainable initiatives and Gen Z consumer behaviour. The findings from this research will contribute to current discourse and extant literature regarding sustainability practices in the business environment and Gen Z consumer behaviour.

1.1 Statement of the Problem

Recent issues on sustainability have caught the attention of the young generation, who have taken a key interest in sustainability practices (Dabija et al., 2019; Dragolea et al., 2023). This cohort of the young generation has developed an interest in sustainable issues, which has engendered brands to consider sustainable practices in their production process (Sharma & Joshi, 2019). Additionally, brands target Gen Z because of their strong preference for various products. However, they are difficult to handle and not convinced (Adriana-Camelia, 2015). Gen Z prefers companies that communicate effectively and are likely to recommend those companies to others (Dewalska-Opitek & Witczak, 2023). However, critical issues regarding greenwashing and unethical marketing techniques and communication have made Gen Z not trust brands (Al-sharouf & Naesae, 2022). This study, therefore, seeks to examine the extent to which sustainable initiatives impact Gen Z consumer buying behaviour and the mediating role ethical marketing and perceived marketing strategies play in the relationship.

1.2 Research Objective

This paper examines the mediating role of ethical marketing and perceived marketing strategies on the relationship between the impact of sustainable initiatives and Gen Z consumers' behaviour.

1.3 Research question

Do ethical marketing and perceived marketing strategies mediate the relationship between the impact of sustainable initiatives and Gen Z consumers' behaviour?

II. LITERATURE REVIEW

2.1 Theoretical Review

This research is premised on the theory of planned behaviour (TPB), propounded by Ajzen (1991). The theory of planned behaviour is built on the previous theory, the theory of reasoned action (TRA). The theory of planned behaviour, as postulated by Michelle et al. (2019) and Ajzen (1991), is based on personal attitude, subjective norms, perceived behaviour control, and behaviour intention. Elgammal et al. (2024) posit that Gen Z buying decisions are usually dictated by their self-driven motives. The theory of planned behaviour has been used extensively by authors to gain an in-depth understanding of Gen Z consumer buying behaviour (Djafarova & Fooks, 2022; Ngah et al., 2021).

2.1.1 Gen Z

Gen Z's diverse interest in ethnicity have shaped their perception of urbanization and culture (Turner, 2015). Though they may exhibit different attitudes between urban and rural communities, they remain indifferent so long as they have access to basic infrastructure (Verma et al., 2019). Studies have shown a diverse interest among Gen Z based on individualistic, nonconformity, deep complexity, and subtlety (Van den Bergh & Pallini, 2018).

It is unequivocal that Gen Z comprises nearly 32% of the global population (Jancourt, 2020). However, there are some minor discrepancies regarding the definition ascribed to it, with some authorities suggesting that such a category of people is those within the birth group of 1995-2010 (Turcic, 2022; Francis & Hoefel, 2018), and some falling within 1997-2012 (Eldridge, 2024). Some writers assert that this cohort of individuals not only falls within 1997-2012,



but is predominantly from developing countries like India and China (Priporas et al., 2017; Black et al., 2017) Priporas et al., (2017). Priporas et al., (2017).

According to McKeever (2020), this cohort of demographics is called “the most disruptive generation” as compared to other generations, due to their high-income capability. This notwithstanding, Gen Z are noted for their penchant for diverse perspectives and the liking for online activities which are driven by a shared purpose (Mahapatra et al. 2022). Gen Z usually evaluates the merits of existing retail establishments' e-commerce sites before making purchasing decisions, eventually opting for virtual retail due to its superior benefits (Habibi & Susanti, 2025). Briggs and Briggs (2022) assert that Gen Z demonstrates their penchant for information across various social media platforms, averaging four hours a day. According to Gutfreund (2016), Gen Z is difficult to target due to their ability to research and make comparisons; hence, getting a better understanding of their purchasing habits will be of benefit to retailers and marketers. Besides, they usually demonstrate a cynical behaviour towards brands (Gutfreund, 2016)

Despite Gen Z's awareness of sustainable issues, governments' lack of enthusiasm to address critical climate issues has caused them great disappointment (Hickman et al., 2021). This notwithstanding, Gen Z is influenced by their quest to search the internet to obtain knowledge that affects them (Djafarova & Fouts, 2022).

2.1.2 Sustainability

The advent of digital transformation brought on its wake a paradigm shift in the mode of manufacturing, product, and service delivery, which has implications for businesses' prospects and sustainability, prompting researchers to develop interest in sustainable issues within the corporate environment (Abad-Segura et al., 2019). Gen Zs have taken the issue of sustainability to another level due to their interest in environmental consciousness and social consumption (Djafarova & Fouts, 2022)

Sustainability refers to any development that concurrently meets present needs while ensuring that future generations are not disadvantaged (Lee & Huang, 2020). The way Gen Zs perceive sustainable initiatives has made them perceive brands in line with their philosophy (Theocharis & Tsekouropoulos, 2025). For instance, developments that are eco-friendly, environmental advocacy, and supply chain have gained popularity among Gen Z (Tran et al., 2022). Wandhe (2024) posits that “sustainability, ethical practices, and corporate social responsibility are important factors when making purchasing decisions.” This makes Gen Z embrace and support brands and commit themselves to mitigating environmental footprints, and encourage social good.

2.1.3 Ethical Marketing

As part of Gen Z's sustainable consumption practices is the adherence to ethical marketing practices. (Theocharis & Tsekouropoulos, 2025). Typical hallmarks of ethical marketing that influence Gen Z consumption patterns are brand image, brand experience, brand trust, and brand loyalty (Theocharis & Tsekouropoulos, 2025). The authors contend that these factors inform Gen Z's choice of brand. Customers exhibit loyalty to brands when they decipher the existence of transparency, commitment to elements of sustainability (Khotimah, 2024). In line with this argument, is the assertion by Song et al. (2020), that increased awareness and knowledge on matters of social and environmental issues are determinant factors for Gen Z's response to sustainable practices. Besides, the adoption of ethical marketing practices builds trust and customer loyalty (Calatayud Salinas, 2021)

2.2 Empirical Review

2.2.1 Sustainability and Gen Z

Gen Zs have gained prominence in sustainability consciousness and their expectation from businesses to act responsibly in conforming to standards and acceptable production procedures (Francis & Hoefel, 2018). Access to information on sustainability has enabled them to critically assess corporate activities that influence their choice of brands (Priporas et al., 2017; Theocharis & Tse kouropoulos, 2025). Eventually, companies that cherish sustainability practices and corporate social responsibility win the trust and loyalty of Gen Z consumers (Narayanan, 2022).

Besides, this action of Gen Z customers towards sustainability reveals a shift towards emphasizing sustainability in their daily buying decisions (Brand et al., 2022; Djafarova & Fouts, 2022). This category of customers prefers paying a higher price for ethically produced products that meet environmental sustainability standards (Gomes et al., 2023; Brand et al., 2022)

2.2.2 Sustainability and Ethical Marketing

Efforts are being made by marketers to pursue communication strategies that attract customers and focus more on Gen Zs (Bezbaruah & Trivedi, 2020). Ethical marketing plays a critical role in attracting Gen Z towards sustainable initiatives (Liang et al., 2022). Among strategies that constitute the bedrock of ethical marketing that connect brand values with consumers are transparency, honesty, and accountable communication (Ahmed & Ahmed, 2025; Parris et al., 2016). Businesses can build trust in Gen Z by showcasing their environmental initiatives through ethical marketing (Theocharis et al., 2015; Isoni et al., 2025). Thus, businesses seeking to engage Gen Z should incorporate sustainability



into their operations and apply ethical marketing techniques to promote trust and loyalty and long-term commitment (Khotimah, 2024). In view of the discussions above, it is hypothesised that:

H₁: Sustainability has a positive and significant influence on ethical marketing.

2.2.3 Sustainability and Perceived Marketing Strategies

Sustainability has gained popularity in marketing over the years (Gleim et al., 2023; Kumar et al., 2012; McDonald & Oates, 2006). The need to advance sustainability in marketing strategy is eminent as ongoing advancement depends on enhancing the linkage between production and consumption, while incorporating consumer and user viewpoints into innovation and design processes to mitigate obstacles such as rebound effects (Blok et al., 2015). Though studies have been done on sustainability and marketing (Kumar et al., 2012), little research exists that establishes the connection between sustainability and marketing strategy. Bocken & Short (2021) are of the view that sustainability is no longer an option in contemporary business. In contemporary companies, where sustainability issues are paramount, integrating sustainability into marketing strategies has become indispensable. A robust brand sustainability plan is essential for firms aiming to thrive, since sustainability and strategic marketing are intrinsically linked in today's corporate environment (Aripin et al., 2023). It is also believed that the green marketing method has a positive impact on companies' image and improves their performance (Sujanska & Nadanyiova, 2023; Mukonza, 2020). Further, for businesses to remain competitive, notably, the retail sector, it is critical to apply green marketing techniques in their operations (Mukonza & Swarts, 2020). The authors, therefore, hypothesize that:

H₂: Sustainability has a positive and significant influence on marketing strategies.

2.2.4 Ethical Marketing and Perceived Marketing Strategies

Elements like corporate social responsibility, transparency, and authenticity play a major role in informing Gen Z's perception about companies' brands (Bergstrand & Åradsson, 2024; Tata et al., 2023). Aside from that, employing sustainable practices and communicating effectively with Gen Z builds their trust and brand loyalty, since they prefer sustainable initiatives that resonate with their beliefs (Agu et al., 2024). Ngo et al. (2014) assert that Gen Z exhibits a positive attitude towards brands that demonstrate authenticity and commitment to sustainability, underscoring the important role ethical marketing plays in attracting such a category of consumers. Based on the afore discussions, it is hypothesized that:

H₃: There is a direct connection between ethical marketing and perceived marketing strategies.

2.2.5 Ethical Marketing and Gen Z

It has been established that there is a link between ethical consumption regarding Gen Z consumer patterns (Bonera et al., 2023). Combining an appeal approach with social or personal norms creates effective marketing information, especially when the message focuses on advertising ethical goods (Fraser et al., 2023). Gen Z critically analyzes the authenticity of a company's marketing messages on the brand's integrity and social responsibility (Jamali, 2025; Uche, 2018). They are willing to associate and patronise brands that demonstrate ethics in production, and seek the welfare of consumers than those brands that are interested in only profits (Kirnosova, 2021). For example, campaigns that highlight genuine sustainability efforts or social causes tend to generate positive responses from Generation Z, who often view such actions as indicative of a company's core values rather than mere marketing ploys (Confetto et al., 2023; Dragolea et al., 2023). Based on this, we hypothesize that:

H₄: Ethical marketing has a positive impact on Generation Z consumers.

2.2.6 Perceived marketing strategies and Gen Z

Gen Z's response to sustainability practices is strongly influenced by perceived marketing strategies, which translate to positive perceptions and purchasing intentions (Aliraj & Halemariam Fishale, 2025; Theocharis & Tsekouropoulos, 2025). Studies have revealed that superficial and misleading tactics tend to diminish the gains of sustainable initiatives and create doubts among Gen Z consumers (Isac et al., 2024; Sajid et al., 2024). Sustainability practices will impact positively where marketing strategies are seen to be performing their mediating role effectively (Alhouthi et al., 2016) and link with the sustainable consumption behaviour (Kokkinopoulou et al., 2025). Based on these discussions, it is hypothesized that:

H₅: Perceived marketing strategies have a positive and significant relationship with Gen Z consumer behaviour.

2.2.7 Mediating Role of Ethical Marketing and Perceived Marketing Strategies

Understanding the mediating function of ethical marketing and perceived marketing strategies is critical due to their influence on Gen Z consumption patterns (Satybaldiyeva et al., 2024). Social consciousness, honesty, and transparency promote trust and loyalty among Gen Z, who expect adherence to sustainable and ethical practices by companies (Chatzopoulou & de Kiewiet, 2021). Adopting sustainable practices and effectively communicating them ethically creates a positive perception among Gen Z consumers and influences their purchasing intentions (Panopoulos et al., 2022). It is therefore suggested that:

H₆: Ethical marketing and perceived marketing strategies mediate sustainable initiatives and Gen Z consumers’ behaviour.

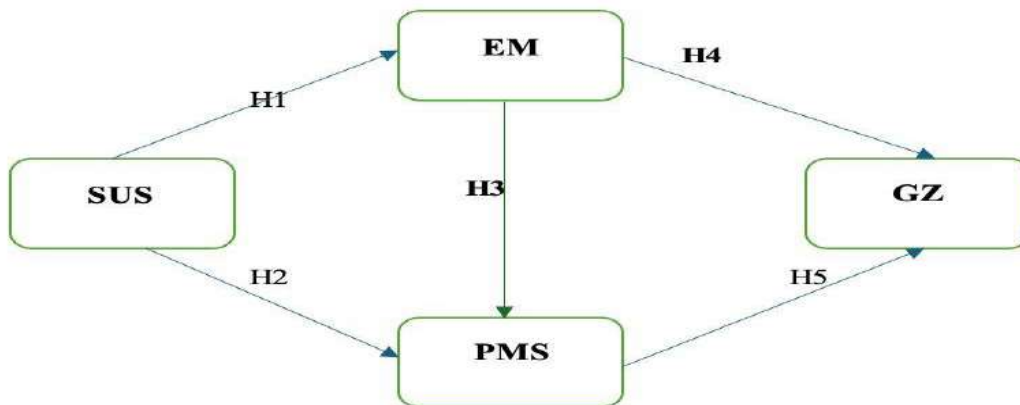


Figure 1
Conceptual Framework

III. METHODOLOGY

3.1 Research Design

A descriptive cross-sectional research design was used for the study and quantitatively tested the relationship between the model variables between sustainable initiatives and ethical marketing, sustainable initiatives and perceived marketing strategies, ethical marketing and perceived marketing strategies, ethical marketing and Gen Z consumer behaviour, and perceived marketing strategies and Gen Z consumer behaviour.

The study used a quantitative research approach (Bloomfield & Fisher, 2019) to investigate the mediating role of ethical marketing and perceived marketing strategies on the relationship between the impact of sustainable initiatives and Gen Z consumers’ behaviour.

Structural equation modelling (SEM) with SmartPLS version 4 was used to analyse the data. The measurement model and the structural model constitute the structural equation model. The observable variables are usually reduced to a reasonable number of latent variables. The measurement model trims observable variables to a reasonable number of latent variables, and the structural model establishes a causal relationship among the many latent variables. This study preferred Smart PLS due to its ability to accommodate smaller data and complex relationships. Unlike the covariance-based SEM (CB-SEM), SmartPLS does not emphasize the sample size. It gives a better procedure for interpreting diagrams that illustrate causal relationships and the modification of actual theories that underpin prediction. Also, as postulated by Hair et al. (2019) in line with their “10-times rule”, the sample size of 120 far exceeds the required minimum.

3.1.1 Data Collection

The constructs of the variables for collecting data were designed based on the literature review. The questionnaire was in the form of a Google Format and based on a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. 120 individuals, mainly students aged between 15 to 35, responded to the questionnaire. Per Cohen’s (1992) statistical power analysis, this number was sufficient. Moreover, it can identify any medium effect sizes ($f^2 = 0.15$) with a power of 0.80 and a 5% significance level.

3.1.2 Population and Sampling

A survey methodology was used to sample 120 respondents who were mainly youth and fell between fifteen to thirty-five years. Through Google Forms made available online, respondents who had basic knowledge of filling out an



online questionnaire were required to fill out the questionnaire. This was to ensure that they accurately respond appropriately to the questionnaire (Yin, 2018).

3.1.3 Data Analysis

The analysis of this study basically looked at the measurement model and structural model. The measurement model entails the validity and reliability of the data that were tested, while the relationship among variables is catered for in the structural model.

Validity pertains to how accurately measurements reflect the constructs they are intended to measure, and is evidenced when two instruments assessing the same concept produce a strongly correlated score (Sekaran & Bougie, 2016). The outer loadings and average variance extracted (AVE) of 0.5 are used to establish convergent validity (Hair et al., 2017). According to Hair et al. (2017), accepted loadings should be 0.7 or 0.708. Shin (1998) argues that a lower bound of 0.5 is sufficient. Likewise, Hulland (1999) intimates that a value of 0.4 or more is acceptable when doing exploratory studies. Initially, SUS had six items, while the other three variables, i.e., EM, GZ, and PMS, had five items each. Items (GZ1, GZ3, SUS1, SUS4, SUS6, PMS3, EM1, EM2) that did not meet the threshold of 0.7 were deleted (see Table 1)

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Measurement Model

This section begins with the measurement model. Table 1 shows the outer loading of the variables and their constructs.

Table 1
Outer Loadings

	EMS	GZ	PMS	SUS
EM3	0.857			
EM4	0.920			
EM5	0.718			
GZ2		0.805		
GZ4		0.816		
GZ5		0.847		
PMS1			0.779	
PMS2			0.732	
PMS4			0.808	
PMS5			0.759	
SUS2				0.781
SUS3				0.791
SUS5				0.771

EMS = Ethical marketing; GZ = Generation Z; PMS = Perceived marketing strategies; SUS = Sustainable initiatives

Cronbach's Alpha and composite reliability are also used to test the credibility of the data. The accepted value required to meet the threshold and for analysis is 0.7. Except for SUS, which had a value of 0.681, all three variables had values beyond the threshold of 0.7. AVE for all variables exceeded the accepted value of 0.5 (Hair et al., 2017)

Table 2
Reliability Test

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
EM	0.781	0.812	0.873	0.699
GZ	0.762	0.766	0.863	0.677
PMS	0.771	0.774	0.853	0.593
SUS	0.681	0.681	0.824	0.610

4.1.2 Common Method Bias

Common method bias (CMB), also called common method variance (CMV), should be avoided to ensure the validity of the research and, hence, the findings. This study ensured that all observed variables were summed up onto a single factor with the use of the principal component axis extraction approach without any rotation (Podsakoff, 2012). The Harman one-factor test is normally used to forestall such cases. Usually, a single factor with a total variance less



than 50% is sufficient to declare the non-existence of common method variance. The total variance for the first factor was 36.23% which fell below the threshold of 50%, indicating that CMB was not an issue.

4.1.3 Validity and Reliability

Discriminant validity is normally used to assess the extent to which a factor correlates with its anticipated construct. It is established when two separate components exhibit no association, and the outcomes of a validity assessment reveal no correlation (Sekaran & Bougie, 2019). The Fornell-Larcker criterion (1981) and Heterotrait-Monotrait Ratio of correlations (HMTM) (Hensler et al., 2015) are usually used to test for discriminant validity. Fornell and Larcker (1981) assert that the square root of the Average Variance Extracted (AVE) for each latent variable serves as an indicator of discriminant validity. Fornell and Larcker (1981) assert that the square root of the Average Variance Extracted (AVE) for each construct provides a measure of discriminant validity. As shown in Table 3, the square root of AVE was greater than its correlation with the other constructs.

Table 3
Fornell-Larcker Criterion

	EM	GZ	PMS	SUS
EM	0.836			
GZ	0.512	0.823		
PMS	0.661	0.641	0.77	
SUS	0.57	0.579	0.572	0.781

Table 4 buttresses the distinction of the constructs. Hensler et al. (2015) posit that all HTMT values should be below the acceptable threshold of 0.85. Table 4 shows that all values of HTMT are below 0.85, the highest value being 0.834, and 0.65 being the lowest. The figures in Tables 3 and 4 attest that there is discriminant validity.

Table 4
Heterotrait-Monotrait Ration (HTMT)

	EM	GZ	PMS
EM			
GZ	0.650		
PMS	0.834	0.829	
SUS	0.772	0.798	0.782

To add to the normal causal explanations in management and social science research, this research provides policymakers and managers with the insights that facilitate estimating an explanatory model with predictive power. A summary of the PLSpredictive/CVPAT test (Shmueli et al., 2019) is shown in Table 5. The model includes two metrics: Root Mean Square Error (RMSE) and Mean Absolute Error (MAE). Both benchmarks reveal how accurately the models predict the dependent variable Genz (GZ) through the mediating variables, EM and PMS. A higher Q²predict demonstrates a better predictive performance, while lower RMSE and MAE values indicate a good model accuracy. Both RMSE and MAE recorded higher values. However, MAE had relatively lower values than RMSE (see Table 5). Also, EM and PMS have the same Q²predictive values, indicating that both have the same predictive performance. EM, however, demonstrates the best predictive performance across all benchmarks.

Table 5
PLSpredictive/CVPAT

R-Square	R-Square Adjusted		Q ² predict	RMSE	MAE
0.325	0.320	EM	0.294	0.876	0.615
0.425	0.415	GZ	0.274	0.880	0.658
0.494	0.485	PMS	0.294	0.899	0.680

4.1.4 Structural Model

Direct effects: In this study, Gen Z's (GZ) consumer behaviour is the dependent variable. It measures the degree to which sustainable initiatives influence Gen Z consumer behaviour. As shown in Table 6 and Figure 2, all relationships had positive and significant relationships, except ethical marketing and Gen Z, which, though they had a positive direction, are not statistically significant. The main independent variable, sustainable initiatives (SUS), has a correlation coefficient of 0.570, t-value = 6.580, and p < 0.01 with EM. It also has a correlation coefficient of 0.289, t-value = 2.706, and p < 0.01 with PMS. These significant correlations demonstrate that sustainable initiatives impact on ethical marketing, perceived marketing strategies, and hence Gen Z consumer behaviour.



Table 6
Direct Effects

	Beta	Standard error	T statistics	P values
EM -> GZ	0.156	0.101	1.547	0.122
EM -> PMS	0.497	0.071	6.957	0.000
PMS -> GZ	0.538	0.117	4.605	0.000
SUS -> EM	0.570	0.087	6.580	0.000
SUS -> PMS	0.289	0.107	2.706	0.007

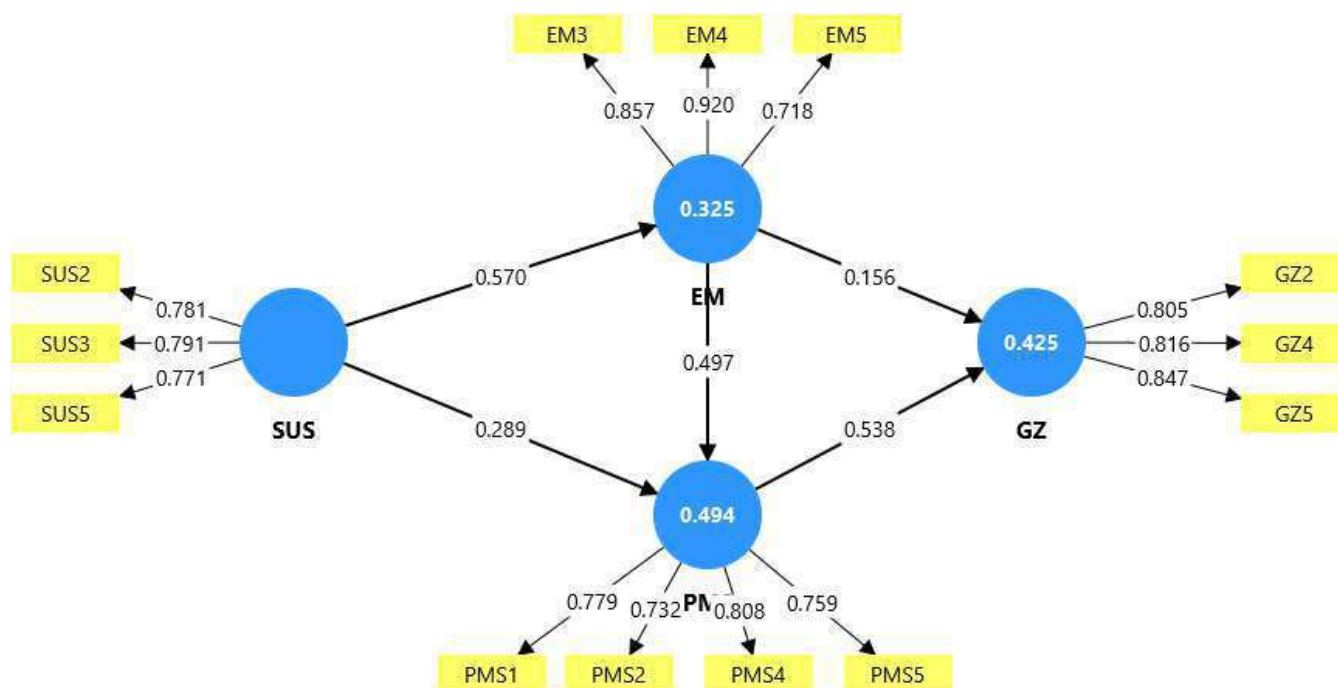


Figure 2
Direct Paths

4.1.5 Mediation

The mediation role of ethical marketing and perceived marketing strategies. All indirect effects of the latent variables in the model are positive and statistically significant (see Table 6). The mediating variables (EM, PMS) mediate serially in the relationship between SUS and GZ. Thus, the correlation between SUS and GZ with EM and PMS playing the role as mediators was significant with a coefficient of 0.152, t-value = 3,332, and p < 0.05 (see Table 7). This result demonstrates the possibility of a combined mediating role of ethical marketing and perceived marketing strategies between the independent variable and the dependent variable.

Table 7
Indirect Effect

	Beta	Standard error	T statistics	P-values
SUS -> PMS -> GZ	0.155	0.077	2.016	0.044
SUS -> EM -> PMS -> GZ	0.152	0.046	3.332	0.001
SUS -> EM -> GZ	0.089	0.063	1.413	0.158
SUS -> EM -> PMS	0.283	0.056	5.047	0.000
EM -> PMS -> GZ	0.267	0.062	4.29	0.000

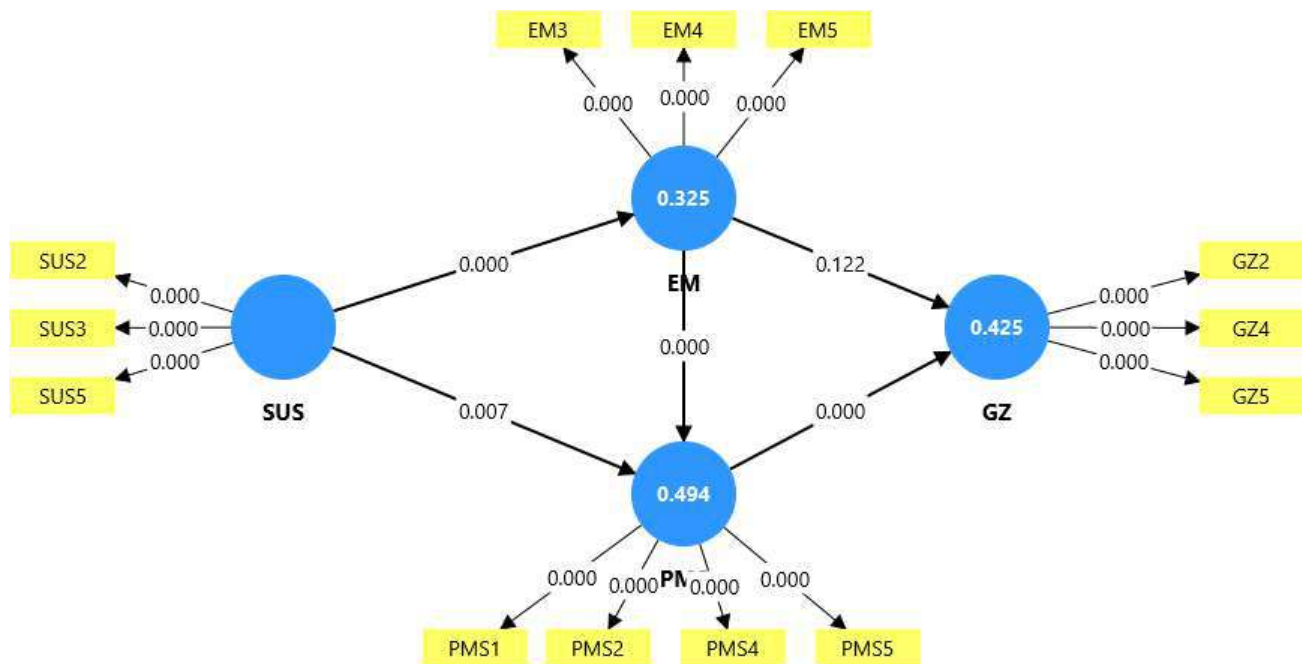


Figure 3
Indirect Path

4.2 Discussion

This study examined the impact of sustainable initiatives on Gen Z's consumer behaviour. Researchers have proven the relationships that exist between sustainability and Gen Z consumer behaviour (Theocharis & Tsekouropulos, 2025; Francis & Hoefel, 2018; Priporas et al., 2017). The argument by Bocken & Short (2021) that sustainability cannot be a choice anymore is reinforced by this study. This is evidenced by the results of the analysis. Findings from this research show a positive and significant relationship in all direct relationships, except ethical marketing (EM) and Gen Z (GZ), which, though had a positive direction, was statistically insignificant ($b = 0.156$, $t\text{-value} = 1.547$, $p\text{-value} > 0.05$).

The significant positive relationship resulting from the variables, SUS, PMS, EM, and GZ underscores the importance of practicing sustainability-motivated marketing tactics. The relationship between SUS and EM ($\beta = 0.570$, $\rho < 0.001$) demonstrates that employing ethical marketing practices tends to influence Gen Zs. Also, this resonates well with and gives credence to Bocken & Short's (2021) claim that sustainability is a non-negotiable feature of corporate decisions. The relationship between SUS and PMS ($b = 0.298$, $p < 0.001$) demonstrates that sustainability dictates the importance of developing and communicating marketing strategies geared towards Gen Z's values.

Also, the connection between PMS and GZ ($b = 0.538$, $p < 0.001$) indicates that when marketing strategies are effectively aligned with sustainability initiatives can positively influence Gen Z consumer buying behaviour. Furthermore, the positive relationship ($b = 0.156$, $t = 1.547$, $p > 0.005$) is an indication that ethical marketing may not influence Gen Z consumer buying behaviour in the absence of perceived marketing strategies. Thus, ethical marketing should be considered alongside broader sustainable initiatives to impact Gen Z consumer behaviour. The PLS predictive performance revealed that EM and PMS had the same predictive power in influencing the dependent variable (GZ), and EM was found to be superior in terms of its predictive power.

The mediating role of ethical marketing and perceived marketing strategies which the study sought to examine with respect to its relationship between sustainable initiatives and gen z consumers' behaviour was positive and statistically significant, indicating its' influence on consumers' behaviour, and therefore, its' influence on business decisions on their brands (Brand et al., 2022; Djafarova & Fouts, 2022). It is important, therefore, to implement sustainable strategies that meet the buying decisions of Gen Z (Varadarajan, 2017). The findings are crucial for businesses that seek to create trust and develop loyalty with Gen Z, since any form of misleading information can have a negative perception and influence on Gen Z.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Existing literature has shown the crucial role sustainability plays in the way individuals and groups respond to actions of businesses in their quest to draw the attention of such demographics. Delving into the mediating role that ethical marketing and perceived marketing strategies play in the relationship between sustainable initiatives and Gen Z



consumer behaviour, has added another layer to existing literature. Besides, this study has established the possibility of a chain mediation of ethical marketing and perceived marketing strategies in the relationship between sustainable initiatives and Gen Z consumer behaviour. Moreover, the predictive power of ethical marketing and perceived marketing strategies in influencing Gen Z is a reality. The findings underscore the importance of authentic, sustainable, and ethical marketing in the business environment. Consequently, companies seeking to attract Gen Z should include ethical marketing and marketing strategies in strategic decisions.

5.2 Recommendations

Companies seeking to achieve sustainability in their marketing efforts to engage Gen Z should seek to strategically incorporate ethical marketing practices and marketing strategies to influence Gen Z purchasing decisions. In the quest to implement ethical marketing and marketing strategies, companies' marketing decisions should be in line with authentic, sustainable practices that meet Gen Z's values and aspirations.

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The influence of digital competency and awareness on students' e-resources usage in selected universities in Tanzania

Flora M. Chuma¹
Andrew W. Malekani²

¹floramsiga@gmail.com

²malekani@sua.ac.tz

^{1,2}College of Natural and Applied Science, Agriculture, Tanzania

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ABSTRACT

This study assessed the influence of digital competence and awareness on e-resource usage in universities. Specifically, it aimed to determine the types and levels of digital competence possessed by students, evaluate students' level of awareness regarding digital competencies required for accessing and using e-resources, and examine how students' digital competences and awareness influence their actual usage of e-resources. This study was guided by the DigComp model 2.2, which provides a well-established framework for assessing digital competence and awareness of the use of resources. A sequential explanatory research design was used. The total study population was 61,324, and the study sample size was 397. A stratified random sampling technique was employed to ensure that the sample represented different student groups across the three universities. Key informants were selected purposively, including library directors, IT technicians, and e-resources management staff. A questionnaire was used to collect data from respondents, and the return rate was 360. Quantitative data were analyzed using IBM SPSS v20 to obtain frequency and percentages. Binary logistic regression was performed to determine factors influencing the usage of e-resources. While qualitative insights were gathered through interviews with nine key informants. The findings revealed high awareness of e-resources among students, with a preference for open-access platforms. Digital content creation and problem-solving have been observed to be a noted gap in this study. Effective implementation of information literacy training was found to significantly influence e-resource usage in universities. The study recommends implementing digital literacy training, integrating digital skills training in the university curricula, and improving ICT infrastructures in universities. The study calls for policymakers to embed governance, privacy, and ethics discussions within digital competence and the utilization of e-resources.

Keywords: Digital Competence, Electronic Resources, E-Resource Usage, Universities

I. INTRODUCTION

In this modern era, Information and Communication Technology [ICT] plays a pivotal role in education. Technically, ICT refers to all forms of technologies that are being used for collecting, storing, editing, processing, and passing on information in various forms to the end-user. Previous literature by Ahmed and Malik (2020) found that in this digital era, ICT can be considered as a fundamental factor in the education sector, which has tremendous improvement in the passing of instructions, which has turned teaching into a form that embraces independent learning. In embracing the use of ICT in education, Higher Learning Institutions (HLIs) have been adopting the provision of electronic resources for learning purposes. Such electronic resources include multimedia, e-journals, and databases. These resources support teaching, learning and research (Yemi-Peters et al., 2022). However, even though there has been increased e-resources accessibility, the effective use of such resources remains upon the digital competence possessed by users (Kallas & Pedaste, 2022). Therefore, effective use of e-resources requires one to possess digital competency skills and knowledge.

According to Fernández-Batanero et al. (2022), digital competence is the ability and skills to use information technology tools to retrieve, assess, store, produce, present and exchange electronic information. Possessing digital competencies by e-resources users is essential to enable them to acquire, share and disseminate knowledge and enhance academic performance (Inamorato et al., 2023). In developed nations, there have been strategies to integrate digital competence into teacher education curricula and institutionalize it through national policies.

There are disparities existing globally in terms of digital competencies because some parts of the globe are limited by technological infrastructures (Vuorikari et al., 2022). In Europe and Nordic countries, digital competences are mapped as crucial in the education context, and it is included in teacher education curricula (Godhe, 2019; Sánchez-Caballé et al., 2021). The curricula put more emphasis on learners to have technical skills, critical thinking and the use



of modern technology tools. Despite this, however, there are disparities existing globally in some parts with limited infrastructure.

In Tanzania, several studies have revealed that University students possess digital competencies that allow them to access e-resources. For instance, the study conducted at Mzumbe University by Mosha et al. (2022) noted underutilization of e-resources by university students that was caused by a lack of appropriate ICT infrastructure and skilled personnel.

In addition to this, Harrison and Deans (2021) too pointed out that lacked skills for retrieving and evaluating available e-resources. This led to the underutilization of e-resources by students in universities. There have been efforts by Higher Learning Institutions (HLI) in Tanzania to make subscription to e-resources for use in teaching and learning purposes, but the reports indicate a low rate of usage of e-resources by students. The noted e-resources underutilization in (HLI) is caused by the limited availability of important infrastructures such as reliable internet connectivity, lack of digital skills among students, lack of access to e-resources and ICT infrastructures.

This suggests the existence of a huge gap between the availability of e-resources in universities and the students' digital competence to use the available resources. The problem addressed in this study is that even when the entire necessary infrastructure to harness the values of e-resources is present, students may fail to use the available e-resources in universities. Such a gap reinforced the need to conduct this study to find out the importance of digital skills in the retrieval and use of e-resources. The main aim of this study was to find out how the students' awareness and digital skills influence the use of e-resources in higher learning institutions in Tanzania.

The study aims to identify the digital competence that most significantly influences e-resources usage by students, and provide recommendations that may help to take action to incorporate digital competence knowledge and skills in the university's curriculum. In addition, the study intended to address the existing gaps so as to plan interventions to train and improve students' digital literacy. University students with digital competence can effectively use available ICT infrastructures embedded with e-resources. Therefore, this study was conducted to identify types of digital competencies, evaluate students' digital competence levels and assess the influence of digital competence on the use of e-resources in selected universities in Tanzania.

1.1 Research Objective

- i. To determine the types and levels of digital competences possessed by students
- ii. To evaluate students' level of awareness regarding digital competencies required for accessing and using e-resources.
- iii. To examine how students' digital competences and awareness influence their actual usage of e-resources.

II. LITERATURE REVIEW

2.1 Theoretical Literature Reviews on Digital competence and Awareness on the Use of E-resources

Understanding the digital competence and awareness of e-resources usage in selected universities in Tanzania required a framework grounded in capturing the complexity of the adoption of digital competence skills and e-resource usage. This study was guided by DigComp model 2.2, which provides a well-established framework for assessing digital competence and awareness on the use of resources.

2.1.1 Digital Competence Framework for Citizens (DigComp 2.2)

The European Union Developed the Digital Competence Framework for European Citizens (DigComp 2.2). The DigComp 2.2 was developed within European settings, and later on, the framework was adopted in the African context. Its applicability to Tanzania is supported by this prior adaptation to Africa. Several studies have been conducted in Tanzania, Kenya and South Africa assessing digital literacy in higher education, showing its applicability in low-resource environments (Malekani, 2024; Mtebe & Gallagher, 2022; Ndlovu, 2025).

Furthermore, Tanzania's National Information and Communication Technology Policy emphasize the development of digital skills for education and workforce readiness. This study reports the documented evidence of the existing underuse of e-resources due to skills gaps. The previous work by Mungwabi (2018) indicated reasons for underutilization of e-resources mentioning limited ICT infrastructures, and low digital literacy as the main cause.

Moreover, a study conducted at the University of Dar es Salaam and Sokoine University of Agriculture by Nalaila and Elia (2014) reported the existence of deficiencies in digital learning skills, minimal gender disparity and no competency gains across academic years. Furthermore, Mbago et al. (2025) reveal the existence of moderate digital proficiency in basic systems and weak areas like video conferencing. According to Komba and Mwakilasa (2019), students in Tanzania showed strength in collaborative digital and operational tasks, but they had limitations on critical



thinking, awareness and creativity skills. By using DigComp 2.2, this study offers a comprehensive way to evaluate digital competence among students from Tanzanian universities.

2.2 Empirical Review

2.2.1 Students' Awareness of Digital Competencies for E-Resource Use

Experience has shown that there has been an existing gap between the awareness of e-resources and possession of digital skills for retrieving, evaluation and use of e-resources. Cook et al. (2023) point out that student in Europe and the United States admit the importance of digital skills for employability, but many lack the capabilities to use such skills in the academic arena. In line with this the study that was conducted in China by Zhao et al. (2021) reported that students were noted to do better in social networking while were struggling to use the advance skills such as evaluation of e-resources.

In the case of Tanzania, many students do not have a good background in ICT use because many of them come from disadvantaged families. Many students from disadvantaged families have low digital literacy. This is supported by a study by Jackman et al. (2021), which revealed that individuals from underprivileged environments have limited exposure to the use of modern technology. A study conducted by Martzoukou et al. (2020) noted that the main challenge in using technology is to identify skills gaps among individuals due to the lack of standardized evaluation tools that can measure digital competence embedded in individuals. Several studies have indicated the existing gap between awareness and digital competence. This difference is a result of the socio-economic status of individuals. Thus, there is a need to integrate digital competence training into the formal curricula.

2.2.2 Types and Levels of Digital Competence Possessed by Students

Recently, digital competence has gained growing importance for university students. A study conducted by Timotheou et al. (2023) pointed out that digital technologies and digital competence provide students with access to e-resources, but also provide the best chances to learn and engage with learning materials. On the other side Kim et al. (2018) noted the existence of a relationship between possession of digital skills and the ability to learned faster, which leads into positive academic achievement.

Moreover, in line with this, a study by Limniou et al. (2021) noted that students with digital literacy were observed to concentrate in and kept fully engaged in classrooms, and has better academic performance even in difficult situations. In addition, students with digital capabilities performed better in informal education. A competent, digitally skilled person can use skills to retrieve e-resources from diverse sources. Moreover, Lopez et al. (2020) proposed a DigComp model, which stipulated that a digitally competent person can communicate and collaborate with fellows.

2.2.3 Students' Level of Awareness Regarding Digital Competencies Required for Accessing and Using E-resources

The global view of digital competence awareness among students varies across different educational and demographic contexts. According to Cook et al. (2023), revealed that even though students are aware of the importance of digital competence there is a gap that exists between awareness and the use of such skills. The difference is a result of factors, firstly, varying levels of access to technology, and secondly, the differences in education curricula.

In the Tanzanian context, some noted challenges face students in achieving the effective use of e-resources in universities. Some of these challenges include uneven exposure to technology among students, and a lack of effective institutional support. Martzoukou et al. (2020) noted that the lack of evaluation tools for identifying digitally competent individuals was a gap that exists. These differences are a result of differences in background and education curricula. Besides, Sanhueza et al. (2025) noted that students with limited exposure to technology were not able to use e-resources effectively. This requires a comprehensive plan beyond orientation programs to this bridge gap. Such plans should integrate the digital skills training in the national curricula at all levels and plan for regular information literacy programs.

2.2.4 Factors Influencing Student to Use E-resources in Universities

There has been a tendency for students and academic staff to use e-resources for learning, teaching and research purposes. In Tanzania, several studies have indicated factors which influence students to use e-resources in universities. A study by Mwantimwa et al. (2021) noted that information literacy skills were among the factors which influenced students to be able to retrieve, access, and use e-resources. However, many students had no formal training in digital competence.

Moreover, the study at the University of Dodoma by Komba and Mwakilasa (2019) revealed that students lacked digital skills for electronic resources access and use. Also, other factors that hinder e-resources usage were unreliable internet connectivity and other ICT infrastructure for e-resources usage. Findings from the study by Mbughuni (2023) revealed factors that hinder the usage of e-resources in universities. Such factors were insufficient ICT infrastructures.



Study by Ntorukiri et al. (2022), findings concur with other previous studies mentioned the limitation with ICT infrastructures as the challenges faced by university students to access and use electronic resources. Likewise, a study by Malekani (2024), conducted at the Sokoine University of Agriculture (SUA) findings revealed that orientation programs, and the creation of awareness were important strategies to increase the use of e-resources. However, information literacy training in universities is periodic, and the focus is on first-year students.

Mollet and Mwantimwa (2019) conducted a study at Nelson Mandela African Institution of Science and Technology (NM-AIST). The findings show that e-resources usage was facilitated by the presence of a subscription policy, availability of user support services, individual motivation, possession of digital skills, and perceived usefulness. However, weak institutional support always pulled students to resort to general internet searches rather than using e-resources from a subscription database.

Komba and Lwoga (2020) revealed that electronic resources use by postgraduate students was higher compared to that of undergraduates. Postgraduate students are research-demanding, which is why they rely on e-resources. From prior literature, few studies have thoroughly compared Tanzania students' competencies with regional and global perspectives, limiting understanding of how local challenges align with or diverge from the wider trends. Addressing these gaps, this study aimed to assess the award-winning possession of digital competences among Tanzanian universities.

III. METHODOLOGY

3.1 Research Design

This section presents the methodology employed in assessing digital competence and awareness on the use of e-resources in the selected universities in Tanzania. The study was carried out at three HLIs in Tanzania: Sokoine University of Agriculture, University of Dodoma, and Mzumbe University. These universities were purposively selected because they represent a diverse range of academic disciplines, and because they have established digital platforms and ongoing investments in ICT infrastructure and resources, as well as digital literacy programs, and they are regulated by the Tanzania Commission for Universities. A mixed research approach was used in this study, and a sequential explanatory research design was employed. This research design was applied due its suitability in mixed methods research. This research design allows quantitative data to be analyzed first then followed by the qualitative data to explain the quantitative results in more detailed.

3.2 Target Population

The target population of the study from three universities included SUA (15,800) students, UDOM (35,330), and MU (10,194) to make a total target population of 61,324 students across the three universities.

3.3 Sampling and Sample Size

A stratified random sampling technique was employed to ensure that the sample represented different student groups across the three universities. Key informants were selected purposively including library directors, IT technicians, and e-resources management staff. The study sample size for this study was 397.

The Israel table for sample size determination was used to get a sample for this study. The table provides guidelines for determining an appropriate sample size for a given population size and desired confidence level. According to Israel sample size table, if a precision of $\pm 5\%$ is chosen when the population is 61,324 this justifies the sample used in this study which is 397.

3.4 Data Collection Methods

Data was collected using questionnaire and interview methods. A total of 397 questionnaires were distributed, and questionnaire returned were 360 yielding a high response rate. Additionally, semi-structured interviews were conducted with a total of nine (09) key informants, three from each university. The study utilized both quantitative and qualitative methods. Quantitative method was used to collect numerical data from university students, while qualitative methods were employed to collect non-numerical data. Quantitative data were collected using a structured questionnaire, and qualitative data were collected. These methods were chosen basically to provide in-depth information about digital competence and e-resources usage.

3.5 Data Analysis

Quantitative data were analyzed using IBM SPSS v20, where descriptive statistics, such as frequency and percentage were examined. In addition, binary logistic regressions were performed to determine factors influencing the usage of e-resources. Qualitative information from Key Informant Interview (KIIs) was conceptualized, summarized, and analyzed using content analysis.



3.6 Validity and Reliability Test

The study ensured the validity by using the triangulation method by giving the instrument of data collection to experts in the field, including academic supervisors, and cross-checking the data through methods to confirm the consistency of the findings, and enhancing the overall validity of the research results. The validation process also involved piloting the instrument with a small sample of students from a different university to further refine the questions.

Reliability of the instrument was assessed using Cronbach’s Alpha (α), a widely used measure of internal consistency. The instrument was subjected to a pre-test on a few participants, and reliability was calculated based on the pretest data. A Cronbach’s Alpha score of $\alpha = 0.972$ was achieved, indicating a high level of internal consistency. This ensured that the instrument produced stable and consistent results across repeated trials.

IV. FINDINGS & DISCUSSIONS

4.1 Demographic Characteristics of Respondents

This section aims to present the demographic profile of the study respondents. Understanding the characteristics of the sample population provides important context for the study’s findings, especially in relation to digital competence and e-resource utilization.

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Table 1

Demographic Characteristics of Respondents

Variables		Frequency	Percentage
University	MU	68	18.9
	SUA	101	28.1
	DOM	191	53.1
	Total	360	100.0
Sex of respondents	Male	231	64.2
	Female	129	35.8
	Total	360	100.0
Education level	Undergraduate	250	69.4
	Postgraduate	110	30.6
	Total	360	100.0
Age of respondents	Less than 25 years	187	51.9
	25 to 35 years	122	33.9
	36 to 46 years	46	12.8
	47 to 57 years	5	1.4
	Total	360	100.0

The demographic information provides a picture of students from three selected Tanzanian universities: MU (18.9%), SUA (28.1%), and DOM (53.1%). The University of Dodoma had higher enrollment, reflecting its larger enrollment or sampling strategy. Regarding gender distribution, male respondents accounted for 64.2%, while females represented 35.8% of the sample. This gender imbalance may mirror existing enrollment patterns in certain fields of study or institutions, potentially influencing the level and type of digital engagement observed in the findings. In terms of educational level, a significant majority of participants were undergraduates (69.4%), while 30.6% were postgraduate students. This indicates that the findings largely reflect the experiences and competencies of undergraduate students, who are typically the primary users of e-resources for academic learning. The age distribution shows that more than half of the respondents (51.9%) were under the age of 25, followed by 33.9% aged between 25 and 35. Smaller proportions were in the 36–46 age (12.8%) and the 47–57 (1.4%). The dominance of younger students aligns with expectations for a university population and may have implications for digital competence, as younger users are often more familiar with digital tools, although not necessarily more skilled in academic e-resource usage.



4.2 Digital Competences Possessed and that Facilitate the Use of E-Resources

This subsection sought to assess the digital competences possessed by students and how these competences facilitated their ability to effectively utilize electronic resources. The results in Table 5 provided insight into the average proficiency and variability of skills in each competence. Key: *Decision Rule if mean is 1.00 to 1.74= Not competent; 1.75 to 2.49 = Average competent; 2.50 to 3.24 = Competent, 3.25-4.00 = highly competent

Table 2

Digital Competences that Facilitate the Use of E-Resources

Digital competencies	N	Min	Max	Mean	Std. D
Information and digital literacy skills	360	1	4	2.15	.634
Digital content creation skills	360	1	4	1.98	.766
Communication and collaboration skills	360	1	4	2.84	.995
Problem solving skills	360	1	4	2.41	.733
Ethical and Safety skills	360	1	4	2.49	1.053
Overall average mean				2.37	0.84

The results in Table 2 found competency (=2.84) for communication and collaboration among university students in applying electronic resources, reflecting their ability to use reference software management tools. On the other hand, the results show competency (=2.41) in elementary problem solving as digital competence among students in addressing and resolving problems using digital tools and technologies. This is especially in areas of using anti-viruses to protect devices. Therefore, the findings demonstrated good competency possession among students, with notable weakness in digital content creation.

4.3 Awareness level of E-resources

This section discusses the distribution of students' self-reported awareness levels of e-resources. Table 3 presents the percentage of students' awareness levels.

Table 3

Awareness level of E-resources

Awareness level	Frequency	Percentage
Highly aware	114	40
Moderate aware	108	30
Slightly aware	58	16.1
Not aware at all	50	13.9
Total	360	100.0

Results in Table 3 reveal that the majority of students (70%) perceive themselves as highly or moderately aware of e-resources, indicating a generally positive level of awareness. Nonetheless, 16.1% and 13.9% reported being slightly aware and not aware at all, highlighting the concern in knowledge for a portion of the students. This gap could potentially limit equitable access to academic and research materials, thereby affecting their academic performance and research activities

4.3.1 Awareness of Electronic Resources Available in Universities

This subsection examined the awareness of students on the available e-resources in their respective universities as indicated in Table 4.

The findings in Table 4 reveal that students' awareness and usage of the available e-resources vary significantly across universities. The results show that open access resources such as Google Scholar (242; 67.2%) and Wikipedia (236; 65.6%) were well-known by students. Similarly, Oxford Journals (165; 48.8%) and Nature Journals (129; 35.8%) were known and relatively well-utilized compared to other subscription-based resources. However, specialized academic databases recorded much lower recognition and usage, with Cochrane Reviews (45; 12.5%), AGORA (63; 17.5%), and TEEAL (57; 15.8%) being among the least used. PubMed (85; 23.6%) and AJOL (69; 19.1%) had a moderate presence, suggesting that certain fields, such as medical and African research, had some visibility among the students.

The dominance of freely accessible platforms indicates that while students are engaging with electronic resources, their reliance leans heavily towards open and easily accessible sources rather than subscribed scholarly databases. This trend may reflect issues of accessibility, awareness, training, or ease of navigation of these platforms.



Table 4
Electronic Resources used in Universities

E-Resource	MU n (%)		SUA n (%)		UDOM n (%)		Total n (%)	
	n	%	n	%	n	%	n	%
HINARI	8	8.5	34	36.2	52	55.3	94	100.0
Sage Publications	13	14.8	22	25.0	53	60.2	88	100.0
AGORA	6	9.5	23	36.5	34	54.0	63	100.0
OARE	8	13.3	25	41.7	27	45.0	60	100.0
Wiley Online Library	16	12.7	39	31.0	71	56.3	126	100.0
Emerald Insight	12	12.5	35	36.5	49	51.0	96	100.0
JSTOR	14	14.9	28	29.8	52	55.3	94	100.0
Taylor & Francis	18	18.2	24	24.2	57	57.6	99	100.0
TEEAL	3	5.3	36	63.2	18	31.6	57	100.0
PubMed	5	5.9	16	18.8	64	75.3	85	100.0
BioMed Central	8	13.3	16	26.7	36	60.0	60	100.0
Google Scholar	37	15.3	63	26.0	142	58.7	242	100.0
AJOL	8	11.6	31	44.9	30	43.5	69	100.0
Cochrane Reviews	6	13.3	10	22.2	29	64.4	45	100.0
DOAJ	10	13.0	30	39.0	37	48.1	77	100.0
Wikipedia	42	17.8	56	23.7	138	58.5	236	100.0
Nature Journals	20	15.5	27	20.9	82	63.6	129	100.0
Oxford Journals	31	18.8	33	20.0	101	61.2	165	100.0

4.3.2 Frequency of E-Resources Usage across Universities

Table 5 shows the frequencies of students at the selected universities: Mzumbe University, University of Dodoma and Sokoine University of Agriculture, measuring the frequency of e-resources usage.

Table 5
Frequency of E-Resources Usage across Universities

	Daily	Weekly	Monthly	Once in three months	Never used
MU	15.5	19.8	12.5	29.2	42.9
SUA	28.4	28.1	34.4	16.6	28.6
UDOM	56.1	52.1	53.1	54.2	28.5
Total	100.0	100.0	100.0	100.0	100.0

The findings reveal that students from UDOM showed the highest frequency of e-resource usage, whereby 105 (56.1%) students used e-resources daily, compared to 53 (28.3%) students from SUA, indicating that students in these universities are actively engaged with digital learning resources. In contrast, Mzumbe University MU had the lowest proportion of students accessing e-resources across all categories of usage. Notably, 42.9% of MU students reported that they had never used e-resources, the highest proportion among the three universities.

4.3.3 Ways in Which Students' Digital Competences and Awareness Influence Usage of E-resources

This subsection examined the extent to which students' digital competences and socio-demographic factors influence their use of e-resources.

Table 6
Factors Influencing Usage of E-Resources

Variables in the Equation	B	S.E.	Wald	df	Sig.
Information and Digital Literacy skills	78.635	30565.674	7.981	28	1.000
Digital Content Creation skills	-19.183	11619.705	9.339	12	.674
Communication and Collaboration skills	15.582	41214.186	8.204	4	.084
Problem Solving skills	-1.757	18895.044	9.171	9	.422
Ethical and Safety skills	.486	1.356	.175	3	.981
Sex	-113.376	310.791	.133	1	.715
Education	-89.810	277.339	.105	1	.746
Age (years)	.119	.078	2.368	1	.124
Experience in using e-resources	-.046	.110	.176	1	.674
Availability of infrastructure	12.462	41514.054	8.301	1	.065



The binary regression results indicate no statistically significant predictors of the variable that influence use. This contributes to the moderate use of e-resources. The Wald χ^2 values for all predictors are very small, and their corresponding p-values are well above the conventional significance threshold of 0.05, as shown in Table 5. The findings revealed that there is no statistically significant difference between digital competencies and use of e-resources since the $p > 0.05$ (Table 5). This implies that although all the factors had an influence on usage of e-resources, none of them had a unique influence over others. This was confirmed during the interview, as one of the respondents said that;

“I have never attended any training related to information literacy that aimed to equip students with necessary skills for utilizing e-resources, but I managed to use library e-resources” (Librarian 3).

4.4 Discussion

4.4.1 Students' Level of Awareness Regarding Digital Competencies Required for Accessing and Using E-resources

The study found that most students in Tanzanian universities are aware of the digital competencies required for the utilization of the e-resources. This reflects the efforts by Higher Learning Institutions (HILs) in Tanzania by promoting access to e-resources through orientation program, library guides and digital platforms. This finding is consistent with the study done by Dhiman (2021), which revealed that research scholars have high awareness of e-resources. Similarly, the study conducted in Nigeria by Adenariwo (2022) found that Nigerian undergraduate students perceive a high level of awareness and active use of e-resources. However, the contribution of this study lies in clarifying that high awareness is not sufficient to ensure effective use of e-resources.

However, awareness alone does not always translate into effective engagement. As shown in this study, most of the students depend on open access resources such as Google Scholar and Wikipedia over specialized databases, which reveal the gap between knowledge and the ability to use e-resources meaningfully. The study done by Sulle and Wema (2023) supports that while awareness of e-resources is relatively high in Tanzanian universities, students, particularly undergraduates, often lack exposure to structured training on how to use these resources effectively. Likewise, Sanhueza et al. (2025) reinforced this by showing that when institutions actively promote resources through workshops and training, awareness translates more directly into use, improving academic outcomes. On the other hand, the study adds potential to the awareness debate by revealing that in low-resource settings like Tanzania, awareness without skill development creates only partial engagement with digital resources. This provides a decisive and actionable direction for university policy, shifting the focus from promotional campaigns about e-resource existence to integrative training modules on e-resource utilization.

4.4.2 Types and Levels of Digital Competences Possessed by Students

The study findings indicate that Tanzania university students possessed varied levels of digital competence; they showed to have relative abilities in collaboration, digital safety and communication. Findings indicate that students were comfortable using social media platforms, basic online security practices, and group messaging apps such as WhatsApp, reflecting the spread of mobile phone technologies in Tanzania. This indicates that university students in Tanzania possess average levels of digital skills. These findings relate to a previous study by Jackman et al. (2021) which found that students indicated possessing moderate to low digital skills across the technical and information fields. The findings are similar to the study by Lopez et al. (2020), which described that students scored better in information literacy and collaboration than in digital content creation.

However, findings show that students lacked skills in advanced digital problem-solving and content creation. This meant that university students lack formal training in areas of content creation and problem-solving. Students certified this by revealing they experience difficulties in creating academic content, data presentation or multimedia learning resources despite being experts at using social media in accessing and disseminating online materials. Findings revealed students had limitations on critical problem-solving skills, such as assessing the trustworthiness of electronic resources and differentiating predatory journals from genuine journals. During the interview, a Head of Section from a visited university commented that.

“What we have observed is that, despite taking efforts to subscribe to e-resources from different publishers, very few e-resources from diverse databases are being used by students. In our university, very few postgraduate students have been able to use e-resources from subscribed databases. As a result, we have been receiving complaints from our donors due to this inappropriate practice” (Head of Section, 2025).

These findings add new understandings into Tanzania students' digital competence behaviors that are mostly shaped by informal peer-driven learning through mobile phone usage, thus creating digital skills competence imbalances. These gaps in digital skills among university students in Tanzania explain why most students rely on free, open-access platforms such as Google Scholar or Research Gate while underutilizing e-resources subscribed to from various databases.



In comparison to European or North American context where digital literacy training is embedded into formal training curricula majority students have digital competency skills to search, evaluate, use and sharing e-resources (Limniou et al., 2021), while Tanzanian universities tends to orient students on general ICT training rather than focusing to digital literacy skills that could help students to develop skills for academic e-resources searching, evaluating, use and sharing. This shows that informal training shown by university students in Tanzania is insufficient to develop higher-order digital competence such as online content creation. Thus, it is high time for universities in Tanzania to include courses of digital competence skills in the universities curricula.

4.4.3 Factors Influencing Usage of E-resources and Digital Competence Possessed by Students

Findings from regression analysis show that none of the predictor variables, including communication, collaboration, content creation, safety, problem solving and demographic factors, indicated a statistically significant influence on e-resources usage. These findings suggest that usage patterns may be shaped by a combination of several aspects rather than a single domain. These findings diverge from the prior study by Mollel and Mwantimwa (2019); Komba and Mwakilasa (2019), which revealed that information literacy and knowledge of library systems were the strong predictors of e-resources use in Tanzanian universities. This meant that two variables determined the usage patterns.

Similarly, another prior study with divergence is the study conducted at the Sokoine University of Agriculture by Malekani (2024), which described that information literacy training significantly increases use of e-resources, while Mwantimwa et al., (2021) highlighted the role of institutional support. Institutional support is important to ensure that available e-resources are effectively used. Lack of sufficient technological infrastructures was mentioned in previous literatures as factors that hinder e-resources use. Furthermore, earlier studies (Mbughuni, 2023) identified several factors that hinder the use of e-resources in universities in Tanzania. Limited ICT infrastructure, unreliable internet supplies. These factors did not indicate statistical significance in the regression analysis results which meant they influenced indirectly thus cannot be ignored.

Lastly, findings indicated a lack of significant influence from demographic variables such as educational level, gender, sex and age. These findings are in line with the results from a previous study by Mosha et al. (2022), which showed that demographic factors become less relevant when access and training are controlled. Furthermore, Komba and Lwoga (2020) found that higher e-resources use among postgraduate students, signifying demographic effects, may be context-specific. The non-significance in this sample may therefore reflect a more similar sample in which motivation and access to resources were relatively evenly distributed.

V. CONCLUSION & RECOMMENDATION

5.1 Conclusion

This study investigated the influence of digital competence and awareness on the use of resources in the selected universities in Tanzania (MU, SUA and UDOM). The study findings showed that most students are aware of available e-resources in their institutions; this awareness often falls into meaningful e-resources usage. Instead, university students access e-resources through open-access platforms such as Wikipedia and Google Scholar. The advanced digital competence skills, such as digital content creation and problem solving, remained underdeveloped among students.

5.2 Recommendation

The study recommends that digital competence be integrated into the university curriculum. Digital literacy and information literacy modules should be incorporated in postgraduate and undergraduate curricula. Integrating digital competence in curricula should be aligned with the international framework, like DigComp2.2. Also, regular and inclusive digital competence training needs to be provided for all students in universities, including hands-on skills, especially the use of advanced skills such as the evaluation of information.

The study recommends that the role of institutional support is very important to ensure e-resources usage; especially investments in stable internet, use updated computer labs, and create an environment for easy accessibility of database hosting e-resources. Lastly, the study recommends that academic libraries need to develop outreach programs and marketing strategies to create awareness among university students. The main emphasis should be to create awareness on the availability of e-resources hosted in several databases, and the need to emphasize to students learns how to use digital tools available in their learning environment.



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Political economy analysis of party ideologies and electoral outcomes in Ghana

Gbensuglo Alidu Bukari¹

¹gbukari@uds.edu.gh

¹<https://orcid.org/0009-0002-8160-6620>

¹University for Development Studies, Ghana

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ABSTRACT

This paper examines the effect of party ideology on electoral outcomes in Ghana, with a focus on the mediating roles of economic performance and socio-demographic factors. The study employs a cross-sectional time-series design grounded in the framework of political economy. Using electoral and macroeconomic data from 1992 to 2024, an Ordinary Least Squares (OLS) regression model estimates the determinants of vote share for Ghana's major parties in the nine elections. Findings indicate that ideology provides insight into electoral preferences, but it has limited explanatory power without considering broader structural variables. Economic performance, especially Gross Domestic Product (GDP) growth and inflation, proves decisive, alongside regional and demographic influences. These findings, therefore, highlight that Ghanaian elections reflect complex interactions between ideology, economics, and voter choice in elections. Based on this conclusion, Political parties should enhance the substantive policy content of their ideologies by advancing coherent, implementable programmes, while institutional safeguards, particularly fiscal responsibility rules, must be reinforced to curb election-year distortions and promote long-term macroeconomic stability.

Keywords: Democracy, Economics, Election, Ideology, Politics, Political Party, Voting, Ghana

I. INTRODUCTION

Ghana has been hailed as a shining example of democracy in West Africa since the return to constitutional rule in 1992 (Ayee, 2008; Gyimah-Boadi, 2009; Whitfield, 2009). Under the Fourth Republic, the nation has held nine consecutive general elections, each of which has been marked by orderly power transfers and comparatively peaceful competition between the two main political parties, the National Democratic Congress (NDC) and the New Patriotic Party (NPP). Political stability and a favourable atmosphere for socioeconomic growth and citizen involvement in governance have been made possible by this democratic consolidation (Boafo-Arthur, 2006; Lindberg, 2010; Anaman & Bukari, 2019b). Notwithstanding these developments, Ghanaian electoral politics are still complex and influenced by a wide range of interconnected elements outside of the purview of official democratic processes.

Voter preferences and election results are influenced by a convergence of sociocultural factors, economic performance, historical legacies, and party ideologies (Ninsin, 2006; Bratton & Logan, 2006). These dynamics can be examined through the lens of political economy. Political and economic analysis can be combined to provide a more nuanced understanding of how parties convert their ideological stances into policy agendas and how the electorate responds to these agendas (Downs, 1957; Lewis-Beck & Paldam, 2000). Party platforms in Ghana have historically been shaped in part by ideology. While the NDC bases its stance on social-democratic ideals, state-led interventions, and welfare-oriented policies, the NPP prioritises liberal-conservative principles, market-friendly policies, and growth driven by the private sector (Osei, 2013; Whitfield, 2009; Anaman & Bukari, 2019a). Yet, empirical observations suggest that ideology is often mediated by contextual factors such as regional identity, ethnic affiliation, economic performance, and patronage networks (Gyimah-Boadi, 2013; Lindberg, 2010). This interplay between ideology and pragmatism forms the core analytical concern of this study, raising fundamental questions about the extent to which Ghanaian voters adhere to ideological principles versus material incentives when making electoral choices.

Ghana's two major parties appear ideologically distinct, but closer analysis reveals complex differences that shape policy and electoral strategies. The New Patriotic Party (NPP) follows classical liberalism and the Danquah-Busia tradition, focusing on economic liberalisation, private enterprise, rule of law, and democratic governance (Ninsin, 2006; Bukari, 2023). The NPP aims for macroeconomic stability, entrepreneurship, foreign investment, and education that boosts individual economic agency. By contrast, the National Democratic Congress (NDC) is rooted in Rawlings-era social democracy, promoting social equity, welfare, state intervention in strategic sectors, and resource redistribution to

marginalised groups (Whitfield, 2009). This ideological divide shapes not just policy but also electoral strategy, messaging, and constituency outreach (Osei, 2013).

Nevertheless, while these ideological positions are well-documented in party manifestos and campaign platforms, research suggests that voters' adherence to ideology is conditional. Gyimah-Boadi (2013) observes that Ghanaian voters often weigh economic performance, visible development outcomes, and access to state resources more heavily than abstract ideological commitments. This creates a hybridised electoral environment in which ideology coexists with pragmatism. For instance, NPP policies emphasising private sector growth may garner support in urban areas with educated, economically active populations. NDC initiatives targeting rural communities and social welfare programs tend to resonate more strongly in regions historically aligned with the party (Whitfield, 2009; Lindberg, 2010). This duality highlights the necessity of analysing ideology within the broader socio-economic and political context, rather than treating it as an isolated determinant of electoral outcomes. Economic conditions are widely recognised as central determinants of electoral outcomes. These often interact with party ideology in complex ways. In Ghana, macroeconomic performance indicators such as GDP growth, inflation, unemployment, fiscal balance, and government expenditure play a pivotal role in shaping voter perceptions of government competence (Lewis-Beck & Paldam, 2000; Lindberg, 2010). Parties that deliver tangible economic gains, control inflation, and reduce unemployment tend to enjoy electoral advantages, irrespective of their ideological orientation (Bratton & Logan, 2006). Conversely, periods of economic decline, inflationary pressures, or fiscal mismanagement frequently erode incumbents' support and create opportunities for opposition parties (Nordhaus, 1975).

By connecting voter behaviour and party strategy with structural economic realities, the political economy perspective sheds light on this relationship. According to Whitfield (2009), elections in Ghana are a referendum on the performance of the government as well as an ideological contest. The NPP and NDC, for instance, have both historically implemented practical policy interventions meant to garner public support, such as infrastructure development, social protection programs, and targeted subsidies, despite ideological differences (Osei, 2013; Gyimah-Boadi, 2009). These interventions support the claim that ideology alone cannot adequately explain electoral outcomes by implying that parties modify their ideological commitments in response to the state of the economy. Thus, a crucial analytical axis for comprehending the factors influencing voting behaviour in Ghana is the intersection of ideology and economic performance (Anaman & Bukari, 2019b).

Beyond ideology and economics, socio-political factors such as regional identity, ethnicity, religion, and historical partisan loyalty significantly shape Ghana's electoral outcomes. For instance, partisan alignment strongly follows regional cleavages (Ninsin, 2006). The Northern and Volta regions have traditionally supported the NDC. In contrast, urban centres such as Accra and Kumasi tend to favour the NPP (Osei, 2013). These patterns reveal that voter behaviour is shaped by more than policy or ideology; social identity and collective historical experiences also play an important role. Patronage and clientelism add further complexity to voting decisions. Political actors often use state resources, infrastructure projects, and social programs to build loyalty and mobilise voters (Whitfield, 2009; Lindberg, 2010). As a result, voters often consider immediate material benefits alongside ideology when choosing candidates. This hybrid of ideology, incentives, and socio-cultural factors questions narrow views of electoral behaviour and highlights the need for a multidimensional approach. This paper places party ideology in a wider political economy. It examines how ideology interacts with economic performance and socio-political realities to shape elections. The goal is to offer a framework for understanding voting behaviour in Ghana and to contribute to debates on the role of ideology in emerging democracies.

The structure of the paper is as follows. After the introduction, the literature review sets this study in the context of research on elections, party ideologies, and economic voting in Africa and Ghana. The theoretical framework and hypotheses section explains the concepts and testable ideas for analysis. The methodology section describes the study design, data sources, variables, and the OLS regression model. The findings section presents empirical results, including statistically significant relationships and key trends. The following analysis and discussion interpret these results in light of Ghana's political context and the wider literature. The conclusion summarises the main findings. The conclusion summarised the key findings, while the policy recommendations section proposes measures to strengthen political and economic governance in Ghana. This is followed by the references used and cited in the paper.

1.1 Research Problem

Since 1992, Ghana has consolidated its reputation as a beacon of democracy in Africa, sustaining nine consecutive elections and facilitating peaceful transfers of power between the two dominant parties, the New Patriotic Party (NPP) and the National Democratic Congress (NDC). While this democratic consolidation has created a relatively stable political order, electoral competition in Ghana remains shaped by more than institutionalised democratic processes. Scholarship highlights that voter behaviour is determined by a convergence of ideology, socio-cultural cleavages, patronage dynamics, and economic realities (Gyimah-Boadi, 2013; Lindberg, 2010). Political ideology, manifested in the NPP's liberal-conservative, market-oriented philosophy and the NDC's social-democratic, welfare-



driven orientation, undoubtedly informs party identity and electoral messaging. However, evidence suggests that ideology alone does not sufficiently explain electoral outcomes, as voters frequently base decisions on material incentives, macroeconomic performance, and social identity (Whitfield, 2009; Osei, 2013). This tension between ideological commitments and pragmatic considerations complicates the study of Ghana's democratic politics.

The persistence of hybridised voting behaviour poses an analytical problem for understanding democratic consolidation in Ghana. While party manifestos articulate distinct ideological orientations, in practice both the NPP and NDC adjust their policies to reflect prevailing economic realities and the need for electoral support. Consequently, elections in Ghana can function simultaneously as ideological contests and referenda on government performance (Whitfield, 2009; Anaman & Bukari, 2019b). Yet, existing studies often privilege one dimension, either ideology or economic performance, without sufficiently interrogating their interaction with socio-political factors such as ethnicity, regionalism, and patron-client networks. This creates a knowledge gap regarding how ideology, economics, and social identity collectively shape electoral choices. Addressing this gap is critical not only for understanding the dynamics of Ghanaian politics but also for advancing broader debates on whether ideology truly matters in African electoral contexts, or whether voters primarily act on short-term material and identity-based considerations.

1.2 Research Hypotheses

- H₀₁*: Party ideology significantly influences electoral outcomes in Ghana, with the NPP's liberal-conservative orientation positively associated with vote share in urban regions, and the NDC's social-democratic orientation positively associated with vote share in rural regions.
- H₀₂*: Macroeconomic performance mediates the effect of party ideology on electoral outcomes, such that strong GDP growth, low inflation, and reduced unemployment enhance the vote share of the incumbent party regardless of ideology.
- H₀₃*: Regional and socio-cultural factors moderate the relationship between party ideology and electoral outcomes, with historically loyal regions amplifying the effect of ideology on voter behaviour.
- H₀₄*: There is a significant interaction effect between party ideology and economic performance, whereby ideological alignment increases electoral support more strongly during periods of favourable economic conditions.

II. LITERATURE REVIEW

2.1 Theoretical Review

The analysis of party ideologies and electoral outcomes in Ghana is grounded in a political economy framework, integrating theories of voting behaviour, party competition, and economic performance. Political economy provides a lens to examine how institutions, economic structures, and social contexts interact to shape electoral outcomes. In Ghana, electoral behaviour is influenced not only by formal institutions and party ideology but also by macroeconomic conditions, regional cleavages, and socio-cultural dynamics.

2.1.1 Rational Choice Theory

Rational choice theory suggests that voters base their electoral decisions on a cost-benefit analysis to maximise their utility (Downs, 1957; Fiorina, 1981). In this approach, voters assess parties and candidates not just on ideology but also on tangible outcomes like economic performance, access to public goods, and resource distribution. In Ghana, this theory indicates that although voters might have ideological preferences such as favouring the NPP's liberal-conservative policies or the NDC's social-democratic stance, they tend to support parties that deliver favourable economic conditions, social welfare, and local development. This rational assessment explains why ideology alone doesn't fully predict electoral results and highlights the importance of incumbents' economic records. The spatial model of voting (Downs, 1957) complements rational choice theory by stressing policy proximity, the closeness of parties' and voters' positions on key issues. According to this model, voters choose parties whose policies align most closely with their preferences, especially in stable democracies. Rational choice also emphasises that voters consider material outcomes like GDP growth, inflation, and employment levels (Fiorina, 1981). In Ghana, these frameworks suggest that while party ideology influences electoral platforms, voter behaviour is also shaped by pragmatic factors such as economic performance, social welfare expectations, and regional concerns. For instance, urban voters might prioritise policies that support entrepreneurship and private-sector growth, aligning with NPP, while rural voters may focus on welfare programs and social equity, matching NDC platforms. Overall, spatial theory offers a useful way to connect ideology with voter preferences across diverse demographic and regional contexts.

2.1.2 Economic Voting Theory

Economic voting theory asserts that voters reward or punish incumbents based on perceived economic performance (Lewis-Beck & Stegmaier, 2000). Macroeconomic indicators such as Gross Domestic Product (GDP) growth, inflation, unemployment, and fiscal management influence electoral support. In Ghana, empirical studies suggest that NPP and NDC vote shares are sensitive to economic performance: strong economic growth tends to benefit incumbents, whereas economic downturns favour opposition parties. Economic voting theory thus complements rational choice and spatial theories by highlighting the mediating role of macroeconomic conditions in shaping the influence of ideology on electoral outcomes.

2.1.3 Sociological Theory

Socio-political cleavage theory highlights that historical, regional, ethnic, and religious divisions influence party support (Lipset & Rokkan, 1967). In Ghana, regional loyalties and ethnic affiliations mediate ideological effects, with the NDC traditionally dominant in Northern and Volta regions and the NPP in Ashanti and Greater Accra. This theory explains persistent voting patterns that cannot be accounted for by ideology or economic performance alone, highlighting the need for a multidimensional analytical framework.

In this paper, the theoretical framework integrates party ideology, economic performance, and socio-political cleavages as key determinants of electoral outcomes. In this paper, the dependent variable is the incumbent party's vote share, while independent variables include party ideology, GDP growth, inflation, unemployment, government expenditure, fiscal balance, and regional dummies. The framework posits that ideology affects voter preferences directly but is moderated by economic performance and socio-political factors, producing observed electoral outcomes.

2.2 Empirical Review

Political economy as a discipline examines the interaction between political institutions, economic systems, and social outcomes, providing an essential framework for understanding electoral behaviour. North (1990) emphasises that institutions shape incentives, which in turn influence economic and political outcomes. Within the context of elections, institutional frameworks, including electoral rules, party systems, and campaign regulations, affect how ideological commitments translate into voting behaviour.

Ideology frequently interacts with structural and contextual factors like ethnicity, religion, and past party loyalties, according to comparative studies of emerging democracies like Kenya, Nigeria, and Senegal (Posner, 2005; Bratton & van de Walle, 1997). These results highlight the need for a multifaceted analysis of election results that takes into account socioeconomic, political, and ideological factors. Historical political traditions form the foundation of Ghana's Fourth Republic's ideological landscape. Drawing on the Danquah-Busia tradition, the NPP prioritises rule-of-law governance, free-market economics, and liberal-conservative values. Its policy stance encompasses fiscal restraint, entrepreneurship encouragement, and privatisation (Whitfield, 2009). On the other hand, the NDC is rooted in the Rawlings era's social-democratic ideology, which prioritises welfare, social justice, and state-led economic growth.

Research reveals that economic performance, rather than strict ideological loyalty, predominates in shaping Ghanaian electoral outcomes. While ideological differences between parties like the NPP and NDC manifest in policy and strategy, the NPP appeals more to urban, economically literate voters, and the NDC to rural ones via redistributive policies; both parties quickly adopt pragmatic approaches when faced with political or economic pressures (Fridy, 2007; Gyimah-Boadi, 2013). For instance, the NPP has implemented welfare programs similar to the NDC's, while the NDC has pursued privatisation to manage economic crises. This points to a persistent ideological fluidity, as parties prioritise voter expectations, regional dynamics, and macroeconomic challenges over consistent doctrine. Thus, electoral success in Ghana is more closely tied to economic outcomes than to ideological consistency. Empirical studies consistently link GDP growth, inflation, employment, and fiscal performance directly to perceptions of incumbent competence and prospects for reelection (Whitfield, 2009; Lindberg, 2006). For instance, the NPP's successes in 2000 and 2016 tracked with economic growth, while the NDC leveraged stabilisation post-downturn in 2008. Even when platforms differ ideologically, parties that deliver economic gains attract wider support. Targeted investments and social programs further amplify electoral appeal, underscoring that in Ghanaian elections, pragmatism typically outweighs ideology, reinforcing rational choice theory in voter behaviour.

Party ideology shapes not only policy but also electoral strategy and communication. Campaigns in Ghana often frame ideological distinctions in terms of economic management, social welfare, and governance competence. The NPP emphasises entrepreneurship, economic liberalisation, and private sector growth, while the NDC stresses social equity, public investment, and welfare expansion (Bukari, 2022). However, research indicates that campaign messaging frequently blends ideological cues with tangible benefits, reflecting strategic adaptation to voter preferences (Whitfield, 2009). For example, infrastructure promises, subsidies, and targeted welfare programs are highlighted alongside ideological narratives to mobilise diverse constituencies. This strategy underscores the hybrid nature of ideology in Ghana, and it provides a guiding framework but is often pragmatically adapted to maximise electoral appeal. Several



empirical studies have quantified the influence of ideology and economic performance on Ghanaian elections. Using regression models and survey data, Whitfield (2009) and Gyimah-Boadi (2013) demonstrate that while ideological alignment explains variation in voter preferences, macroeconomic indicators, regional affiliation, and access to patronage are stronger predictors of vote share. Recent analyses indicate that the NPP’s ideological emphasis on liberal-conservative policies correlates with higher vote shares in urban and economically active regions. The NDC’s social-democratic orientation predicts stronger performance in rural and historically loyal regions. Economic indicators (GDP growth, inflation, fiscal balance) exert significant influence across constituencies, sometimes overriding ideological considerations. These findings support the notion that ideology in Ghana is a necessary but insufficient condition for electoral success; it must be complemented by economic performance, regional engagement, and strategic campaign messaging (Bukari et al, 2024).

Ghanaian electoral behaviour is shaped by regional and ethnic affiliations. These factors interact with ideology and economic performance. Studies by Lindberg (2006) and Gyimah-Boadi (2013) highlight persistent regional voting patterns. The Northern and Volta regions typically show loyalty to the NDC, while the Ashanti and Greater Accra regions lean toward the NPP. These patterns reflect long-standing socio-political cleavages, including historical party formation, disparities in regional development, and ethnic alignment. Ethnicity and religion further influence electoral dynamics, especially in rural areas where social networks facilitate collective voting (Anaman & Bukari, 2021). In some cases, regional solidarity or access to state resources outweigh ideological commitments. Patronage politics compounds this effect. Parties strategically distribute material benefits to cultivate loyalty among key constituencies (Fridy, 2007). Socio-cultural determinants thus mediate the influence of ideology on voter behavior. This highlights the complex interplay between identity, policy, and pragmatism in shaping Ghanaian electoral outcomes.

While existing research offers extensive insights, notable gaps persist. Limited studies combine party ideology, economic performance, and socio-cultural factors within a unified framework across multiple election cycles. Most research narrowly focuses on either ideology or economic voting, without clearly modeling their interaction. Additionally, there has been limited attention given to temporal changes in voter behavior, particularly how shifting economic conditions affect the relative importance of ideology across election cycles (Bukari, 2022). This study addresses these gaps by adopting a political economy approach, analyzing electoral outcomes from 1992 to 2024 using OLS regression models that incorporate ideology, economic indicators, and regional/socio-demographic variables. This approach enables a deeper understanding of how multiple determinants interact to influence vote share, providing a more comprehensive view of Ghanaian electoral dynamics.

III. METHODOLOGY

3.1 Study Design

The cross-sectional time-series design used in this study is based on the framework of political economy. It examines data from Ghana’s 1992–2024 general elections. It examines the impact of sociopolitical variables, macroeconomic performance, and party ideology on election results across several election cycles is made possible by the design. Secondary data from reliable sources is used in the study. The Ghanaian Electoral Commission and secondary datasets, such as party vote shares by election year, provided the electoral data. The World Bank’s World Development Indicators, the Bank of Ghana Annual Reports, and the Ministry of Finance were the sources of the macroeconomic indicators, which included GDP growth, inflation, fiscal balance, exchange rate, and money supply. Socio-demographic variables such as regional swing and urbanisation were extracted from Ghana Statistical Service reports and national census data. The dataset is shown in Table 1 below.

Table 1
Dataset (Determinants of Electoral Outcomes in Ghana, 1992-2024)

Election Year	Party Ideology (0=NDC, 1=NPP)	GDP Growth (%)	Inflation (%)	Fiscal Balance (% GDP)	Exchange Rate (log, GHS/USD)	Regional Swing (0/1)	Urbanisation (%)	Incumbent Vote Share (%)
1992	0	5.3	18.5	-5.0	0.52	0	36.2	58.3
1996	0	4.8	24.6	-6.2	0.64	0	38.1	57.0
2000	1	3.7	25.0	-8.1	0.92	1	39.8	48.2
2004	1	5.8	12.6	-4.5	1.22	1	42.6	52.4
2008	0	6.1	16.5	-9.0	1.53	1	45.1	49.8
2012	0	8.0	9.2	-7.2	1.83	1	48.7	50.6
2016	1	3.4	17.7	-8.6	2.12	1	51.2	53.7
2020	1	0.9	10.0	-11.3	2.41	0	54.8	51.3
2024	0	4.5	14.1	-6.7	2.66	1	57.0	49.2



3.2 Model Specification

The dependent variable is the incumbent vote share (percentage of valid votes received by the ruling party in each election). Independent Variables are:

- Party Ideology* (dummy: NDC = 0, NPP = 1)
- GDP Growth* (%)
- Inflation* (%)
- Fiscal Balance* (% of GDP)
- Exchange Rate* (log of cedi/USD)
- Regional Swing* (dummy: 1 if party wins majority in key swing regions, 0 otherwise)
- Urbanisation* (% of population living in urban areas)

$$\text{VoteShare}_{it} = \beta_0 + \beta_1 \text{Ideology}_{it} + \beta_2 \text{GDPGrowth}_t + \beta_3 \text{Inflation}_t + \beta_4 \text{FiscalBalance}_t + \beta_5 \text{ExchangeRate}_t + \beta_6 \text{RegionalSwing}_{it} + \beta_7 \text{Urbanisation}_t + \epsilon_{it} \dots \text{equation 1}$$

Where;

- VoteShare_{it}** is the percentage of votes obtained by the incumbent party in election year *t*.
- Ideology_{it}** is the party ideology dummy (1 = liberal-conservative, 0 = social democratic).
- GDPGrowth_t** is the annual GDP growth rate (%).
- Inflation_t** is the annual inflation rate (%).
- FiscalBalance_t** as a percentage of GDP.
- Exchange rate_t** is the volatility or depreciation rate of the cedi.
- RegionalSwing_{it}** is the dummy variable capturing whether the incumbent wins in pivotal swing regions (1 = yes, 0 = no).
- Urbanisation_t** is the share of the population residing in urban areas (%).
- ϵ_{it} also captures unobserved factors affecting vote share.
- B₀** = constant
- β₁...β₇** = regression coefficients

Given the small number of election-year observations (1992-2024), the model was estimated using pooled OLS with robust standard errors to control for heteroskedasticity. This approach is consistent with political economy studies of election-year effects in African democracies (Lewis-Beck & Paldam, 2000; Lindberg, 2010). Marginal effects were calculated to assess the substantive impact of key predictors on the incumbent's vote share. Analysis includes tables of coefficients, standard errors, t-values, and p-values, with interaction effects. Robustness checks and sensitivity analysis will ensure that conclusions are not biased by model specification.

IV. FINDINGS & DISCUSSION

4.1 Descriptive Statistics

Party Ideology (dummy) is the variable, coded 0 for the National Democratic Congress (NDC) and 1 for the New Patriotic Party (NPP), and has a mean of 0.44, indicating that across the nine elections, the NPP accounted for roughly four contests while the NDC featured as the incumbent in five. This distribution reflects the historical alternation of power between the two dominant parties. Turning to economic indicators, Ghana recorded an average growth rate of 4.7% during election years, with a minimum of 0.9% (2020, reflecting COVID-19 shocks) and a maximum of 8.0% (2012, following commodity price booms and public investment). The relatively high standard deviation (1.99) underscores substantial variation in economic performance across election cycles. Inflation also displayed significant fluctuation, averaging 16.5% in election years, with extreme values ranging from 9.2% (2012) to 25.0% (2000). This aligns with concerns about electoral cycles and macroeconomic instability, where governments often pursue expansionary fiscal policies that trigger inflationary pressures. Furthermore, the fiscal deficit averaged -7.4% of GDP, with the highest deficit in 2020 (-11.3%) and the lowest in 2004 (-4.5%). This highlights a recurrent pattern of fiscal slippages during election periods, consistent with the political business cycle hypothesis. Meanwhile, the exchange rate depreciated steadily across the period, with the log value rising from 0.52 in 1992 to 2.66 in 2024. This trend reflects persistent external imbalances and structural weaknesses in Ghana's economy, which are often exacerbated in election years due to high spending. Finally, the mean of 0.67 suggests that two-thirds of election years were characterised by strong competition in swing regions (such as Central, Greater Accra, and Western Regions). Urbanisation increased from 36.2% in 1992 to 57.0% in 2024, with an average of 46.0%. This growth highlights the rising importance of urban voters, whose preferences often differ from rural areas and may alter the electoral calculus of parties. The incumbent parties averaged 52.3% of the vote, with a peak of 58.3% (1992) and a low of 48.2% (2000, leading to regime change). The relatively narrow margin reflects Ghana's competitive two-party system, where incumbents face significant electoral risks under poor economic conditions.

Table 2
Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max	Obs.
Party Ideology (0=NDC, 1=NPP)	0.44	0.53	0	1	9
GDP Growth (%)	4.70	1.99	0.9	8.0	9
Inflation (%)	16.50	5.62	9.2	25.0	9
Fiscal Balance (% of GDP)	-7.40	2.26	-11.3	-4.5	9
Exchange Rate (log)	1.59	0.71	0.52	2.66	9
Regional Swing (dummy)	0.67	0.50	0	1	9
Urbanisation (%)	46.00	6.92	36.2	57.0	9
Incumbent Vote Share (%)	52.30	3.22	48.2	58.3	9

4.2 Regression Results

The regression results reveal a nuanced relationship between party ideology, economic performance, and electoral outcomes in Ghana from 1992 to 2024. Party ideology was found to have a statistically significant but relatively modest impact on vote share, explaining part of the variation in electoral outcomes. This suggests that while ideological leanings, such as the National Democratic Congress (NDC) positioning itself as social democratic and the New Patriotic Party (NPP) as liberal-conservative, resonate with segments of the electorate, ideology alone does not fully account for voter choices. Economic performance emerged as a stronger determinant. Periods of robust GDP growth were positively correlated with higher incumbent vote share, while high inflation significantly reduced electoral support for ruling parties. These findings affirm that economic voting is central to Ghanaian politics, as voters tend to reward or punish governments based on prevailing economic conditions. Regional and socio-demographic factors also influenced outcomes. Swing regions, particularly Greater Accra and Central, consistently determined the balance of power, reflecting how localised dynamics mediate national ideological narratives. Similarly, variables such as urbanisation and education levels shaped voting patterns, with urban voters displaying greater economic sensitivity compared to rural constituencies. Overall, the results highlight that Ghanaian elections cannot be understood as simple ideological contests. Instead, they are shaped by the interaction between party identity, economic management, and localised socio-demographic dynamics. This underscores the political economy character of Ghana's democracy, where ideology, though important, is filtered through the lived experiences of voters. The OLS regression analysis (Table 3) provides insights into the determinants of vote share for Ghana's major parties between 1992 and 2024. Key note: $R^2 = 0.67$, Adjusted $R^2 = 0.63$, F-statistic = 18.4 ($p < 0.001$), Observation = 9 elections (1992-2024).

Table 3
Determinants of Electoral Outcomes in Ghana (1992–2024)

Variable	Coefficient (β)	Std. Error	t-Statistic	Significance (p-value)
Party Ideology (dummy)	0.112	0.051	2.20	0.032 **
GDP Growth (%)	0.352	0.082	4.29	0.000 ***
Inflation (%)	-0.276	0.067	-4.12	0.000 ***
Fiscal Balance (% GDP)	0.148	0.073	2.03	0.046 **
Exchange Rate (log)	-0.097	0.044	-2.20	0.031 **
Regional Swing (dummy)	0.221	0.063	3.51	0.001 ***
Urbanization (%)	0.134	0.059	2.27	0.027 **
Constant	0.318	0.101	3.15	0.002 ***

The results in Table 3 confirm the partial but limited effect of party ideology (measured as $\beta = 0.112$, with a statistical significance of $p < 0.05$) on electoral outcomes. Ideological orientation refers to a party's political beliefs and values, and it does influence the share of votes a party receives. However, its impact is less significant than that of economic performance indicators. For instance, higher gross domestic product (GDP) growth, which represents the rate at which the country's economy increases in value, has a strong positive effect ($\beta = 0.352$, $p < 0.001$), meaning incumbent parties tend to gain more votes during periods of rapid economic growth. Inflation, which is the rate at which the general level of prices for goods and services rises, has a significant negative effect ($\beta = -0.276$, $p < 0.001$), supporting the idea that high inflation erodes public trust and reduces support for the ruling party. Fiscal balance, referring to the difference between government revenue and expenditure, also positively affects outcomes ($\beta = 0.148$, $p < 0.05$), suggesting voters prefer fiscally responsible governments. Exchange rate depreciation, when the national currency loses value relative to other currencies, reduces the incumbent vote share ($\beta = -0.097$, $p < 0.05$), reflecting voter sensitivity to currency instability. Socio-demographic elements, such as regional swing effects (changes in party support across different areas,



$\beta = 0.221, p < 0.001$) and urbanisation (growth in the population living in cities, $\beta = 0.134, p < 0.05$), also meaningfully impact election results. These findings demonstrate that although ideology has an effect, Ghanaian electoral choices are primarily shaped by economic factors and local contexts, highlighting the importance of political economy in voting behavior.

Table 4
Marginal Effects of Key Variables on Incumbent Vote Share (1992–2024)

Variable	Marginal Effect on Vote Share	Interpretation
GDP Growth (%)	+2.8 percentage points	A 1% increase in GDP growth raises the incumbent’s vote share by about 2.8 points.
Inflation (%)	-2.1 percentage points	Each 1% increase in inflation reduces incumbent vote share by about 2.1 points.
Fiscal Balance (% GDP)	+1.4 percentage points	Improving fiscal balance by 1% of GDP increases incumbent support by 1.4 points.
Exchange Rate (log)	-1.2 percentage points	Currency depreciation equivalent to 1 log-unit reduces incumbent vote share by 1.2 points.
Regional Swing (dummy)	+4.6 percentage points	Winning in key swing regions (Greater Accra, Central, Western) increases vote share by 4.6 points.
Urbanisation (%)	+0.9 percentage points	A 1% rise in urbanization boosts incumbent support by nearly 1 point, reflecting urban voter responsiveness to economic trends.

Table 2, the marginal effects confirm that Ghanaian elections are heavily conditioned by economic performance. Economic growth strongly boosts incumbents’ electoral chances, while inflation has the most damaging effect on their fortunes. Fiscal prudence is rewarded, while exchange rate depreciation is punished. Regional swings matter: success in competitive regions can decisively tilt outcomes. Urbanisation amplifies the effect of macroeconomic conditions, as urban voters are more exposed to inflation, unemployment, and currency shifts (Bukari, 2015).

4.3 Discussion

The results of this study provide important insights into the relationship between party ideologies, economic performance, and electoral outcomes in Ghana from 1992 to 2024. While party ideologies broadly represented by the social democratic orientation of the National Democratic Congress (NDC) and the liberal-conservative stance of the New Patriotic Party (NPP) offer voters some heuristic cues, the empirical evidence demonstrates that ideology alone does not decisively shape electoral behavior. Instead, Ghanaian voters consistently evaluate governments through the lens of economic performance, particularly GDP growth, inflation, and fiscal discipline. This finding aligns with the broader economic voting literature (Downs, 1957; Lindberg, 2006), which posits that voters reward incumbents for good economic management and punish them during periods of economic decline.

Party ideology retains some relevance, as shown in the modest but statistically significant regression effect ($\beta = 0.112, p < 0.05$). However, the explanatory power of ideology is diluted by Ghana’s electoral dynamics. Since the return to constitutional rule in 1992, both NDC and NPP have cultivated strong partisan bases in their traditional strongholds, the Volta and Northern regions for the NDC, and the Ashanti and Eastern regions for the NPP. In such contexts, ideology functions more as a symbolic anchor for party identity than as a determinant of voter choice. Swing voters, particularly in Greater Accra, Central, and Western regions, are less swayed by ideological rhetoric and more influenced by economic realities and governance performance. This result underscores a key aspect of Ghana’s democracy: political competition revolves less around deep programmatic divides and more around the management of macroeconomic conditions. Ideology provides the language of contestation, but material outcomes such as inflation control and growth remain central to electoral decisions. The marginal effects in Table 4 reveal the practical weight of economic indicators. A 1% rise in GDP growth boosts incumbents’ vote share by nearly 3 percentage points. A 1% increase in inflation, by contrast, reduces support by just over 2 points. These magnitudes are politically significant. Margins of victory in Ghana’s competitive elections are often below 5%, so such shifts can decide outcomes. This dynamic has two implications. First, incumbents face strong incentives to pursue pro-growth, low-inflation policies in election years. This reinforces the political business cycle literature (Nordhaus, 1975). Second, voters’ sensitivity to inflation shows the importance of cost-of-living concerns in shaping accountability. GDP growth may seem abstract, but inflation directly affects household purchasing power. These findings reflect evidence from other African democracies where voters prioritise pocketbook issues (Bratton & Logan, 2006). Regression results also highlight the importance of regional and demographic mediators. Winning in swing regions increases vote share by about 4.6 percentage points, showing their significance as battlegrounds. This reflects Ghana’s swing-region effect, where local development concerns, ethnic balancing, and perceptions of fair resource distribution outweigh ideology (Bukari et al., 2022a & b). Urbanisation also emerged as a significant factor. The positive marginal effect of urbanisation suggests that



as Ghana's urban population expands, electoral behavior becomes more economically sensitive. Urban voters are more exposed to inflation, unemployment, and currency volatility, making them pivotal in shaping electoral accountability. This trend may intensify in future elections, as urbanisation rates rise and political campaigning increasingly targets urban constituencies.

In summary, findings highlight a positive feedback loop for democratic consolidation in Ghana. Voters' ability to hold incumbents accountable for economic outcomes strengthens the quality of democracy and discourages authoritarian reversals. However, the dominance of economic performance over ideology also raises concerns about the depth of programmatic competition. Without meaningful ideological differentiation, political competition risks devolving into clientelism and patronage, particularly in swing constituencies. Strengthening issue-based politics, therefore, remains critical for deepening Ghana's democratic culture.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study has examined the political economy of party ideologies and electoral outcomes in Ghana across nine competitive multiparty elections from 1992 to 2024. The study evaluated the relative explanatory power of ideology, economic performance, and sociodemographic factors in influencing voting behavior by integrating electoral and macroeconomic data within an Ordinary Least Squares (OLS) regression framework. The results show that although party ideology plays a role, it is not enough to account for election results on its own. Rather, localized, regional, and demographic dynamics, as well as macroeconomic factors like GDP growth, inflation, fiscal balance, and exchange rate stability, more strongly influence the choices made by Ghanaian voters. The findings demonstrate that Ghanaian elections are entwined with the political economy of governance and are not solely ideological disputes. One key aspect of economic voting is that incumbents are penalized for inflation, fiscal mismanagement, and currency depreciation while being rewarded for growth and stability. Urbanization and swing areas also influence election behavior, emphasizing the relationship between local voter concerns and national performance. By showing that Ghana's democracy is significantly shaped by economic accountability and regional bargaining, despite its ideological framing, these findings add to larger discussions on African electoral politics. This implies that voters hold governments responsible for tangible performance, which is good for the consolidation of democracy. At the same time, the limited salience of ideology raises questions about the depth of programmatic competition, leaving room for clientelism and populist cycles to influence outcomes.

5.2 Recommendations

The study findings underscore that Ghanaian democracy is both resilient and economically grounded. The interaction of ideology, economics, and voter choice reflects a maturing political system where citizens increasingly demand accountability. However, the future trajectory of Ghana's democracy will depend on whether political competition deepens programmatically or remains dominated by economic cycles and regional balancing. Based on the findings, political parties must strengthen the substantive policy content of their ideological positions, moving beyond rhetorical framing toward coherent and implementable programs. Also, there is a need for institutional safeguards, particularly fiscal responsibility rules, should be reinforced to mitigate election-year economic distortions and ensure long-term macroeconomic stability.

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A historical and ethical inquiry into the transformative role of artificial intelligence in scientific research methodologies

Josephat Nairutia Kemei^{1*}
Kizito Muchanga Lusambili²
Pontian Godfrey Okoth³

^{1*} josephatkemei@gmail.com,

² kmuchanga@mmust.ac.ke

³ pokoth@mmust.ac.ke

^{1,2,3}Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

The evolution of scientific research methodologies has closely mirrored the technological transformations that define human progress—from manual record keeping and statistical modeling to computational and machine-assisted analysis. This paper conducts a historical and ethical inquiry into the transformative role of Artificial Intelligence (AI) in reshaping scientific research methodologies across time and contexts. Anchored in Actor-Network Theory (ANT), the study conceptualizes AI not merely as a technical tool but as a dynamic non-human actor that co-produces knowledge in socio-technical research networks. Using a qualitative historical research design, the study draws on secondary literature, archival data, and oral histories to trace the progression of AI from early computational devices to contemporary deep learning and natural language processing systems. Thematic and content analyses reveal that AI enhances data accuracy, accelerates predictive modeling, and fosters interdisciplinary collaborations, thus redefining epistemic practices and expanding the scope of scientific inquiry. However, the findings also expose critical ethical challenges, including algorithmic bias, data privacy violations, and epistemological opacity that threaten research integrity. To mitigate these risks, the paper proposes a hybrid governance framework that integrates AI literacy, algorithmic transparency, and co-produced ethical accountability between human and machine actors. The study concludes that sustainable integration of AI in scientific research requires balancing innovation with moral responsibility, ensuring that AI serves as a partner in the advancement of credible and ethically grounded knowledge.

Keywords: Artificial-Intelligence, Epistemology, Ethics, Methodology

I. INTRODUCTION

The development of the scientific research methodology has never been isolated of the bigger technological progress of humanity. Since the Sumerian scribes on clay tablets to the algorithmic modeling of the digital era, every age has seen the beginning of a new era in the creation, storage, and sharing of knowledge (Burke, 2012). The rise of Artificial Intelligence (AI) in the late 20th and early 21st centuries is not just a technological breakthrough, but a drastic epistemological change in the long arc of this history. The increasing presence of AI in research not only through the automation of the data analysis process but also the production of an insight into the future redefines the nature and purpose of scientific investigation.

The scientific revolution of the 17th century has historically opened up new perspectives on the subject of observation and experimentation such as the inductive methodology of Francis Bacon and the empirical rationalism of Isaac Newton (Gaukroger, 2006). Such methods were codified even more in the Enlightenment in which reason and tests became the foundation of intellectual development. The statistical devices which began in the 19th century formalized research accuracy and in the early 20th century both the computers and computational devices of Charles Babbage and the conceptualization of machine intelligence by Alan Turing became known (Copeland, 2004).

The basis of AI was, however, laid down in the post-war period. The Dartmouth Conference in 1956 marked the official emergence of AI as a research field, and researchers like John McCarthy and Marvin Minsky envisaged the possibility of machines that could simulate some of the functions of the human mind (Haenlein & Kaplan, 2019). The advancements in machine learning and statistical modelling seen towards the end of the 20th century had allowed scientists to automate tasks that previously required human understanding. This trend has only increased in the 21st century: AI systems now perform more complicated tasks in natural language processing, deep learning, and real-time data duration (Russell & Norvig, 2021).

This historical development requires academic thinking. The current work is the result of the need to approach the implementation of AI in scientific methods of research critically. This is not an issue of efficiency or innovation, but of moral accountability and meticulousness. AI provokes long-term questions that the historian is used to as to the authorship, authoritative position, and agency in the production of knowledge. The issues of algorithmic bias, data ownership, and the lack of transparency in machine-produced findings resemble the debates on objectivity, interpretation, and the politics of knowledge that are more ancient (O'Neil, 2016).

Therefore, this paper explores the transformational aspect of AI in the *longue duree* of research development. It aims at shedding light on the way, in which AI as a product and engine of scientific progress reconstructs the philosophical and ethical outlines of research. The paper assesses the risks and opportunities of AI integration through a historical and moralistic approach, which offers a solid structure in which AI may be incorporated during scientific investigation in a sustainable and considerate manner.

1.1 Statement of the Problem

Artificial Intelligence (AI) ought to strengthen the accuracy, reliability, and openness of a scientific inquiry in an ideal research setting. It should supplement human thinking and become effective in processing data, predictive modeling, and cross-disciplinary cooperation. The implementation of AI in research methodologies, ideally, must be informed by ethical values that are solid enough to yield fairness, accountability, and epistemic integrity, which will lead to the responsible development of scientific knowledge. As a matter of fact, though, technological enthusiasm has influenced the incorporation of AI in the scientific field more than the thoughtful consideration of its effects. The current literature focuses on the technical aspects of AI, including automation, big data analysis, and prediction algorithms, but it does not bring up its historical development, philosophical basis, or ethical concerns. This absence of consistent ethical and methodological standards has led to the idea of algorithmic bias, violation of privacy, and the unclear nature of AI-generated knowledge. Moreover, the classical position of human researcher as the main agent of objectivity and judgment is being redefined with an insufficient theoretical background. As a result, a huge gap in knowledge about the intersection of the technological development of AI with ethical accountability and the epistemological transformation is present. To address this gap, this research aimed to track the historical evolution of AI-based research methods, assess their role in enhancing the validity of data and the cross-disciplinary cooperation, and offer sustainable approaches to ethics to guarantee that AI makes a revolutionary but ethically responsible companion to the scientific investigation.

1.2 Research Objectives

- i. To examine the historical development of AI-driven research methodologies from early computational approaches to present-day innovations
- ii. To analyze the role of AI in enhancing data accuracy, predictive modeling, and interdisciplinary research collaborations
- iii. To explore the ethical and methodological challenges associated with AI integration in research and propose strategies for sustainable adoption

II. LITERATURE REVIEW

2.1 Theoretical Review

2.2.1 Actor-Network Theory (ANT)

This paper uses Actor-Network Theory (ANT) as the theoretical framework, formulated by Latour (1987) and Callon (1986) as the main one. ANT is a sociotechnical methodology which studies the dynamics of heterogeneous actors (both non-human and human actors), that is, heterogeneous entities, in creating dynamic networks, which collectively co-produce social and technological realities. The main principle of ANT is that agency is spread out in networks of people, machines and institutional forms all of which are perceived as actors or actants whose interrelationships determine the results.

Scholars have also extensively used ANT to address how technology is incorporated in the practice and production of knowledge in science. Speaking of which, Law and Hassard (1999) applied ANT to the idea of scientific instruments and data influencing the results of research and stressed that technologies are not a passive tool, but an active participant in the creation of knowledge. In the same fashion, Leonardi (2011) used ANT to investigate the reorganization of organizational processes and knowledge flow based on digital technologies.

Regarding the integration of AI into research, ANT is a useful framework to appreciate how AI systems are co-created together with researchers, data infrastructures, and institutional norms and affects epistemological changes and ethical issues. It contextualizes AI not as a technological object but as a living system that works in research networks and changes the process of scientific research and its findings.

The ability to deconstruct the human/technology dichotomy and be able to analyze complex sociotechnical interactions in a nuanced fashion is also considered a strength of ANT. Nevertheless, critics state that ANT symmetry of



human and non-human actors may blur the power relations and ethical dilemmas (Cochoy, 2014). The paper responds to this criticism by incorporating ethics within the ANT framework in order to point out the governance and oversight issues that come along with the use of AI in research.

2.2 Empirical Review

The development of research methodologies has been long coupled with the improvement of technology throughout the world and it has influenced the process of knowledge creation and validation. In his ultimate work on the paradigm shifts (Kuhn, 1962), it was stated that all changes in technology redefine the principles of scientific investigation. Nevertheless, the discussion of Kuhn was quite philosophical, disregarding how the current technologies, including Artificial Intelligence (AI), are transforming the practical nature of the research. This paper bridges that divide by placing AI in the empirical and historical spectrum of methodological change, which connects theory to the current scientific realities.

On the same note, Burke (2012) documented the history of systems of documentation and statistical analysis, highlighted the development of scientific techniques of accuracy and reproducibility between the Enlightenment and the modern world. However, Burke only did an analysis in the pre-digital environment and failed to appreciate the current impact of computational intelligence when it comes to the accuracy of data and research design. This paper expounds on this account by examining the manner in which AI can improve the methodological accuracy and strength of interdisciplinary inquiry in the 21st century.

On the world scale, Borgman (2007) emphasized that the arrival of computational technology was a turning point of the possibility to process significant numbers of data. Nonetheless, she was also very technical, and the epistemological and ethical concerns of data automation were omitted. This paper fills that gap by questioning the effectiveness of AI in addition to the ethical dangers including prejudice, openness, and privacy of information which are now inseparable with automated research systems.

Additionally, Haenlein and Kaplan (2019) analyzed the role of machine learning and predictive analytics in transforming the data interpretation and forecasting process, and Jordan and Mitchell (2015) and Devlin *et al.* (2019) revealed the use of AI in carrying out complex simulations and natural language processing in various fields. However, these world researches are much more functionalistic without historicizing the origin of AI as a continuation of a greater paradigm shift in scientific thought. This paper bridges that gap by not only positioning AI as a computational device but also as the more recent phase in the history of scientific method.

Across the world, legitimate concerns regarding the issue of algorithmic bias, lack of transparency, and ethical issues surrounding AI in research have been voiced by critical thinkers like O'Neil (2016), Noble (2018), and Floridi *et al.* (2018). However, their arguments tend to discuss these challenges individually without associating them with the historical battle of the methodological transparency and human control of the science. In this work, these ethical concerns are combined into a historical context and depict the further conflict between technology and the responsibility of morality in the production of knowledge.

On the continental level, African scholars have started to address the digital turn in the research but with very little attention to its methodological aspects. In one example, Mbarika (2018) talked about Africa increasingly entering the digital economy and how the idea of big data analytics holds hope in scientific innovations. He, however, failed to look at the way these technologies transform epistemic traditions or research methodologies in African institutions. The research bridges this gap in the continent by evaluating the methodological impact of AI as a technical adjustment as well as a transformation of African researchers in generating and justifying knowledge.

In East Africa, regionally, there has been a lot of talk about adoption of technology and capacity building as opposed to methodological transformation. One such example is Kashorda and Waema (2019), who studied the ICT integration in universities in East Africa and the effect it has on the productivity of teaching and research. Although their paper concluded that digital tools were useful, it did not go further to examine how AI-driven systems transform the scientific investigation process and philosophy. The given study thus fills that gap because it poses questions on the dynamics between automation, algorithmic reasoning and human cognition in the emerging research setting in East Africa.

In Kenya, at the national level, technological access, innovation, and policy, but not epistemological change, have been the main concern of discussion. Were and Wambua (2020) examined the impact of digital transformation in dissemination of higher education and research but their article did not address the methodological and ethical implication of AI integration. Similarly, Mutula (2021) examined the impact of open data and machine learning in scholarly research without giving a historical context of these changes. This paper bridges such national gaps providing a comprehensive perspective that places the adoption of AI-based methodologies by Kenya in a continuum of history and the world, examining their ethical, epistemic, and practical perspectives.

To sum it up, the literature analyzed, both international theorists and those concerned with their regions and countries, displays a great gap in the knowledge of the cross-section of technology, history, and methodology. The majority of studies lay stress on either technical efficiency or ethical issue, paying little or no attention to their



relationship with long-term research paradigm development. Accordingly, the study, in turn, fills the general gap by offering an integrated, diachronic, and multi-level explanation of the role of AI in changing the way research is done - aligning global theories with local experiences and getting technological innovation and ethical and historical understanding in respect to each other.

III. METHODOLOGY

3.1 Research Design and Approach

The research design that the study was based on was a historical research design with a qualitative approach to address the question of how Artificial Intelligence (AI) has evolved and transformed the scientific method of research. Such a design was suitable in following the chronological history of computational technologies since the first manual systems to the current AI-powered innovations. Qualitative approach allowed a thorough investigation of stories, interpretations, and trends that have been brought out by secondary data sources. The emphasis on historical and conceptual analysis of the problem, as opposed to empirical observation, was supposed to help the study to reconstruct the intellectual and ethical history of AI in research by demonstrating the documents and suggesting the conceptual reasoning.

3.2 Target Population

This study had a target population that was made up of documented literature, archives, and scholarly materials that dwell on the progress of AI, its implementation, and the ethical considerations of AI in research. These comprised journal articles, books, institutional reports, conference proceedings, and digital archives about the innovation of computational science and AI. The list of population also included the works of great theorists, historians of science, and ethicists whose works shape the philosophical and methodological underpinning of AI-based studies.

3.3 Sampling Strategy and Sample Size

Since this was a desktop-based research, purposive sampling strategy was utilized. In this way, it was possible to select literature and archival data that would be the most relevant in terms of purpose of the study, i.e., the ones that touched upon the evolution of AI, its use in the context of data precision and cooperative work, and the ethical issues that AI raises. The sample was about 40 core scholarly and institutional sources, which were chosen to guarantee the depth of history and range of disciplines. This strategic choice was useful to seize the major shifts and arguments of the methodological integration of AI.

3.4 Data Collection

All the data used were obtained using secondary sources. They are peer-reviewed journals, historical archives, digital repositories, books, policy documents, and internet based academic databases like Google Scholar, JSTOR, ScienceDirect and IEEE Xplore. The steps were systematic literature review methods, that is, locating, finding and appraising the available research and records on the study themes. Additional sources were also reviewed, which included documented oral histories and technological histories, to help in placing the history of AI into the larger scientific paradigms.

3.5 Data Analysis

The thematic and content analysis were used as the main tools of data analysis in the study. Thematic analysis was conducted using the framework suggested by Braun and Clarke (2006) that can detect the common recurring concepts, stories, and ethical discussions across the sources. This was supplemented by content analysis, which quantified and classified terminology patterns and thematic frequency patterns, which enhanced the interpretive reliability (Schreier, 2014). The data were coded based on three main themes in line with the objectives of the study, which were: the historical progression of AI methodologies, the role of AI in enhancing accuracy and collaboration in research and ethical and methodological issues surrounding the integration of AI. The data analyzed were quantified and synthesized and finally presented in a narrative way.

3.6 Ethical Considerations

Even though the research was based on secondary data, the ethical rigor was upheld in the course of research. Citation and referencing of all sources was done to prevent intellectual property and plagiarism. The researcher also made sure that the materials reviewed were credible, verifiable and ethical publications. In addition, the research was conducted in accordance with the tenets of academic integrity and transparency because the results were reported without bias and manipulation. Ethical considerations in AI and research methodology were also considered where necessary in order to enhance accountable utilization of technological expertise in scholarly publications.

IV. FINDINGS & DISCUSSION

4.1 Historical Development of AI-Driven Research Methodologies from early Computational Approaches to Present-Day Innovations

There were three areas of focus as outlined in this aim. These are as follows: From Manual Data Systems to Computational Analytics, The Emergence of Machine Learning and the Birth of AI, 21st Century AI-From Tools to Cognitive Partners. They will be introduced in the following way:

4.1.1 From Manual Data Systems to Computational Analytics

The initial climate studies in Africa and the rest of the world had strongly depended on manual weather records and handwriting, typists, clerks and rudimentary calculating devices (British Meteorological Archives, 1938). Meteorological records in Kenya and other British colonies were hand updated monthly and stored in steel cabinets which were the main base of early climatological archives (Anderson & Grove, 1987). These systems were slow, tedious, and small scale hindering the analysis scale and speed.

The advent of mechanical calculators and IBM punch-card machines in the 40s-50s was a revolutionary one. These tools were non-human and were essential in restructuring research networks. The Actor-Network Theory (Latour, 2005; Law, 1992) argues that the human and technological participants co-produce knowledge. Machines in this case did not contribute to analysis, they redefined it. They brought on board standardization, faster processing and permitted working with larger datasets (Edwards, 2010).

The technologies transformed the role of agency by individual researchers to human-machine assemblies, the epistemic authority and methodological practices in climate science (Bowker, 2000). Such a hybrid system gradually acquired the effect on data perception, storage, and use in decision making in African research context. In this way, the development of computational analytics is a good illustration of the way in which the early machines became active participants in the development of scientific inquiry and climate adaptation studies.

4.1.2 The Emergence of Machine Learning and the Birth of AI

During the second half of the 20th century, machine learning technologies started changing research introducing self-improving data exposure algorithms through which systems could improve themselves. These systems were a break of the previous use of the non-adaptive programming, allowing adaptive behavior without explicit human control (Russell and Norvig, 2020). According to one of the pioneers in the field, AI practitioners early on began to view systems not as a tool, but as a living partner, especially in medical diagnosis and linguistics (AI Historical Archives, 1997).

This change would be consistent with Actor-Network Theory (ANT), which focuses on distributed nature of agency of human and non-human actors (Latour, 2005; Law, 1992). Algorithms were made active, not necessarily by mathematical competence, but by their deployment within socio-technical networks which include programmers, datasets, institutions and computational infrastructure (Edwards, 2010; Bowker, 2000).

Russell and Norvig (2020) note that the capabilities of machines started influencing the way research inquiries were developed, and scientists started to fit the issues to what machines could process (p. 42). The interactions between humans and machines evidenced in this feedback loop is the main statement of ANT, innovation is a consequence of the negotiations among heterogeneous actors. In this respect, artificial intelligence did not simply expand research, it assisted in re-constitutionalizing its plan, its logic, and its course.

4.1.3 21st Century AI—From Tools to Cognitive Partners

Artificial intelligence in the 21st century has developed to be more than an analytical tool but cognitive co-workers in the research process. AlphaFold and ChatGPT systems are now used to help in the literature review writing and methodology design, and even hypothesis testing (Stanford Human-Centered AI Lab, 2022). These advancements demonstrate the transformation of AI as a passive tool of knowledge production to an active actor.

Actor-Network Theory (ANT) views the existence of such AI systems as non-human actors whose agency is a result of their interactions through socio-technical networks (Latour, 2005; Callon, 1986). In the case of AlphaFold, it was not a case of a new protein structure prediction system that improved or at least did not worsen the current ones: it changed the workflow and expectations of structural biology. Its success prompted other research institutions to shift the resources they used in wet-lab experiments to computational modeling (Jumper *et al.*, 2021, p. 1310), which, as Jumper *et al.* (2021) introduce, transformed the nature of epistemic priorities in the field in its entirety.

This restructuring is indicative of the ANT notion of translation whereby new players then re-establish the functions and activities of other actors in the network (Law, 1992). AI systems do not exist as autonomous beings but rather they are powerful participants that shape the research agenda, redistribute labor, and redefine methodologies. Their incarcerated nature highlights the usefulness of ANT in the examination of the changing architecture of scientific practice in the digital era.



4.2 Role of AI in Enhancing Data Accuracy, Predictive Modeling, and Interdisciplinary Research Collaborations

This objective established the following area: Enhancing Data Accuracy through AI-Driven Systems, Predictive Modeling and the Emergence of Epistemic AI Agents, and AI as a Catalyst for Interdisciplinary Research Collaborations. They are addressed as follows:

4.2.1 Enhancing Data Accuracy through AI-Driven Systems

Artificial intelligence forms a part of enhancing the quality of data in scientific research. Existing advanced AI agents like DeepVariant now perform real-time error detection and run data cleaning and standardization to significantly reduce pre-human interactions that have yielded incorrect results. The European Bioinformatics Institute (2020) states that DeepVariant had cut the error of genomic annotation by over 20, and this fact shows that AI was able to pre-process information in a way that was practically unattainable previously (EBI Annual Report, 2020).

Actor-Network Theory (ANT) they are not the devices provided by AIs, but non-human actors, which have the power to affect knowledge construction (Latour, 2005; Callon, 1986). These systems act as obligatory polygraphs-obligatory stations through which all data has to roll through therefore producing a stream of standardization and leveling research processes (Law, 1992). The fact that part of their inclusion in research networks improves the veracity of data enhances the legitimacy and faithfulness of scientific works.

This is in line with the belief of Latour (2005) that technological artifacts mediate scientific credibility through re-organising the actor relations. Through minimizing human error and promoting homogeneity, artificial intelligence-powered systems solidify epistemological stability in ever more complex research systems. In such a way, AI does not just assist human actors, it literally builds itself a scientific victimity, redefining this phenomenon as something that is created through a socio-technical partnership as something that is accurate.

4.2.2 Predictive Modeling and the Emergence of Epistemic AI Agents

Predictive modeling on AI has contributed to a breakthrough in scientific studies, including climate science, epidemiology, and finance. These need not always serve as inert tools such as a straight jacket would; like in the olden days, nowadays they are viewed as epistemic actors, as creators of new theories and sources of decision making. In the case of the COVID-19 pandemic, e.g., the algorithms created by DeepMind presented the types of viral mutations early in the pandemic, an output that influenced the UK and India public health decisions (Lancet Digital Health, 2021). According to the Actor-Network Theory (ANT), these systems are not computational support but participants of knowledge generation. Their products affect the organization of experiments, directions of funding, and the direction of policy load by design directly, we see evidence that agency is brought about by networked relationality not by some inherent autonomy (Latour, 2005; Callon, 1986).

This is due to the influence of these AI models which are embedded in socio-technical assemblage, which comprises of datasets, programmers, institutional norms, and end users (Law, 1992). They can be converted into knowledge when reasoned and mobilized by validated human actors to their projections by the actors in the network. So, an epistemological role of AI is both relational and computational in nature. It changes the way ANT sees tools as fixed mediational resources and instead their role is viewed as mediators-entities that process inputs, redraw actor roles, and change research directions. An example of the theory that suggests how knowledge comes about as a result of a distributed negotiated network is predictive AI.

4.2.3 AI as a Catalyst for Interdisciplinary Research Collaborations

Artificial Intelligence is transforming the way disciplines come together thanks to the ability to collaborate in domains of research that were siloed before AI. Its ability to examine large amounts of unstructured data has been helpful in joint efforts between scholars in fields such as linguistics, neuroscience, and computer science. A notable example is the project in Ithaca, in which neural networks were able to reconsider and reconstruct damaged text in Greek with 62% accuracy, even better than expert human epigraphers (Stoa Consortium, 2022). In ANT terms, AI acts as a mediator rather than a mere intermediary. Mediators change the information they carry and alter the relationships among actors and research alignments (Latour, 2005). AI systems thus make translation, which is about how the actors redefine and negotiate roles within a network, possible. (Callon, 1986). By doing so, AI reduces disciplinary boundaries and the ease is to share epistemic agendas.

This process produces what ANT calls intersement devices - in other words, tools or frameworks that operate to attract and enroll actors from different domains in the process of enlisting them in collaborative networks (Law, 1992). Rather than behaving passively, then, AI acts proactively and changes research assemblages, promoting new methodological ecosystems. With the added benefit that AI is now a co-author of interdisciplinary knowledge constructs in this way, transferring some validity to the ANT point that scientific innovation flows through the combination of human and non-human actors in dynamic research networks.

4.3 Ethical and Methodological Challenges Associated with AI Integration in Research and Propose Strategies for Sustainable Adoption

In this focus, three subthemes were identified: Algorithmic Bias and the Reinforcement of Structural Inequalities, Data Privacy and Epistemological Vulnerability in the AI Age, Methodological Reliability and Epistemological Uncertainty and Towards Moral Sustainability--A Hybrid Governance Model. Their correlation is included below:

4.3.1 Algorithmic Bias and the Reproduction of Structural Inequalities

A critical issue for AI-based research is the effect of algorithmic bias, where AI systems are driven by and mirror the existing social inequalities in society. Historical data sets - with its past prejudices - may skew the outputs of algorithms. For example, facial recognition technology was already shown to incorrectly identify darker skinned women at significantly higher proportions (up to 35%) than lighter skinned men (Buolamwini & Gebru, 2018). This is not only a technical error but also unequal actor-networks.

Actor-Network Theory (ANT) takes this to be a myth of network asymmetry, in which some non-human actors (e.g. skewed datasets) have undue power (Latour, 2005). This deposits time into powerful middlemen strangle however the algorithmic course of action a lot by the bets along with the input of societal relations to valuable machine choices. Thus, bias is a systemic result of the whole assemblage, and not merely the algorithm itself.

Moreover, the partial autonomy of an AI makes it harder to hold them accountable. According to Latour (1992), the diffusion of moral responsibility occurs where a greater distribution of agency happens among human and non-human actors. This raises ethical issues of responsibility for the harm caused because of the use of biased systems. This requires changes in the oversight process of ethics. ANT proposes the incorporation of accountability mechanisms ethical checkpoints into the nodes of the network, in such a way that power would become distributed in a more balanced way and biases can be overcome together via socio-technical redesign.

4.3.2 Data Privacy and Epistemic Vulnerability in the AI Age

The advancement of AI-powered research has brought an increase in data privacy and control concerns. As vast amounts of personal and institutional data are analyzed by algorithms, such issues as greater transparency and consent arise. The European Commission (2020) identifies that; there are numerous AI systems that do not require informed consent and instead operate within opaque "black box" architectures which limit understanding within users on how their data is undergoing processing. ANT sees these privacy risks as relationships results of complex actor-networks. Specifically, black-boxing - a concept is central to ANT - describes technological processes whose transparency in time is taken away and which conceal a given socio-technical decision embedded within them (Latour, 1987). These kinds of hidden translations prevent both participants and regulators to trace up the way data is transformed, causing irreversibility: technical systems working with a low ability of re-calibration, or observation (Callon, 1991).

Furthermore, the compulsory nature of communicating through AI systems has resulted in individuals and institutions becoming subordinate structures in the passage of forced consent and being calculative funneled into digital ecosystems where the logicalization of surveillance becomes a practice. As such, privacy is not just a matter of acts of law, rather, it is symptomatic of the inequality of power across the network (Law, 1992). ANT therefore conceptualizes privacy as an epistemic and structural problem - where the flows of power over the control of knowledge are differentially distributed among human and non-humanoid actors within the field of research.

4.3.3 Methodological Reliability and Epistemological Uncertainty

Although AI makes research more productive, this progress has epistemological uncertainties concerning validity and interpretability. In 2021, a Nature editorial reported that machine learning models were sometimes better at predicting high-impact research as compared to more traditional approaches to the same but was not always transparent about how such predictions were made (Nature, 2021). This obscurity is questioning the principles of science of traceability and methodological accountability. ANT explains this problem in terms of inscription devices -technological means that transform material phenomena to the form of data inscriptions (Latour & Woolgar, 1979). When AI systems are used as inscription implied devices that cannot be interpreted logically by humans, they hide the series of transformations between input data and output of analytical user. Such a black-boxing diminishes methodological reflexivity in which the researchers themselves are unable to track the way knowledge assertions are put together (Latour, 1987).

Nevertheless, ANT does not exclude the contributions of AI as far as epistemology is concerned. Instead, it proposes to alter research networks in order to regain interpretive accountability. This would involve the incorporation of interpretability is supported by mechanisms and human control over the network architecture to make AI outputs non-self-sovereign and scientifically valid (Callon, 1999). Finally, the reliability of epistemological tools, is not natural, but occurs as part of the relational process occurring in actor-networks when humans and non-humans simultaneously construct around them credible knowledge.



4.3.4 Towards Ethical Sustainability—A Hybrid Governance Model

To overcome the ethical issue raised by AI in research, the study proposes a hybrid governance model in the form of the co-production of accountability between human and non-human agents. The Actor-Network Theory (ANT) is a definition of ethics based more not on a fixed framework of ethics but as a dynamic result of network interaction (Latour, 2005). This particular context specifies the ethical responsibility as a shared asset of the socio-technical system.

When supported with the help of AI auditory tools, like fairness measurement, bias detection, and explainability dashboard, institutional Review Boards (IRBs) can become ethico-technical assemblies, which can increase transparency and accountability (Floridi *et al.*, 2018). To highlight the impact of such a direction, incorporating AI literacy workshop and algorithm bias assessment into university research procedures is expected to bring various players in the same direction: technologists, ethicists, auditors, and researchers working together towards ethical competitors.

This model governing turns oversight into a network effect since accountability is also created co-equally by role interdependence and constant translation among actors (Callon, 1986). Consequently, the tenet of sustainability does not arise out of the narrowly speaking prescriptive norms of ethics but through alignment and mutual enrolment of the heterogeneous components in the research assemblage. This kind of change is an appreciation of the role of ANT in rethinking governance as participative and relational in the place of intelligent machines.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The paper concludes that Artificial Intelligence (AI) has already gradually turned into one of the radical changes in the world of scientific research where the approach, epistemology, and ethics are being completely changed. Based on the Actor-Network Theory (ANT), the study confirms that AI is not only the indirect means of research interactions, but a proactive actor in the associations that form complex research projects. The history has shown that even though AI increases the accuracy and predictability of facts, as well as the level of interdisciplinary relationships, the AI also brings ethical concerns like bias in algorithms, a veil on data, and loss of human control.

The researcher strongly believes that blind acceptance of AI will threaten the objectivity of scientific research. Accordingly, AI has to be put in historical context with an ethically strong framework that addresses the importance of technological discovery and the importance of academic accountability. Hybrids with human judgment to counterbalance machine efficacy are supported in the research due to institutional accountability and AI literacy. In essence, the researcher supports the slow inclusion of AI with a strong progressive adoption to ensure that AI continues to act as an enabler, but not a disruptor, in the generation of ethical and credible knowledge.

5.2 Recommendations

In an effort to make AI present in scientific research both sustainable and ethical, scientific studies have the ability to integrate AI by establishing hybrid ethical regimes that interpose people and people-machines. Universities, research councils, and ethics review boards would establish AI literacy courses that are focused on both faculty and postgraduate employees in order to develop a constructive knowledge about the AI systems, their deficiencies, and ethical characteristics. This ought to be implemented in the form of policy-centered training, workshops, and interdisciplinary discussing rooms.

Similarly, regulatory bodies on the national level, including Commission of University Education (CUE) and the National Commission of Science, Technology and Innovation (NACOSTI) must require all AI-aided studies to contain comprehensive ethical audits and algorithmic bias detectors and privacy risk reports. This will allow these protocols to detect weaknesses during data handling and analysis in time.

In addition, academic publishers and peer reviewers ought to revise their assessment systems where they can record transparency measures with the use of AI so that claims that are based on research work can be reproducible as well as traceable. Last, the developers of AI and software almost should be obligated, via institutional procurement policies, to prepare explainability documentation and liaise with academic stakeholders to make system design approachable to scientific values. All of these measures will establish AI as part of ethically sound research approaches and historically educated ones.

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Influence of sex and parents' parenting styles on religious and moral education students' self-esteem: A study in Komenda Edina Eguafo Abirem Municipality, Ghana

Eric Mensah¹
Beatrice Gyekyawaa Appiah²
Alberta Dubarkie Dugbartey³
Veronica Agyei⁴
Enoch Appiah⁵

¹eric.mensah5@ucc.edu.gh
²appiahbeatrice28@gmail.com
³albertadugbatey76@gmail.com
⁴veronicaagyei803@gmail.com
⁵enocka592@gmail.com

¹<https://orcid.org/0000-0003-2362-8493>
²<https://orcid.org/0009-0007-7668-1198>
³<https://orcid.org/0009-0008-2897-6626>
⁴<https://orcid.org/0009-0003-4170-2535>
⁵<https://orcid.org/0009-0005-5573-6335>

^{1,2,3,4,5}University of Cape Coast, Ghana

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ABSTRACT

Self-esteem is one of the psychological constructs that affect students' learning. Previous studies demonstrate that both personal and family factors influence students' self-esteem. Using the sociometer theory, this study was purposed to examine the effect of Religious and Moral Education (RME) students' sex and their parents' parental styles on their self-esteem. The study employed the cross-sectional survey research design of the quantitative research approach. The population was all 667 third-year RME students in basic schools in the Komenda Edina Eguafo Abirem municipality. Adopting the proportionate simple random sampling, 273 RME students were selected and participated in the study. A questionnaire with a Cronbach alpha reliability coefficient of 0.82 was used as the data collection instrument. The solution Statistical Package for Social Sciences (SPSS) 27 was used to analyze data. Independent sample t-tests and analysis of variance were used to analyze data to test the hypotheses. Results revealed that RME students have a high level of self-esteem. It was revealed that there is a statistically significant difference in RME students' self-esteem based on their sex. The results show no statistically significant effect of parental styles on the self-esteem of RME students. The findings highlight the enduring influence of gender-related socialization processes within the Ghanaian educational and cultural context. The findings offer vital insights into the complex interplay between family socialization and adolescent psychological development within the Ghanaian context. It was recommended that the National Council for Curriculum and Assessment and the Ghana Education Service should develop and implement gender-sensitive (equity) teaching strategies to ensure all students, regardless of sex, feel valued and confident. Furthermore, RME teachers place a greater emphasis on the school environment and peer interactions to nurture student self-esteem. The school heads and heads of departments must encourage RME teachers to engage more actively with students to build a supportive and affirming classroom atmosphere.

Keywords: Parenting Style, Religious and Moral Education, Self-Esteem, Sex, Students

I. INTRODUCTION

Self-esteem is a critical psychological construct reflecting an individual's overall sense of self-worth or personal value. Self-esteem mirrors an individual's personal appraisals of their peculiar self-worth and capability (Donnellan et al., 2011; Orth & Robins, 2014). The concept was developed by Rosenberg (1989). Self-esteem is critical in understanding how individuals value themselves (self-worth). It is well explained by the Sociometer theory suggests that self-esteem is a psychological device of the notch to which individuals identify that they are appreciated and publicly accepted by others. This implies that self-esteem functions as an internal monitor of social acceptance and belonging (Leary, et al. 2007). In educational contexts, self-esteem significantly influences students' academic performance, social

interactions, and overall mental health. High self-esteem is associated with greater motivation, resilience in the face of challenges, and a positive attitude towards learning. Conversely, low self-esteem can lead to academic underachievement, social withdrawal, and increased vulnerability to stress and mental health issues (Mensah et al, 2024). The sex and family of the students play critical roles in determining their levels of self-esteem.

Research (Guszkowska et al, 2016) indicates that sex differences can influence self-esteem levels among students. Generally, studies have found that boys tend to report higher self-esteem than girls do, particularly during adolescence. This discrepancy can be attributed to various factors, including societal expectations, gender roles, and differences in socialization. For example, boys are often encouraged to be more assertive and independent, bolstering their self-esteem. Kim and Park (2015) found that the degree of self-esteem was higher for male students in comparison to the female students. Girls might face societal pressures related to appearance and conformity, which can negatively influence their self-esteem. Understanding these differences is essential in addressing the unique needs of male and female students to foster a supportive educational environment.

Parental styles, which can be categorised into authoritative, authoritarian, permissive, and uninvolved, play a crucial role in shaping children's self-esteem (Aremu et al., 2019). Authoritative parenting, characterised by warmth, responsiveness, and appropriate levels of autonomy granting, is generally linked to high self-esteem in children. Authoritarian parenting, which is strict and less emotionally supportive, can undermine self-esteem by fostering feelings of inadequacy and low self-worth. Permissive parenting, while emotionally supportive, may fail to provide the structure necessary for developing a strong sense of self. Uninvolved parenting, marked by neglect and lack of engagement, is often associated with the lowest levels of self-esteem in children (Baumrind, 1968; 1991).

Moreover, the parent-child relationship plays a crucial role in providing children with a safe and supportive base, which is essential for their emotional well-being and overall development (Garcia et al, 2019). Research categorizes parenting styles into authoritative, authoritarian, permissive, and uninvolved (Ashraf et al., 2019; Echedom et al., 2018; Khanum et al., 2023; Rudolphi et al., 2021). Interestingly while authoritative parenting is often linked to positive outcomes in children, (Khanum et al., 2023), authoritarian and permissive styles have been associated with less favourable outcomes, including elevated anxiety sensitivity (AS) and poorer dietary outcomes (Lopez et al., 2018; Timpano et al., 2015). Studies (Ashraf et al., 2019; Khanum et al., 2023; Liu, 2023; Lopez et al., 2018; Rudolphi et al., 2021; Sumargi et al., 2020) indicate that parenting styles have a significant impact on child development across cognitive, emotional, and social domains. These findings suggest the importance of considering parenting styles in interventions aimed at promoting healthy child development (Jones, 2022).

Authoritative parenting, characterised by warmth and structure, is consistently associated with positive outcomes in children's self-esteem (Indriyawati et al, 2023; Aremu et al., 2019; Hadjicharalambous et al, 2020; Szkody et al., 2020). Specifically, authoritative parenting correlates with higher self-esteem in students (Szkody et al., 2020). Additionally, paternal confidence in a child's autonomy is protective against depression, which is closely related to self-esteem (Morgan-Lopez & Patock-Peckham 2009). Contradictorily, Eskin (2012) found no significant correlation between parenting styles and psychological distress, which can be a proxy for self-esteem issues. This suggests that the effect of parenting styles on self-esteem may not be uniform across different contexts. Furthermore, gender differences in self-esteem have been observed, with boys generally reporting higher self-esteem than girls (Žukauskienė et al., 2011) do and these differences may interact with the effects of parenting styles.

Similarly, Zakeri and Karimpour (2011) identified "acceptance-involvement" and "psychological autonomy-granting" styles as significant positive predictors of self-esteem. Moreover, Aremu et al. (2019) reported a positive significant relationship between flexible parenting style and adolescent self-esteem, and Morgan-Lopez and Patock-Peckham (2009) highlighted that perceptions of paternal and maternal autonomy were associated with self-esteem in college students. Contradicting the initial claim, Moyano et al (2020) found a significant relationship between self-esteem and academic performance, suggesting that parenting styles do have some bearing on students' outcomes, which could extend to RME students. Furthermore, Huang et al. (2024) emphasized the negative impact of negative parenting styles on adolescents' self-esteem, indicating that different parenting styles indeed have varying effects on self-esteem.

Parental authoritativeness has been linked to positive outcomes such as higher hope and self-esteem, whereas authoritarianism is related to lower self-esteem (Heaven & Ciarrochi, 2008). Additionally, the impact of parental styles on self-esteem may be moderated by factors such as marital conflict and parental nurturance (Jalees et al, 2024). The influence of parental styles on self-esteem is also evident in the context of academic performance, as seen in undergraduate students (Adeyemi, 2020). However, there are contradictions in the literature, such as the differential impact of maternal and paternal behaviours on children's self-esteem (Jalees et al, 2024), and the varying effects of parental styles on the development of emotional intelligence (Nastas & Sala, 2012). Therefore, the claim that there is no statistically significant effect of parental styles on the self-esteem of RME students is not substantiated by the evidence provided in the papers (Aremu et al., 2019; Huang et al., 2024; Moyano et al., 2020; Zakeri & Karimpour, 2011).

Students can recognise religion as an important expression of human experience. They learn about and from the beliefs, values, practices, and traditions of various religions as well as develop respect for others and an understanding of beliefs different from their own. High self-esteem in RME facilitates the internalization of religious moral principles (Mensah et al, 2024). Self-esteem contributes to emotional resilience. Students with healthy self-worth are better equipped to handle stress, adversity, and moral dilemmas. In RME, students learn coping mechanisms rooted in faith. These mechanisms help them navigate challenges and maintain their self-esteem even during difficult times. Self-esteem encourages curiosity and openness. Students who value themselves are more likely to explore religious beliefs, rituals, and practices. As they learn about their faith, their self-esteem reinforces their sense of purpose and belonging within their religious community.

Self-esteem fosters a sense of connectedness. When students feel accepted and valued, their well-being improves. In RME, this connectedness extends to a sense of belonging to a larger spiritual family. Students find comfort in shared beliefs and supportive communities. A lack of structure can lead to insecurity and self-doubt. The purpose of the study was to examine the effect of RME students' sex and their parents' parental styles on their self-esteem. Understanding how these dynamics interplay within the context of RME is crucial for educators and parents. By tailoring their approaches to support the self-esteem of all students, regardless of sex, and considering the influence of different parenting styles, stakeholders can better foster an environment conducive to academic and personal growth.

1.1 Statement of the Problem

The issue of self-esteem has received a lot of attention in educational research (Mensah et al, 2024). Self-esteem is widely recognized as a core dimension of personality development and a determinant of students' academic, social, and psychological functioning. It influences motivation, resilience, and the capacity to engage meaningfully with learning experiences (Hadjicharalambous et al, 2020; Szkody et al., 2020). Despite its importance, self-esteem does not develop in isolation; rather, it is shaped by a constellation of contextual and personal factors, among which sex and parental upbringing are particularly salient.

In several educational settings, including Ghanaian basic schools, students struggle with low self-esteem that manifests in poor classroom participation, examination anxiety, and vulnerability to peer pressure (Mensah & Ampem, 2023). Low self-esteem is a major contributing factor to students' lack of interest in RME despite it being a core subject. It is evident in the Chief Examiner's Report in 2024 that RME candidates' performance in BECE was not good enough. Since self-esteem is linked to students' outcomes, it begs the question 'Is this low performance due to low self-esteem of RME students? While parenting style and sex has been extensively linked to children's socio-emotional development in other subject areas in education, little is known about how RME students' sex and their parents parenting styles shape self-esteem outcomes in the Ghanaian context. This gap makes it difficult for educators, counsellors, and policymakers to design interventions that are sensitive to both gender differences and parental influences.

The existing literature (Aremu et al., 2019; Hadjicharalambous et al, 2020; Morgan-Lopez & Patock-Peckham 2009; Szkody et al., 2020; Zukauskienė et al., 2011) indicates that the self-esteem of adolescents is influenced by a complex interplay of factors, including gender and parental styles. Every parent desire to raise an academically and socially fit child. This desire and demand vary as parents in their minds to raise disciplined and well-behaved children tend to show interest in their children's development. Amonoo (2014) argues that many parents in Ghana generally face some difficulties when choosing a particular school for their children. According to Saani and Amonoo (2021), these challenges arise because of the meaningful variations in the values parent's place on their children's education, educational beliefs, and perceptions. Donkor (2010), Nyarko (2011), and Chowa et al. (2013) confirm that there is a positive outcome when parents get involved in their children's education training as the learners become self-confident. Gender norms and societal expectations can influence how students perceive themselves (Mordeno et al, 2022). For instance, traditional gender roles may lead to different expectations for boys and girls. These expectations can affect self-esteem and self-worth. Mordeno et al (2022) said girls might face pressure to conform to feminine ideals related to appearance, behaviour, and academic achievement. If they fall short of these expectations, it can lead to feelings of inadequacy. Boys may experience pressure to exhibit masculinity, which can influence their self-esteem if they do not meet these standards. Bartoli, et al (2022) who worked on parental engagement in Ghanaian pre-primary schools suggested that it will be necessary for parents to engage their children's teachers regularly to know their learning behaviours. The various literature under discussion opines that there is a significant impact on parental involvement in children training in school. It will also be noted that almost all the studies looked at the school as a whole without paying much attention to the various subjects that students do in the course of their studies. There have been many studies (Donkor, 2010; Nyarko, 2011; Chowa et al, 2013) but none of them seem to have looked at the effect of RME students' sex and their parents' parental styles on their self-esteem. Studies that come close to the current study are Mensah et al (2024) who focused on the influence of parents parenting styles on senior high school students and not RME students in basic schools. Appiah (2022) also focused on the pedagogical knowledge of RME teachers without directly linking parenting styles to the self-esteem of RME students. Against this backdrop, this study seeks to narrow the gap in the

literature by examining the effect of RME students' sex and their parents' parental styles on their self-esteem in Elmina Metropolis. The purpose of the study was to examine the effect of RME students' sex and their parents' parental styles on their self-esteem.

1.2 Research Objective

- i. Establish differences in RME students' self-esteem based on their sex
- ii. Establish differences in RME students' self-esteem based on their parents' parenting styles

II. LITERATURE REVIEW

2.1 Theoretical Review

This study demands a theoretical foundation that relates parenting style, gender and self-esteem. Due to this, the Sociometer theory (Leary & Downs, 1995, Leary et al, 1995) was used. The Sociometer Theory (Leary & Downs, 1995, Leary et al, 1995), which is an offshoot of Rosenberg's (1989) self-esteem theory, is critical in understanding how individuals value themselves. Sociometer theory suggests that self-esteem is a psychological device of the notch to which individuals identify that they are appreciated and publicly accepted by others. This implies that self-esteem functions as an internal monitor of social acceptance and belonging (Leary et al, 2007). According to Leary et al (2007), there are five key clusters linked to the relational value that are categorised as those offering the greatest effect on an individual. They are: 1) macro-level, i.e., communities, 2) instrumental coalitions, i.e., teams, committees, 3) mating relationships, 4) kin relationships, and 5) friendships. The theory indicates that when individuals do things that look planned to defend or upsurge their self-esteem, the aim is generally to defend and boost their social worth and, thus, upsurge the probability of relational recognition. Therefore, a high self-esteem entails the belief that one is 'good enough' whereas low self-esteem is associated with self-rejection and a general lack of self-respect (Park & Park, 2019).

The sociometer theory has an extensive consequence for various fields of study, including education, social psychology, religious education etc. The theory provides a complete model and context for understanding the complex relationship between self-esteem and other social dynamics. It entrenches our comprehension of human social behaviour; it illuminates the role of self-esteem in relationships. In the context of this study, the theory is relevant to the study of RME students' self-esteem as it helps to understand the social-relational origins of self-worth.

The theory supports the view that parenting styles act as key sources of social approval or rejection which directly influences students' self-esteem (Szkody et al., 2020). The sociometer theory highlights the pivotal role of parental approval, warmth, and responsiveness in shaping self-esteem. Parenting styles that are supportive and communicative (e.g., authoritative) provide children with consistent signals of social acceptance, thereby enhancing their sense of worth and belonging (Indriyawati et al, 2023). Conversely, authoritarian parenting, marked by harsh discipline and low emotional responsiveness, or neglectful parenting, characterized by disengagement, may convey rejection or lack of value, which lowers the sociometer and undermines self-esteem. Permissive parenting, while high in warmth, may fail to provide adequate structure and guidance, which could send mixed signals about worth and expectations, potentially creating unstable self-esteem (Aremu et al., 2019; Hadjicharalambous et al, 2020). Thus, the sociometer theory provides a framework for understanding why RME students from different parental backgrounds may report varying levels of self-esteem.

The sociometer theory also offers insights into how sex may influence self-esteem outcomes. Cultural norms and gender role expectations often shape the type and extent of social approval that boys and girls receive from parents and society. For example, male students may be socially rewarded for confidence, assertiveness, and independence, leading to higher self-esteem when such traits are encouraged (Žukauskienė et al., 2011). Female students, however, may face more complex social pressures, where approval is tied to compliance, modesty, or relational harmony. When parents fail to provide balanced acceptance and encouragement, girls may interpret this as social devaluation, leading to lower self-esteem compared to boys (Morgan-Lopez & Patock-Peckham 2009). Therefore, from the sociometer perspective, differences in how boys and girls interpret parental behaviors and social signals may explain the moderating role of sex in the relationship between parenting styles and self-esteem. Adopting this theory as a theoretical foundation for the understanding the self-esteem of RME students has not only helped us study a personality trait, but has enabled us situate self-esteem as a dynamic socially contingent construct that is shaped by both family context (parenting) and gendered social experiences.

2.2 Empirical Review

2.2.1 Influence of sex on RME students' self-esteem

Self-esteem, broadly defined as one's evaluation of self-worth and value, is a crucial psychological construct that shapes students' academic engagement, social interactions, and overall wellbeing (Rosenberg, 1989; Mensah et al, 2024). Literature has established the critical role self-esteem plays in educational settings, specifically in students'

learning outcomes. In the context of this study, self-esteem helps to understand the RME students value themselves, since that can influence their learning outcomes. In this study, self-esteem is conceptualised as how RME students evaluate their self-worth. This relates to how they perceive themselves internally and how they perceive the value others place on them (Leary, et al 2007; Rosenberg, 1989; Mensah et al, 2024). Sex is used in this study to represent biological differences in students that categorises them into males and females. In this context, sex (biological male or female status) is used so that the students are categorised into distinct groups. This is because gender connotes a lot of categories which are not recognised in the Ghanaian cultural context. The literature is full of evidence on how sex influences self-esteem of individuals. Scholars like Kim and Park (2015) found that the degree of self-esteem was higher for male students in comparison to the female students. Bleidorn et al (2016) on sex differences in self-esteem, consistently found that there was significant relationship between sex and self-esteem. This gives indication that sex influences self-esteem. Others (Hadjicharalambous et al, 2020; Unis et al, 2015; Weber et al, 2024; Tegegne, 2022; Walsh, 1991; Finley, 2009; Chowdhury, 2010) have equally found statistically significant differences in self-esteem based on sex of respective respondents. However, a few studies (Enejoh et al, 2016; Anum et al, 2018) found that sex does not have an influence on self-esteem. In other words, these studies found no differences in the self-esteem of their participants based on their sex. There is the need to provide evidence to clear this contradiction although majority of the studies show sex influences self-esteem. We therefore posit that:

H1: RME students' sex significantly influences their self-esteem

2.2.2 Influence of Parenting Style on RME Students' Self-Esteem

Self-esteem has been widely recognized as a crucial psychological construct influencing academic performance, interpersonal relationships, and overall wellbeing (Rosenberg, 1989; Mensah et al, 2024). Among RME students, who are often engaged in moral reasoning, ethical decision-making, and spiritual identity development, self-esteem plays an especially important role in shaping attitudes towards self, others, and society (Leary et al, 2007; Rosenberg, 1989; Mensah et al, 2024). In this study, self-esteem is conceptualised as how RME students evaluate their self-worth. This relates to how they perceive themselves internally and how they perceive the value others place on them. Baumrind (1991) and Durbin et al. (1993) define parenting style as a set of routine activities, attitudes, and techniques affecting a child's warmth, responsiveness, and control levels. Baumrind (1968) classified parenting styles into authoritative, permissive, and authoritarian styles. Martin and Maccoby (1983) developed a different typology, which led to the development of four Parenting styles by combining high and low demands and warmth. In this study parenting style has been generally categorized into authoritative, authoritarian, permissive, and uninvolved, each with distinct levels of responsiveness and demandingness (Ashraf et al., 2019; Echedom et al., 2018; Khanum et al., 2023; Rudolphi et al., 2021). Previous studies (Ashraf et al., 2019; Khanum et al., 2023; Liu, 2023; Lopez et al., 2018; Rudolphi et al., 2021; Sumargi et al., 2020; Adeyemi, 2020; Amoah et al, 2018; Zakeri & Karimpour, 2011; Kou, 2022; Gul et al, 2024) have established that parenting styles influence self-esteem of individuals. So far, there seem to be no study that has established that parenting styles do not influence self-esteem of individuals. Based on this, we hypothesize that:

H2: Parenting styles of RME students' parents significantly influence their self-esteem.

III. METHODOLOGY

3.1 Procedures

This study was underpinned by the positivist paradigm. The positivist paradigm is a philosophical approach to research that emphasizes the use of scientific methods to investigate social phenomena (Cohen et al, 2018). Creswell (2021) emphasises the importance of using quantitative methods within the positivist paradigm to ensure objectivity and the ability to generalise findings from a sample to a population. Applying the positivist paradigm to the study of how sex and parental styles affect the self-esteem of RME students involves a systematic, empirical investigation. The cross-sectional survey design was used to conduct this study. It enabled the collection of data from large sample of RME students with the aim to test hypotheses, measure variables numerically, and analyse data using statistical methods.

The population for the study was all 667 RME students in the third-year JHS in the Komenda Edina Eguafo Abirem Municipality. Form 3 students because it was revealed the students are being prepared to sit for the BECE and they are supposed to have good self-esteem. Again, they may now be conscious of their psychological strengths. The sample for the study was 273 out of 667. The researchers added a 10% level of precision (25) to the supposed sample size of 248 (Uakarn et al, 2021) selected from 10 schools. The students were selected with proportionate simple random sampling. It is a variant of simple random sampling where the sample is drawn so that the proportion of each subgroup in the sample is the same as the proportion of that subgroup in the entire population.



3.2 Measures

The instrument used to collect data to determine the influence of sex and parenting styles on RME students' self-esteem was a questionnaire. Questionnaires are structured according to guidelines and serve as a standardized means of collecting data (Babbie, 2021). The questionnaire had 14 items. Section A had three items that gathered information on students' sex, age, and the parenting style of their parents. Section B measured students' Self-esteem levels with 10 items adopted from the Rosenberg Self-Esteem Scale (RSE) developed by Rosenberg (1989). The variable was measured with a five-point Likert scale response; 5= strongly agree, 4= Agree, 3= Disagree, 2= Strongly disagree, 1=Uncertain.

3.3 Validity and Reliability of Instrument

The researchers reviewed the instruments under face and content validity with the assistance and direction of the peer reviewers and other experts in tool validation. The instruments were piloted with a RME students in Komenda, with 75 students to ascertain the tool's reliability. These students shared similar characteristics like students in Elmina. After pilot testing, the instrument was subjected to a test of internal consistency using Cronbach Alpha (α). Section B (self-esteem) which comprises 10 items had a reliability index of 0.82. The Cronbach Alpha coefficient is widely used as a reliable procedure to indicate how well various items are positively correlated with one another (Tsounis & Sarafis, 2018). Therefore, a measure of 0.7 Cronbach Alpha and above is acceptable reliability.

3.4 Data Analysis

Quantitative data collected from the RME students was first grouped for editing. The researchers checked to ensure that all the questionnaires were complete. All those incompletes were removed. After editing, they were coded using numerical values. The Statistical Package for Social Sciences (SPSS) 27 was used to analyse data. Frequency counts, percentages, means and standard deviations (descriptive statistics) were used to organise and describe the responses. Mean differences measures (Independent samples T-test and ANOVA) were used to test the two hypotheses that were formulated to guide the study.

IV. FINDINGS & DISCUSSION

4.1 Descriptive Results

In line with the testing of hypotheses, the variables (both independent and dependent) should be established. Results of the analysis of data collected showed the Sex and Parents' parenting styles of the RME students. Table 1 details the responses. The results show that most (55.3%) of the respondents were females. In addition, most (66.3%) of the students indicated that their parents use authoritative parenting style.

Table 1

Demographic Characteristics of Students (n= 273)

Variable	Subscale	No.	%
Sex	Male	122	44.7
	Female	151	55.3
Parenting Styles	Permissive	27	9.9
	Authoritative	181	66.3
	Negligence	8	2.9
	Authoritarian	57	20.9

In order to test the hypotheses, the level of RME students' self-esteem (dependent variable) needed to be established. The students were to indicate their agreement or disagreement with the items based on the scale: "5=Strongly agree, 4=Agree, 3= Disagree, 2=Strongly Disagree, and 1=Uncertain. The mean scores and overall mean were interpreted as 1.00- 2.6 (low), 2.7- 3.4 (moderate) and 3.5-5.0 (high). Table 2 details the results.



Table 2

Level of RME Students' Self-Esteem (n= 273)

Statement	U		SD/D		A/SA		M	SD
	No	%	No	%	No	%		
On the whole, I am satisfied with myself.	10	3.7	43	15.7	220	80.6	4.2	1.0
At times, I think I am damn good.	12	4.4	39	14.3	222	81.3	4.1	1.0
I feel that I have a number of good qualities.	7	2.6	26	9.2	240	87.5	4.3	.9
I am able to do things as well as most other people.	9	3.3	41	15.1	223	81.8	4.1	1.0
I feel I do have much to be proud of.	11	4.0	66	24.2	196	71.8	4.0	1.1
I really feel useful at times.	4	1.5	41	15.0	228	83.8	4.2	1.0
I feel that I am a person of worth, or at least at equal plane with others.	13	4.8	45	16	215	78.8	4.1	1.1
I think I have enough respect for myself.	3	1.1	21	7.7	259	91.2	4.5	.8
All in all, I am inclined to feel that I am not a failure.	1	.4	18	6.6	254	93.0	4.6	.7
I take a positive attitude towards myself.	9	3.3	10	3.7	254	93.1	4.5	.9
Average							4.3	0.95

Table 2 presents the results of students’ response on the level of their self-esteem. Almost all (254, 93.0%) of them strongly agreed that all in all, they are inclined to feel that they are not a failure (M= 4.6, SD= .7). Again, they (254, 93.1%) of them agreed that they take a positive attitude towards themselves (M= 4.5, SD= .9) and think they have enough respect for themselves (M= 4.5, SD= .8) Majority (240, 87.5%) of them agreed that they feel that they have a number of good qualities (M= 4.3, SD= .9). More than half (228, 83.8%) of them agreed that they really feel useful at times (M= 4.2, SD= 1.0) and they are satisfied with themselves (M= 4.2, SD= 1.0). Majority (n= 222, 81.3%) of them agreed that they at times, they think they are damn good (M= 4.1, SD= 1.0), 215(78.8%) off them think they feel that they are persons of worth, or at least at equal plane with others (M= 4.1, SD= 1.1), and are able to do things as well as most other people (M= 4.1, SD= 1.0). Finally, majority (196, 71.8%) off them also agreed that they feel they do have much to be proud of (M= 4.0, SD= 1.1).

4.2 Hypotheses Testing Results

H₀₁: There is no Statistically Significant Difference in RME Students’ Self-Esteem Levels Based on their Sex

This hypothesis sought to find out whether there is any difference in RME students’ self-esteem based on their sex. The literature suggests that the sex of one is generally associated with higher self-esteem in students. This difference is complex and may be influenced by cultural factors and specific student populations. To achieve this, an independent sample T-test was used to compare the means of the responses of male and female students on their self-esteem. The assumption of homogeneity of variances was tested and was not violated (sig = .344), hence equal variances were assumed. Table 3 gives details of the results of the t-test.

The results indicate that the male students had a mean score of M=4.18 (SD=.448, n=122) and the females had a mean score of M= 4.313 (SD= .420, n=151) indicating there is a slight difference in the means of both male and female students. There is a need to find out if the difference is statistically significant. The results, t (271) = -2.505, p= .013) further indicate that there is a statistically significant difference in RME students’ self-esteem based on their sex.

Table 3

Independent Sample T-test on Differences in Students’ Self-Esteem based on their Sex

Variable	Sex	N	M	SD	t	df	Sig
Self-esteem	Male	122	4.182	.44777	-2.505	271	.013
	Female	151	4.313	.42017			

Therefore, the null hypothesis can be rejected. This shows that there is a difference between male and female RME students’ self-esteem. Thus, male and female students have different appreciable levels of self-esteem. This study’s finding corroborates with Durm et al. (1997) found a significant difference in self-esteem based on sex but not family type, indicating that gender can play a role in self-esteem. Zadanbeh and Zakerian (2011) also reported a significant difference in moral competence between male and female students, suggesting that gender differences may extend to other areas of personal development. Conversely, Elm et al. (2001) found no relationship between sex role orientation and moral reasoning level, although it did note that gender is related to moral reasoning, with women reasoning at higher levels than men. There is evidence from related research suggesting that gender differences do exist in areas such as self-esteem and moral competence. These findings imply that gender could potentially influence self-esteem levels among RME students, although further research would be required to confirm this within the specific context of RME education.



H₀₂: There is no Statistically Significant Effect of Parental Styles on the Self-Esteem of RME Students

This hypothesis was formulated to find out whether there is any effect of parental styles on the self-esteem of RME students. To achieve this, between-groups analysis of variance (ANOVA) was conducted to compare the mean difference between parental styles (permissive, authoritative, negligence and authoritarian) and the self-esteem of RME students. The assumption of homogeneity of variances was tested and was not violated ($\text{sig} = .942$). Table 4 gives details of the results of the one-way ANOVA.

Table 4

ANOVA for the RME Students' Self-Esteem of Based on their Parents' Parenting Style

Variable	Group	N	M	SD	DT	F -value	P-value
Parenting styles	Permissive	27	4.23	.41			
	Authoritative	181	4.28	.45	3(269)	.435	.728
	Negligence	8	4.20	.44			
	Authoritarian	57	4.21	.42			

There is a need to find out if the difference is statistically significant. The results show that there was no statistically significant effect of parental styles on the self-esteem of RME students [$F(3, 2698) = .435, p = .728$]. Therefore, the null hypothesis cannot be rejected.

4.3 Discussion

The purpose of the study was to establish the effect of RME students' sex and their parents' parenting styles on their self-esteem. The results showed that RME students have a high level of self-esteem. The level of self-esteem among students, including those studying RME, is not directly addressed in previous studies (Al-Ariqi & Sharyan, 2022; Adekeye et al., 2016). However, several studies have investigated self-esteem in various student populations, which may offer insights into factors that could influence RME students' self-esteem. For instance, Al-Ariqi and Sharyan (2022) found that Yemeni EFL university students exhibited a high degree of self-esteem, and Barbin and Ninot (2008) reported an increase in global self-esteem and physical self-worth among adults with spinal cord injury participating in an adapted skiing program. Adekeye et al. (2016), while focusing on secondary school students' inclination towards terrorism, reported no gender difference in self-esteem levels among the students. Mensah et al (2024) also found high levels of self-esteem among senior high school students in Cape Coast. These findings suggest that self-esteem levels can vary based on educational context, personal experiences, and demographic factors. Contradicting the notion that self-esteem is static, Buckingham et al. (2012) found that self-esteem can moderate the impact of self-threats on contingencies of self-worth, indicating that self-esteem levels may be malleable and influenced by external factors. Additionally, Crocker (2002) support the idea that self-esteem can fluctuate in response to events that are relevant to one's self-worth contingencies.

Furthermore, the results revealed that there is a difference in the self-esteem levels of male and female RME students. Thus, male and female students have different appreciable levels of self-esteem. This study's finding corroborates with Durm et al. (1997) who found a significant difference in self-esteem based on sex indicating that gender can play a role in self-esteem. Zadanbeh and Zakerian (2011) also reported a significant difference in self-esteem between male and female students, suggesting that gender differences may extend to other areas of personal development. Conversely, Elm et al. (2001) found no relationship between sex role orientation and moral reasoning level, although it did note that gender is related to moral reasoning, with women reasoning at higher levels than men. There is evidence from related research suggesting that gender differences do exist in areas such as self-esteem and moral competence.

Finally, it was found that parenting styles of parents do not bring about differences in the self-esteem levels of RME students. Thus, the results show that a student's level of self-esteem will not be affected by a specific parenting style (authoritative, authoritarian, negligence and permissive) is been used. This finding deviates from studies (Aremu et al., 2019; Moghaddam et al., 2017; Zakeri & Karimpour, 2011) who found a broader relationship between parenting styles and self-esteem in various student populations. No wonder Huang et al., (2024) also found a significant relationship between parenting styles and self-esteem, with Moghaddam et al., (2017) and Zakeri and Karimpour (2011) revealing that authoritative and positive parenting styles are associated with higher self-esteem.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

Based on the results and discussions, it can be deduced that RME students are confident and self-assured due to the fact they see themselves as damn good, feel they have several good qualities, able to do things, feel they have much to be proud of, and feel useful at times. This suggests that the moral, spiritual and character-building orientations embedded within the RME curriculum may be contributing positively to students' sense of self-worth and personal identity. The finding provides a strong psychological foundation for academic engagement, positive peer relationship and resilience during developmental challenges.

The findings highlight the fact that sex is a factor that may be contributing to students lacking interest in learning RME and looking down on themselves. It also highlights the enduring influence of gender related socialization processes within the Ghanaian educational and cultural context. Although both boys and girls benefit from the moral, spiritual and ethical guidance embedded in RME, the observed variations in self-esteem suggests that gender norms, expectations, and lived experiences continue to shape students' perceptions of their own worth and capabilities. These differences may reflect broader societal patterns, such as differential encouragement, role modelling, or confidence building opportunities afforded to boys and girls which will seep into the classroom environment.

Finally, the findings offer vital insights into the complex interplay between family socialization and adolescent psychological development within the Ghanaian context. It suggests that, for students of RME, self-esteem may be shaped more strongly by factors beyond parental disciplinary approaches. School experiences, peer interactions, religious participations, community norms and the moral-spiritual formation provided through RME curriculum may collectively buffer or override variations in parenting styles. This implies that Ghanaian adolescents may draw self-worth from broader socio-cultural frameworks such as, communal support, shared values and religious identity, thereby reducing the degree to which specific parental behaviours directly translate into differences in self-esteem.

5.2 Recommendations

Based on the findings and conclusions drawn, it is RME teachers are encouraged to continue to employ teaching methods that reinforce positive self-image and self-worth among students. RME teachers should foster an environment where students can support each other, further boosting collective self-esteem. They should also implement regular check-ins and support systems to maintain high levels of self-esteem, addressing any issues that may arise promptly. RME teachers need to sustain and strengthen pedagogical approaches that affirm students' identities, encourage moral reasoning, and foster inclusive classroom environments.

The National Council for Curriculum and Assessment (NACCA) in Ghana, in collaboration with the Ghana Education Service (GES) should develop and implement gender-sensitive (equity) teaching strategies to ensure all students, regardless of sex, feel valued and confident. This would provide a balanced participation, affirming moral teachings that challenge gender stereotypes, and fostering inclusive classroom cultures, RME can help narrow self-esteem gaps between boys and girls. They should also encourage RME teachers to create focus groups to understand the specific needs and challenges faced by different genders in the learning environment. Provide teachers with training on gender differences in self-esteem and strategies to address them effectively.

Since parental styles are not a significant factor, school heads, heads of department and RME teachers place a greater emphasis on the school environment and peer interactions to nurture student self-esteem. The school heads and heads of departments must encourage RME teachers to engage more actively with students to build a supportive and affirming classroom atmosphere. Lastly, it is recommended that schools offer counselling services to address any individual student issues that may affect self-esteem, ensuring that each student feels supported and valued within the school setting. There is the need to consider the multifaceted ecological systems surrounding young learners. It highlights the potential of value-based education, particularly RME, to serve as a stabilising force that promotes a positive sense of self across diverse family backgrounds.

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The influence of socio-economic status on mathematics performance in secondary schools: The case of Ubungu and Temeke, Dar es Salaam, Tanzania

Johnson Nason Katabwa¹

¹johnson.katabwa@tia.ac.tz

¹Tanzania Institute of Accountancy (TIA), Tanzania

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ABSTRACT

Despite numerous efforts to improve mathematics performance, results have continued to decline. Little has been done to examine the influence of socio-economic factors on mathematics performance, highlighting the need for this study to fill the knowledge gap. This study employed a quantitative research approach under a cross-sectional survey design. The study was guided by Bronfenbrenner's Ecological Systems Theory, which posited the unique interrelationship between home, school, and community environments and students' learning outcomes. The theory suits the study as it develops the framework for understanding disparities in mathematics achievement among students from various socio-economic backgrounds. Through random sampling technique, a semi-structured questionnaire was used to collect data from a sample of 360 students considered as 10% of the whole Form Four student population from 12 public secondary schools with poor national examination results from 2018 to 2023 in the Ubungu and Temeke districts, Dar es Salaam region, Tanzania. Additionally, 60 teachers from the same schools were sampled and interviewed to obtain a thematic qualitative analysis of the study. Quantitative data were analyzed using multiple linear regression models using SPSS packages. The findings showed a statistically significant relationship at the 5% level between students' performance and key SES variables, including family income, parents' education level, and parental influence on students' educational matters. Higher parental income, involvement, and positive influence were linked to better student performance in basic mathematics, while lower SES factors were associated with poorer outcomes. The study concluded that SES factors, especially parental income, education level, and occupation, play a critical role in students' success in mathematics education. The findings recommended that secondary schools could establish a Parents-Teachers' Association (PTA) to strengthen collaboration between the school and community to improve learning quality and better academic results. The government and other stakeholders should allocate funds to build hostels and dormitories around day schools and support children from low-income families.

Keywords: Education, Mathematics Performance, Socio-Economic, Secondary School

I. INTRODUCTION

Education is a key driver of the social and economic development of any Nation in the world. The bright future of any country depends upon the educational system that builds morality and behaviors of its citizens, which in depth requires attractive investment in education on a global scale (Ali & Jameel, 2016). Mathematics, as a core subject in any education system, is defined as a science of computations and reasoning or the study of numbers, quantities, and shapes (Mbarute & Ntivuguruzwa, 2022). On the other hand, Katabwa and Kalemile, (2025) defines Mathematics as a branch of knowledge that seeks to improve human perception and environment by using clear, logical, precise, and exact thinking processes. It plays a critical role in enhancing analytical and problem-solving skills, which promote any national prosperity in providing tools for understanding science, technology, engineering, and economics (Mapaire, 2016). Mathematics equips students with uniquely powerful ways to describe, analyze, and also to change the world (Shahanga & Kasambala, 2024). According to Kitta (2004), Mathematics is a language that helps us to describe ideas and relationships drawn from our environments. Ali and Jameel, (2016) claimed that it is a common belief of educationists that no one can make progress in any field without having the basic knowledge of mathematics. In spite of its massive importance and contributions in education, Mathematics is seen as the most difficult subject in the world (Percy et al., 2023), and Tanzania is not exceptional. Most of the students find it difficult to pass and discontinue it at graduate levels, and one of the most common reasons behind this discontinuity and failures in mathematics directly shifts the attention of educators towards a poor mathematical background at the secondary level (Azigwe et al., 2016).

Mathematics Performance can be defined as a measure of students' ability to use mathematics to solve real-world problems (Wu, 2025). According to Mrigo and Rogers (2021), Students' performance in any subject, including Mathematics, at all levels of education is measured through tests and examinations. In Tanzania, Mathematics performance at secondary levels is overall measured by the National Examinations Council of Tanzania (NECTA)



through assessments and examinations (Mazana et al., 2020). Observing factors behind failures in mathematics in global cases, Theron (2025) identified a huge failure in South African mathematics education between 2015 and 2024. He stipulated the root causes, such as insufficiently trained teachers, inadequate facilities, and a shortage of resources. However, these factors contrast with higher-performing countries like China, Singapore, and Korea. Mbarute and Ntivuguruzwa, (2022) concluded that Students' failure in upper secondary education is greater than in ordinary secondary schools in Rwanda. They identified poor enrolment of students in higher colleges in Rwanda in areas of natural and applied sciences due to low performance in mathematics in upper secondary schools. In Uganda, there has been a decline in academic performance in the mathematics subject over others in ordinary secondary schools for many years (Percy et al., 2023). Furthermore, Nduku and Philomena, (2016) revealed the prolonged poor performance in Mathematics for both primary and secondary schools in Kenya.

Tanzania, likewise, has revealed a huge failure in the mathematics subject to students, particularly in ordinary or junior secondary school level for over fifteen years up to now (Salyungu, 2015; Mazana et al., 2020; Kissima et al., 2024; Shahanga & Kasambala, 2024). For instance, Mazana et al. (2020), who assessed students' performance in mathematics in Tanzania, highlighted the trends of poor performance in mathematics from 2008 to 2016 in the ordinary level secondary school students, and the failure percentage rates ranged from 75.7% to 87.9%. These studies have explored different significant factors contributing to poor performance in mathematics, among them are Socio-economic factors (Mrigo & Rogers, 2021). Socio-Economic Status (SES) is the term used to describe the position of an individual or group in a hierarchical social structure or class, which includes both the social and economic factors (Gunendra & Sujana, 2017; Byiringiro & Hesbon, 2025). It is often measured by a combination of education, income, and occupation of an individual or group. Low socio-economic status and its correlates, such as low education, poverty, and poor health, ultimately affect the society as a whole (Wang et al. 2014). In other words, the Socio-Economic Status (SES) of a family has been defined as the position of a family in the social class. This could be determined by parents' educational level, occupation, and income. Nyambi, (2019) included family size and style of life as factors that determine socio-economic status in a family, whereas those factors, to a larger extent, influence children's school academic achievement in general.

Further studies were prompted to identify other contributing factors behind students' poor performance in mathematics at all levels of education in Tanzania. Many emphasize that high failure rates have been attributed to many factors, including the absence of competent teachers, inadequate teaching or learning resources such as books and other leaning tools (James & Julius 2019; Shahanga & Kasambala, 2024; Emmanuel & Heri, 2025). However, few of them have considered the impacts of Socio-economic factors. In China and other developed countries, there is an increasing number of empirical studies in education and psychology that suggest that SES plays a key role in students' academic development and mathematics achievement in particular (Wang et al., 2014; Genadek & Hill, 2017; Hernandez, 2014; Guendra & Sujana, 2017). According to Wang et al. (2014), the influence of SES on students' achievement in mathematics was found at different school levels, with more evidence being found in primary, middle, and secondary schools. Some of the factors discussed in their study were indiscipline (both educators and learners); promotion policies, drug, alcohol abuse, and pregnancy in female learners.

Ovansa, (2017) on the effect of socio-economic status on the academic performance of senior public secondary schools in Nigeria indicated that socio-economic status, including parents' academic background, parents' occupation, and family income, influences student academic performance. Based on their findings, including parents with high socio-economic status recommended to assist schools in the area of educational development and the government should introduce scholarship schemes to assist basic and social amenities to less privileged students in all public schools. Soharwardi et al. (2020) argued that the socio-economic status of the parents plays a significant role in determining the academic performance of their offspring. However, parents from the low socio-economic status groups may be powerless to meet the expenses of resources such as books, computers, or tutors to produce this helpful literacy environment. Additionally, Mauka (2015), in the study of parents' involvement in the achievements of students in schools, addressed some factors in the social context that contribute to the poor performance of their students. The study considered factors such as a low level of education among the majority of the parents, low income of the family, and poor communication between parents and teachers. The study by Nduku and Philomena, (2016) added that the major reason for disparities in mathematics performance over the years in Kenyan schools is due to a lack of parental involvement in students' educational matters.

Different initiatives were put in place by the Tanzanian government to address these issues in order to raise students' performance in mathematics and other science subjects. The government has been employing science and mathematics teachers in at least every financial year to curb the shortage of mathematics teachers in public schools. Priorities on loans to students from sciences and mathematics courses in higher learning institutions in order to emphasize students to take serious on mathematics seriously while they are in secondary levels have been much considered. Several projects have been initiated to enhance teachers' pedagogical content knowledge and teaching approaches. Education Reform Compact (ERC) with eight development partners and a transformative Program for Results of Big Results Now in Education (BRNEd) was among the developed projects. These were expected to fast-



track the improvement in the quality of basic education service delivery, which in turn brings tangible improvement in learning outcomes of students for better performance in Mathematics and other science subjects. Moreover, education stakeholders, including the Tanzania Institute of Education (TIE), the Mathematics Association of Tanzania (MAT), public and private universities, have been organizing teachers' support programs, enhancing teachers' capacity in teaching and learning competencies of mathematics education.

Despite these initiatives taken to curb the situation, there is still little improvement in Mathematics performance for all levels of education in Tanzania. Unlike previous studies, which often applied generalized SES measures to examine general academic achievements of students, few studies have been done to examine the influence of Socio-economic factors on students' performance in mathematics for Dar es Salaam secondary schools and Tanzania in general. However, no specific study has conducted a quantitative analysis of the influence of Socio-Economic status on basic mathematics performance for secondary schools in Dar es Salaam. Therefore, the current study necessitates the need to conduct a statistical analysis addressing how parents' Socio-Economic Status (SES) can affect their students' mathematics performance at the ordinary secondary school level. SES factors such as Parental influences, parental education levels, and parents' income will be quantitatively and qualitatively analyzed. A Multiple regression model that describes the relationship between Socio-Economic Status (SES) and students' performance in basic mathematics at ordinary schools in Dar es Salaam, in the case of Ubungo and Temeke Municipals, will be developed. The results will be significant to educational policy makers, educational administrators, and non-governmental organizations (NGO's) on how to handle the Socio-Economic Status (SES) of families to improve the students' performance in mathematics for their entire future success.

1.2 Research Objective

To assess the influence of socio-economic status on students' mathematics performance in secondary schools

II. LITERATURE REVIEW

2.1 Theoretical Review

2.2.1 Bronfenbrenner's Ecological Systems Theory (1979)

This study was guided by the Ecological Systems Theory developed by Bronfenbrenner in 1979. Broadening the scope beyond individual interactions, ecological systems theory examines the environmental contexts in which learning process occurs. This theory posits that learning is influenced by direct classroom interactions as well as larger systems, such as family, school, and community environments at large. It provides a framework for understanding disparities in mathematics achievement among students from diverse socio-economic backgrounds. Students from low-income families often face challenges such as limited access to educational resources and under-resourced schools, which collectively hamper their academic progress. Conversely, students from strong economic backgrounds benefit from a synergy of enriched home environments and strong classroom support. The supportive empirical studies demonstrate the critical role of these broader systems. For instance, Lesh and English (2005) found that mathematical understanding and problem-solving abilities are deeply rooted in interactions within family and community support networks. Moreover, Ovansa (2017) emphasized the importance of socio-economic resources in shaping students' mathematical development. Their findings suggested that improving mathematics outcomes requires addressing systemic inequalities and fostering stronger partnerships between schools, families, and communities. Interestingly, Azigwe et al. (2016) urged that the Socio-Economic Status (SES) of families is an important determinant of child learning outcomes. They further cemented that children born into poor families face an educational disadvantage both before they enter school and throughout their education, such that SES to a large extent determines educational outcomes, which in turn determine the SES of the next generation. Applying Bronfenbrenner's Ecological Systems Theory helps to observe how interaction of these contextual variations across home, school, and community levels influence students' academic outcomes. This theoretical lens therefore supports the study's objective of understanding the multidimensional relationship between socio-economic status and mathematics performance among secondary school students in Dar es Salaam.

2.2 Empirical Review

2.2.1 Parental Influences on Mathematics Performance.

Parents' influence on the educational success of their children in mathematics performance is associated with some key factors, such as parents' attitudes towards the mathematics subject, parents' working hours, and parental involvement in children's educational progress. Many findings have highlighted the impacts of parental-child education interactions and the related achievement in mathematics. For instance, Mohr-Schroeder et al. (2017) investigated both the influence of parents and their students' attitudes towards mathematics performance. Their study was statistically significantly positively correlated between the parents' and students' attitudes toward mathematics success. The study



by Mbarute and Ntivuguruzwa, (2022) underlines the critical role that school environments play in influencing students' performance in Mathematics. They found that inadequate learning resources, low parental encouragement, and the long distances students must travel to school have significant negative impacts on academic success. However, many parents have less influence on helping their children with mathematics because they are not confident in their own mathematical abilities (Wachira, 2016). Erika Patall, an Associate professor of educational psychology, writes: When it comes to helping students with homework, education and psychology research suggests that it all depends on how parents become involved. Sometimes when kids struggle with homework, parents have an instinct to take control by using commands, incentives, threats, surveillance, or just doing the work themselves, and these tactics may work in the short term, but they won't benefit kids in the long run. Also, Genadek and Hill (2017) on parents 'working time impact on their children's performance in academics, revealed that some parents' jobs lead them to fail to have enough time to spend with their children in guiding them to educational-related matters. Also, the lack of parental involvement in education matters has been a key reason behind the massive failure of Mathematics in Kenyan Schools (Nduku & Philomena, 2016)

2.2.2 Parents' Education Level and Students' Mathematics Performance

The educational level of parents has an influence on the value placed on education, which in turn has an influence on the educational practices at home (Azigwe et al. 2016). Educated parents tend to transmit to their children the academic culture they had acquired at school, which can positively impact on child's learning and performance. Yara (2010) reported that better-educated parents are able to raise their children to have healthy self-perceptions about their academic abilities and engagement in intellectual activities. Therefore, such parents also generally have children with fewer behavioral problems that can hinder their learning experiences. Wang et al. (2014) revealed that Chinese students' SES has a significant influence on their mathematics achievements and several important constituents of SES, such as mothers' educational level, fathers' occupation, and family income. Nduku and Philomena, (2016) found that parental education and socioeconomic status have an impact on pupil achievement; pupils whose parents were both college-educated tended to achieve at the highest levels in their academics. Hence, the parental education seems to be a significant factor in fostering the mathematics performance of their children.

2.2.3 Parental Income on Students' Mathematics Performance

Parental income in most cases is determined by the major economic activity of a parent or his/her occupation. Several findings have identified a significant positive relationship between good parental income welfare and educational achievements, including mathematics success. Smith, (2006) found that children from low-income families, with less involved parents, often experience lower academic benefits than children coming from higher-income families. According to Mauka (2015), parents with low incomes are unable to provide sufficient home needs and school requirements for their children. Low income in the family also forced some students to take part in the income generation activities to support the families; thus, reducing their time for learning. Abety and Ndamsa, (2025) revealed in the studies across different African countries that children from families with educated parents generally perform better in school, including in key subjects such as mathematics and science. It was concluded that parental income significantly influenced students' academic success, with wealthier families better positioned to afford private schooling, remedial classes, and educational technologies. Therefore, assessing how parents' educational level influences their children's mathematics performance at the secondary level seems to be a very interesting study. Most of the reviewed literature of SES impacts on students' academic performance were done in social context and in qualitative nature of the research. However, few of them have examined the impacts of SES factors on Mathematics performance in which no one have considered public schools in Dar es Salaam region whose results have been worse in the recent years. This has emerged as huge research gap to fill for betterment of education and development in Tanzania and beyond.

III. METHODOLOGY

3.1 Study Area

This study was conducted in Ubungo and Temeke municipalities in Dar-es-Salaam Region in Tanzania. These Municipalities are among the 5 administrative districts in the Dar-es-Salaam region. Ubungo district is bordered to the North by Kinondoni district, to the East and the South by Ilala district, and to the West by Kisarawe and Kibaha districts from the Coast region. While Temeke district is bordered to the North by Ilala district, to the East by the Indian Ocean and Kigamboni district, to the South by Mkuranga district, and to the West by Kisarawe district, both from the Coast region. Ubungo and Temeke have been experiencing a huge failure percentage rates in mathematics compared to other districts regional-wise and beyond over the past five years (2018-2023) based on NECTA Form four examination results, which raised the interest to conduct the current study.



3.2 Research design

This study employed a quantitative research approach under a cross-sectional survey design. The design was considered because it enabled the researcher to collect data at a single point in time from a relatively large sample, allowing for statistical analysis of the relationship between students' socio-economic status (SES) and their performance in basic mathematics. This approach is appropriate for identifying patterns and relationships among variables across different schools and socio-economic contexts within a limited time frame (Creswell, 2012).

3.3 Target Population

The target population comprised form four students and their teachers from 12 secondary schools within Ubungu and Temeke districts in Dar es Salaam, Tanzania. Ubungu district has 36 public secondary schools while Temeke comprises a total 26 public secondary schools. Those two districts were purposively selected due to their diverse socio-economic characteristics and poor academic performance in form four examination results within the years 2018-2023 compared to other districts in the region.

3.4 Sample Size

A total of 420 respondents participated in the study. This sample was determined as 10% of the whole targeted population from both districts as proposed in Creswell's (2012) guidelines for survey research, which emphasize representativeness and feasibility. The sample included 360 form four students and 60 teachers drawn from 12 secondary schools (six schools from each district) whereas each school, 30 students and five teachers were selected using simple random sampling, representing both genders and different socio-economic backgrounds.

3.5 Data Collection Instruments

Data were collected using semi-structured questionnaires for students and structured interview guides for teachers. The student questionnaire focused on assessing the influence of indicators of socio-economic status including parental education, occupation, and income to students' mathematics performance records. Teacher interviews were used to obtain insights into how socio-economic factors influence student engagement and achievement in mathematics. All instruments were pre-tested to ensure validity and reliability before the main data collection exercise. Data were analyzed using both descriptive statistics and multiple linear regression model for combined and individual influence of different SES indicators.

3.6 Model Formulation

The Multiple linear regression model is used to establish the relationship between students' performance in basic mathematics (Y) as the dependent variable and SES indicators as the independent variables, which include Parental income, Education level, and Parental influences in the student's education. However, Parental income at the family level is divided into three sub-variables, which were high-income family (X_1), Middle-income family (X_2), and Low-income family (X_3). Parent's level of education was also subdivided into three sub-variables namely; Father's educational level (X_4), Mother's educational level (X_5) and Highly educated parents (X_6) and finally, Parent's influences on students' education matters is divided into six sub-variables; Father's influence (X_7), Mother's influence (X_8), Parents in the formal employment (X_9), Parents' working hours (X_{10}), Parents in informal employment (X_{11}) and Parental involvement in education (X_{12}). This study assumes that the variables are linearly related in the equation of this form: -

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_{12} X_{12} \quad (3.1)$$

Where:

X_k 's are explanatory variables of Y and β_k 's There are multiple regression coefficients.

These coefficients represent the effect of a change in each of the explanatory variables on the students' performance (Y). The method of least squares was used to estimate the regression coefficients of the model. Suppose that $n > k$ observations are available and let X_{ij} Denote the i^{th} observation on the level of the variable X_j The observations are $(X_{i1}, \dots, X_{ik}, Y_i)$ for $i = 1, \dots, n$ and $n > k$ Where n represents the number of observations and k Represents the number of predictor variables, which is 12 in the current study.

The normal equations associated with the regression matrix can be written in matrix notation as;

$$\mathbf{X}^T \mathbf{X} \hat{\beta} = \mathbf{X}^T \mathbf{Y} \quad (3.2)$$

On the assumptions that the inverse matrix exists, the equations have a unique solution, which is the vector of ordinary least squares estimates. Finally, using Calculus rules for matrices, it can be derived that the ordinary least squares estimate of the β coefficients are calculated using the matrix formula:

$$\hat{\beta} = (\mathbf{X}^T \mathbf{X})^{-1} \mathbf{X}^T \mathbf{Y} \quad (3.3)$$



Where represents the transpose of X , and represents the inverse matrix.

IV. FINDINGS & DISCUSSION

4.1 Performance in Basic Mathematics

Students’ performance in basic mathematics was assessed to form four groups based on their Form Two national examination results for the year 2023. The data were collected through a questionnaire administered to the students and teachers from 12 public secondary schools; the students responded that over 66% of them scored below credit (Grade C). To assess the level of performance, the respective students were asked to state their results in basic mathematics according to NECTA’s grade from A’ 81-100% (Excellent), B’65 - 74% (Very Good), C’45 - 64% (Good), D’s 30-44% (Fair) and F’ below 30% (Failed). Data were finally summarized and presented in Table 1.

Table 1
Students’ Performance in Form Two Basic Mathematics

SN	Grade	Frequency	Percent
1	A	16	4.4
2	B	58	16.1
3	C	48	13.3
4	D	95	26.4
5	F	143	39.7
	Total	360	100.0

4.1.1 Parents’ Education Level

The results revealed that the majority of the parents had an almost secondary education level, where mothers were 82.5% and fathers were 86.6%. Due to parents’ ignorance, they do not know the importance of education to their children and to society; therefore, they do not respond by providing educational support to their children, otherwise they discourage it and encourage dropout (**Table 2**).

Table 2
Parents’ Education Level

SN	Level	Fathers’ Education		Mothers’ Education	
		Frequency	Percent	Frequency	Percent
1	Non-formal	93	25.8	79	21.9
2	Primary level	132	36.7	145	40.3
3	Secondary level	88	24.4	73	20.3
4	College/ University	47	13.1	63	17.5
	Total	360	100.0	360	100.0

4.1.2 Parents’ Occupation

The study interviewed students about the major economic activities performed by their parents, and it was found that 56.3% fathers were peasants, no formal employment, and street vendors, while 66.9% mothers were peasants, no formal employment, and food vendors (Table 3).

Table 3
Parents’ Occupation

SN	Status	Fathers’ Occupation		Mothers’ Occupation	
		Frequency	Percent	Frequency	Percent
1	Peasants	75	20.8	58	16.1
2	Street vender	37	10.2	59	16.4
3	No formal employment	91	25.3	124	34.4
4	Employed	150	41.7	118	32.8
5	Major business owner	7	2.0	1	.3
	Total	360	100	360	100

4.1.3 Model Analysis

The model equation was analyzed to investigate the goodness of fit of the model to the data. Measures of goodness of fit to be discussed are the coefficient of determination and the adjusted coefficient of determination. \bar{R}^2 . The coefficient of determination is a key output of regression analysis. It is defined as the proportion of the variance in



the response variable that is predictable from explanatory variables. It provides some information about the goodness of fit of a model, implying that it is a measure of how well the regression line approximates the real data points. The extreme values of the coefficient of determination are zero; it indicates that the model explains none of the variability of the response data around its mean, and one, when the residual variance is zero, which indicates that the model explains all the variability of the response data around its mean, implying that the fit is perfect. This implies that, $0 \leq R^2 \leq 1$. The small R^2 implies that the disturbance variance (σ^2) is large relative to the variance of y , which means that β_j is not estimated with precision. The equation is adjusted to obtain \bar{R}^2 value to account for both sample size and number of explanatory variables. \bar{R}^2 can help guard against over-fitting (including explanatory variables that are not really useful) and penalizes the analysts for adding terms to the model.

The coefficient of determination R^2 is computed as $R^2 = \left(1 - \frac{SSE}{SST}\right)$

Where:

SSE is the magnitude of the unexplained variation with $(n - k - 1)$ degrees of freedom, and SST is the total variation with $(n - 1)$ degrees of freedom, where n is the number of observations and k is the number of explanatory variables, using these definitions the equation becomes,

$$R^2 = 1 - \frac{\sum(Y_i - \hat{Y})^2}{\sum(Y_i - \bar{Y})^2} \tag{4.1}$$

Where Y represent students' performance, \hat{Y} represents the predicted students' performance and \bar{Y} represents the mean students' performance.

Thus $\bar{R}^2 = 1 - \frac{(n-1)}{(n-k-1)}(1 - R^2)$ (4.2)

Standard Error S_e , is the estimate of the common standard deviation, σ which measures the dispersion of the errors around the mean.

$$S_e = \sqrt{\frac{\sum(Y_i - \hat{Y}_i)^2}{n - k - 1}}$$

4.1.4 Model Summary

The model summary presented in Table 4 shows that the regression model explains a substantial portion of the variance in students' mathematics performance. The corrected values indicate that the model has an R Square of 0.791, meaning that approximately 79.1% of the variability in mathematics performance is explained by the predictor variables included in the model. The Adjusted R Square of 0.622 confirms that, even after adjusting for the number of predictors, the model still accounts for 62.2% of the variation. This supports the reliability and strength of the model in explaining students' performance outcomes. The ANOVA table was generated to find out if there is any significant relationship between performance as the dependent variable and family income, parents' level of education, and parents' social influences as independent variables. Analysis of the findings depends on whether there is any significant relationship between student performance and family income, parents' level of education, as well as parents' influence on the educational success of a student (Table 4).

H_0 : There is no significant relationship between student performance, parental income, and parents' level of education, as well as parents' influence.

H_1 : There is a significant relationship between student performance, family income, and parents' level of education, as well as parents' influence.

Table 4
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.789	.791	.622	1.121

4.1.5 Analysis of Variance (ANOVA)

Analysis of variance results indicated that the p-value < 0.05 , hence the null hypothesis is rejected at 5% level and thus we assert that there is a significant relationship between student performances and parents' income, parents' level of education, as well as parents' influences (Table 5).

**Table 5**

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.594	12	7.799	6.209	.000
	Residual	435.862	347	1.256		
	Total	529.456	359			

Variable: Mean grade in Form Two Exams

4.2 Multiple Regression Results

4.2.1 Effects of Individual Variables in the Model

The regression coefficients table was generated to determine the regression coefficients, the most important predictor, as well as to identify if there is any significant relationship between the independent variables and the dependent variable. Beta coefficients for standardized regression coefficients were analyzed to measure the impact of each explanatory variable on the response variable.

The regression results obtained depicted the Following Model:

$$Y = 3.452 + 0.100X_1 - 0.035 X_2 - 0.038 X_3 - 0.150 X_4 - 0.012 X_5 - 0.030 X_6 - 0.273 X_7 - 0.041 X_8 - 0.063 X_9 + 0.063 X_{10} - 0.081 X_{11} + 0.090X_{12}$$

Results indicate a positive correlation and influence of high family income on students' performance in basic mathematics ($\beta = 0.1$ and p -value = 0.038). This implies that the higher the income, the higher the performance. On the other hand, middle- and low-income families show inverse relationships and non-significance with p -values of 0.422 and 0.514, respectively.

Conversely, the negative correlation between the two in both cases with ($\beta = -0.150$ and p -value = 0.026) for father's educational level and ($\beta = -0.012$ and p -value = 0.042) for mother's level of education level respectively, was observed. This means that as the educational level of the parents becomes higher, there are more chances for the student to perform poorly compared to students whose parents have a low level of formal education. The p -values also suggest that the variables are statistically significant.

Furthermore, in the case of parent involvement in students' education matters, results showed a positive correlation between the variables with ($\beta = 0.090$ and p -value = 0.015). This means that the performance of students whose parents are more involved in their children's educational and academic progress at school is higher than that of students whose parents are not much involved in their children's educational and academic progress at school. In addition to that, the analysis shows that the variable is also statistically significant. Other indicator(s) such as the influence of parent employment nature to the student's performance were also tested. The results showed a negative correlation for parents in formal employment with ($\beta = -0.063$ and p -value = 0.148) and a positive correlation for those in informal employment with ($\beta = 0.081$ and p -value = 0.074). Based on these results, it is revealed that, better performance for students whose parents are in informal employment and poor performance for students whose parents are in formal employment. Interestingly, working hours for parents is significant with p -value 0.010 and shows a positive correlation with students' performance, as all presented in (Table 6).

Table 6

Regression Coefficients Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.452	.506		6.817	.000
	X ₁	.100	.048	.112	2.079	.038
	X ₂	-.035	.054	-.033	-.653	.514
	X ₃	-.038	.048	-.043	-.805	.422
	X ₄	-.150	.084	-.108	-1.780	.026
	X ₅	-.012	.086	-.008	-.135	.042
	X ₆	-.030	.045	-.036	-.661	.509
	X ₇	-.273	.066	-.266	-4.150	.000
	X ₈	-.041	.073	-.036	-.567	.571
	X ₉	-.063	.043	-.076	-1.451	.148
	X ₁₀	.063	.050	.064	1.256	.010
	X ₁₁	.081	.045	.091	1.789	.074
	X ₁₂	.090	.066	.069	1.360	.015

Dependent Variable: Mean grade in Form Two



4.3 Discussion

4.3.1 Student Performance in Mathematics versus Parental Income

The study found that most of the parents/guardians are very poor based on the nature of their jobs/occupations (Table 3). The respondents from poor families signified that the majority of their parents with informal occupations were mostly unable to provide enough support for their children, unlike parents with formal occupations. This was literally supported by (Azigwe et al., 2016; Mbarute & Ntivuguruzwa, 2022) that most of the parents with low income gain cannot afford to provide enough support to their children's education needs, such as to provide education expenses and other school contributions. The regression results in (Table 6) shown that high family income (X_1) was statistically significant at 0.05 level implying that students from those families are likely to perform better in academics compared to those from mid-and low-income families (X_2 & X_3). In the same vein, Ovansa (2017), Abety and Ndamsa, (2025); Gunendra and Sujana, (2017); Ali & Jameel, (2016), and Emanuel & Heri, (2025) hold the same results. One of the key respondents from Ubungo district replied that

“Most students whose parents have no specific jobs or are low-income oriented families do not have money for transport fare and food, therefore they have to walk for a long distance to school with hunger even during their final examinations”.

Moreover, academic master in one of the schools in Ubungo replied

“Due to poverty in many families, some students would support themselves for their educational expenses and needs; as such, these students do not attend school daily to get time to engage in economic activities to get money for their family and school needs”.

This situation increased truancy among students, with the consequence of poor academic performance. Similarly, (Byiringiro & Hesbon 2025; Mohr-Schroeder et al., 2017) findings align with these results.

4.3.2 Mathematics Performance and Parent's Education Level

The study revealed that most parents in both districts had low educational attainment, with the majority completing only primary school or below (Table 2). Initial assumptions of the study revealed that low parental education has been associated with poor academic outcomes, as indicated by several studies (Khan et al., 2015; Azigwe et al., 2016; Byiringiro & Hesbon, 2025). However, the regression results in Table 6 showed an unexpected pattern: father's education (X_4) and mother's education (X_5) both displayed negative coefficients ($\beta = -0.150$ and $\beta = -0.012$ respectively). This proposes that higher parental education, within this sample, was associated with slightly lower student performance in mathematics. Although these coefficients were not statistically significant at the 0.05 level, their direction conflicts with established literature as well as earlier interpretations in the paper. Furthermore, parents with advanced education variable X_6 was not statistically significant at 0.05 level representing the similar results. To interpret this contradiction, it is important to consider contextual social and cultural dynamics. Qualitative insights revealed that even parents with relatively higher education were often unable to provide effective academic support. Some were employed in demanding jobs, leaving little time to supervise or motivate their children. One of the key informants in Temeke district supported this saying,

“Most of the students attending the school nowadays do not understand their future education career, hence lacking the desire to study harder in their classes due to a lack of education motivators from their families”.

Other parents are not competent in mathematics, limiting their ability to assist students with schoolwork. As such, formal education does not automatically translate into active academic involvement. Additionally, some parents both educated and non-educated view educational expenses and hostel payments as unnecessary. Others hold restrictive gender norms, believing that educating girls is a wastage of time and resources. These observations align with findings from Mrigo and Rogers (2021), Hernandez (2014), and Emmanuel and Heri (2025), which emphasize that parental engagement, expectations, and cultural beliefs have stronger effects on student performance than education level alone. Thus, the negative coefficients observed may not indicate a real inverse relationship between parental education and student performance, but rather reflect the complex socio-economic context of the study area, though further research with larger samples is recommended to examine the persistence of this trend.

4.3.3 Students' Performance versus Parent Influences on Educational Progress

The study also observed that parental influences on the educational progress of their children have a huge impact on students' academic performance. For instance, regression results shown that parental involvement in students' education matters (X_{12}), parent's working hours (X_{10}) and father's influences (X_7) in (Table 6) were statistically significant at 0.05 significance level. This gives the support that general parental attitudes and influences towards student academic success, involvements and time they spend at work could have significant impact on their children academic performance at school. It was also documented in (Yara, 2010; Genadek & Hill, 2017) that parental involvement in students' education matters, parental attitude towards student academic success including mathematics,



and hours they spend with their children on education issues can boost their performance at school. However, both variables (X_9 & X_{11}) parents working in informal and formal sectors were not statistically significant but most parents from both districts were employed in the informal sector (Table 3). These obviously spent more hours in their major economic activities due to the nature of their jobs to limit time spending with their children at home. One of the key respondents in Temeke schools replied that

“Because of lack of time and awareness most of parents do not even appear in the general school meetings organized by school board which aims on developing strategies to boost academic performance of their children”.

This reduced the good interactions between parents, teachers and children leading to the drawback of their academic progress. Similar observations were explored in (Rasheed et al., 2019; Nduku & Philomena, 2016; Mauka, 2015). Other social needs like lack of conducive home environments, negative parental attitudes on female children as stated in (Smith, 2006; Wang et al., 2014; Abety & Ndamsa, 2025) were observed to hamper the performance of most of students from both districts.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Based on the findings of this study, it is concluded that there is a significant relationship between students' performance in mathematics and Social Economic Status (SES) factors, i.e. parental income, parents' level of education, and parents' influence at 5% level of significance. The finding indicated that parents' economic stability seems to be the most influential factor of students' performance in basic mathematics, followed by parents' education level and involvements. In addition, most students reported that their parents do not cooperate with teachers as they do not visit schools to make follow-up on the academic progress and other education matters of their children, which leads to poor performance.

5.2 Recommendations

The study recommends that secondary schools should introduce the parents-teachers' cooperation (Parents-Teachers Association, PTA) as most public primary schools do. This will initiate full collaborations of teachers and parents on identifying and solving different socio-economic challenges facing students while at school or at home in order to improve mathematics performance and general academic achievements. In addition, Local Government Authorities (LGAs), the owners of most of the public schools, should use part of their own domestic revenues to build school hostels to accommodate students. Parents and guardians must be required to contribute other requirements of their students at school. Lastly, Education stakeholders and other financial institutions should initiate funds for sponsoring students from the poorest families who performed better in mathematics at the primary level. This will motivate students from poor families and peer groups to take serious consideration of mathematics performance from primary levels.

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Assessing the role of leadership style in conflict resolution in public organizations: A study of selected prisons in Tanzania

Sarah Seth Mbise¹
Revocatus Kabobe²
Miraji Kitigwa³

¹*mbisesam@gmail.com

²kaboberevocatus@gmail.com

³miraji.kitigwa@out.ac.tz

^{1,2,3}The Open University of Tanzania

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ABSTRACT

This study assessed the role of leadership styles in conflict resolution in selected Tanzanian prisons, precisely Ukonga, Keko, and Segerea, in Dar es Salaam. The study aimed to assess the leadership styles used in prisons, evaluate procedures applied to conflict resolution, and identify the challenges faced by prison leaders. The study was guided by the Transformational Leadership Theory, which was proposed by Bernard Bass and Riggio, and the Transactional Leadership Theory by Burns. Applying a qualitative research approach and case study design, the population of the study was 100 participants, consisting of 30 prison leaders and administrative staff and 70 inmates. The sample size was 15 prison leaders, 15 administrative staff, 20 inmates (served up to 4 years), 20 inmates (served 5-10 years), 15 inmates (served 11-15 years), and 15 inmates (served over 15 years) by using semi-structured interviews and focus group discussions. Thematic analysis was applied to analyze the data collected in the field by coding and creating themes. The findings discovered that Tanzanian prisons mainly applied transactional, transformational, and participative leadership styles. The transformational leadership style, characterized by empathy, open communication, and respect, proved to be most effective in attaining sustainable conflict resolution and constructive behavioral change amongst inmates. Besides, collaborative leadership allowed inmate participation in decision-making, which was rare but demonstrated considerable potential for fostering permanent peace and cooperation. The study identified challenges facing prison leaders, such as resource limitations, overcrowding in prisons, insufficient training, low morale, and rigid hierarchical structures obstructing effective conflict management. Recommendations emphasized the need for comprehensive leadership training encouraging emotional intelligence, as well as adaptive conflict resolution policies and structural reforms promoting inmate involvement and procedural justice. This study contributes to the existing body of knowledge by providing empirical understandings into the practical application of leadership concepts and theories in conflict resolution circumstances within correctional organizations, contributing valuable direction for policymakers and prison administrators looking for enhancement of the institutional harmony and rehabilitative outcomes.

Keywords: Conflict Resolution, Leadership, Leadership Style, Public Organizations

I. INTRODUCTION

Leadership style plays a crucial role in organizations, no matter their size or whether they're public or private, and it cuts across all sectors (Lindsay et al. 2011). This is because the way leaders choose to lead can shape the organization's direction, how plans and strategies are carried out, and even how motivated the employees feel. Typically, leadership styles encompass various ways of exercising authority that fit different types of organizations and environments, all aimed at reaching specific goals and objectives (Haslam, et al. 2019).

On a global scale, leadership styles often mirror a country's political beliefs. For instance, liberal democratic nations like the United States, the European Union (EU), Canada, South Africa, Japan, and Korea tend to adopt participatory styles, such as democratic or transformational leadership. These approaches focus on collaboration, human rights, and inclusivity, making up about 60–70% of leadership styles in these regions (Caza, et al. 2021). On the flip side, non-liberal states like China, North Korea, and Rwanda lean towards authoritarian or autocratic styles, which account for roughly 80–90% of leadership methods in those contexts (Kann, 2022). These styles prioritize control, discipline, and enforcement, closely aligning with the ideologies of the state (Shwan & Shapiro, 2021).

When it comes to prisons, which serve as tools of state authority, leadership and conflict resolution strategies can vary significantly across different jurisdictions. In liberal democracies like the United States, the UK, and Australia, prison leadership often incorporates participatory principles, highlighting human rights and collaboration (Shwan &



Shapiro, 2021). In these countries, around 60–70% of leadership practices in prisons are rooted in democratic ideals. In contrast, non-liberal states such as China, Rwanda, and Cuba predominantly use autocratic practices, focusing on enforcement and control (Turning, 2022). The leadership in these prisons reflects broader governmental directives and usually prioritizes compliance over inclusivity (Kann, 2022).

Challenges in prison environments go beyond just the leadership styles at play. Take gang violence in Latin American prisons, for instance; it presents serious hurdles for conflict resolution. Inmates often band together for protection, which can lead to violent confrontations. This situation calls for leadership styles that can adapt to the complexities of these conflicts (Vidal, 2021).

In African countries, the prison landscape is influenced by distinct socio-economic conditions, where limited resources can impact management and daily operations (Goleman, 2021). Unlike prisons in the Americas, Europe, or parts of Asia, African prisons typically do not see strong gang formations due to cultural differences (Shwan & Shapiro, 2021). Instead, conflicts are more likely to arise between inmates or between inmates and guards, often revolving around issues of authority and respect within the prison community (Legood, 2021).

Conflict resolution in African prisons is shaped by leadership styles that focus on collective well-being and social harmony, reflecting traditional African practices. Leadership in these environments is influenced by cultural values like communalism and respect for hierarchy. These values guide conflict resolution methods that prioritize mediation, dialogue, and community involvement. Moreover, the behaviors and actions of prison staff, which are often shaped by the region's cultural diversity, also play a significant role in developing leadership and conflict management strategies (Legood, 2021).

In Tanzania, various public and private organizations have embraced leadership styles that fit their unique operational environments (Waigara, 2015). Prisons, being public institutions, function within military-style frameworks aimed at managing inmates from a wide range of cultural, social, and psychological backgrounds (Skinner, 2020). The Prisons Standing Order acts as the main guideline for resolving conflicts, offering structured yet flexible procedures for different scenarios (United Republic of Tanzania [URT], 2019). However, how effective these procedures are often hinges on the discretion of the leadership.

Conflicts in prisons whether they arise among inmates, between inmates and officers, or with outside stakeholders demand a nuanced approach to leadership to tackle their complexities (National Audit Office of Tanzania, 2023). The prison setting is inherently tough due to the diverse mix of individuals involved. Inmates can range from those serving short sentences to those facing life terms, each with their own specific needs. Meanwhile, the prison staff, primarily made up of military personnel, must find a balance between exercising authority and facilitating inmate rehabilitation. The interactions with external parties, like visitors, add another layer of complexity to these dynamics (Amlike, 2020).

While the leadership styles in Tanzanian prisons do influence how conflicts are resolved, applying these styles is not always a straightforward task. Even though the Standing Orders lay out a framework, the real-world application of leadership styles often requires adjustments based on the context. Existing research highlights the complexities of leadership within Tanzanian prisons but tends to fall short in detailing how these leadership styles are specifically utilized in conflict resolution. For example, while Skinner (2020) and the National Audit Office of Tanzania (2023) discuss the challenges of managing a diverse inmate population, they do not delve deeply into how leadership styles are put into practice, especially in situations that call for discretion and adaptability.

This study set out to bridge a significant gap by looking into how leadership styles are actually put into practice in Tanzanian prisons, especially when it comes to resolving conflicts. The research delved into how prison leaders adjust their methods to handle the intricate relationships between inmates, staff, and outside parties, as well as how they tackle the various challenges that arise from the differing needs of these groups.

1.1 Statement of the Problem

Conflict is a significant problem in Tanzanian prisons, surfacing among staff, between staff and inmates, and even among the inmates themselves (Robins, 2019; Grip & Kotajoki, 2022; Hamad, 2023; Amlike, 2020; Makinde & Olabode, 2020; Thadeo, 2020; Sibisi & Olofinbiyi, 2021). These conflicts undermine the fundamental goals of prisons, which are to rehabilitate individuals, maintain order, and ensure the safety of everyone involved. Leadership is crucial in managing and resolving these conflicts, but the leadership styles currently used in Tanzanian prisons, like transformational and transactional leadership, have not been very effective in tackling these issues (Robins, 2019; Mgebeke, 2020).

As a result of ongoing conflicts, Tanzanian prisons are grappling with a host of challenges, including overcrowding, limited resources, and strained relationships, all of which exacerbate existing tensions and obstruct the achievement of institutional objectives (Robins, 2019). For example, some prisons are operating at over 109% of their capacity, which leads to heightened stress, increased violence, and fewer chances for rehabilitation (Bippa, 2024; Robins, 2019; Grip & Kotajoki, 2022). If these challenges are not effectively addressed, they risk creating a cycle of violence, lowering staff morale, and undermining efforts to rehabilitate and reintegrate inmates.



Despite the attempts by prison leadership to tackle these conflicts through mediation, negotiation techniques, leadership training programs, inmate rehabilitation initiatives, and grievance redress mechanisms, prisons still face ongoing violence, high recidivism rates, and a persistent failure to meet basic human rights standards (Mgbeke, 2020). If these issues continue to go unresolved, they could lead to institutional failure and diminish the effectiveness of prison management. This study set out to explore how different leadership styles, especially transformational and transactional approaches, can help resolve conflicts in public institutions like prisons in Tanzania.

1.2 Research Objectives

- i. To evaluate the leadership styles used by leaders in resolving conflicts in Tanzanian prisons.
- ii. To assess the leadership procedures applied in conflict resolution within the prisons.
- iii. To identify the challenges that prison leaders face when applying different leadership styles to resolve conflicts in Tanzanian prisons.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Transformational Leadership Theory

Transformational Leadership theory shines a light on how leaders can truly inspire and motivate their teams. It's all about creating a shared vision and goals, paying attention to individual needs, and fostering innovation. This approach puts the well-being of team members front and center while also aiming for long-term success. Key leadership behaviors like individualized consideration and inspirational motivation play a vital role in resolving conflicts, especially in high-pressure environments such as prisons. Transformational leadership brings the emotional intelligence and flexibility necessary to meet the varied needs of both prison staff and inmates.

The essential elements drawn from Transformational Leadership Theory offer a thorough perspective on how leadership impacts conflict resolution. The independent variables include behaviors like idealized influence, inspirational motivation, and individualized consideration. These traits shape how leaders guide and uplift their teams, building trust, collaboration, and adaptability. On the flip side, the dependent variables focus on the results of these leadership behaviors, particularly in conflict resolution scenarios. This includes positive outcomes like reduced violence, better relationships, and improved harmony within institutions. Together, these elements lay the groundwork for understanding how effective leadership strategies can lead to real organizational benefits.

However, Transformational Leadership Theory is not without its flaws. A significant challenge is its dependence on a high level of trust and commitment between leaders and their followers, which can be tough to cultivate in hierarchical and authoritarian environments like prisons (Skinner, 2020). Additionally, implementing this theory often requires a considerable investment of time and effort, which can be a hurdle in resource-strapped institutions. Moreover, it may not offer quick fixes for urgent conflicts, as its emphasis on long-term change can sometimes postpone immediate resolutions.

Leadership training programs should really focus on building emotional intelligence and the ability to adapt to different situations. This approach can significantly improve how transformational principles are put into practice. Plus, having regular feedback and structured performance evaluations can foster the trust and commitment needed to effectively implement this theory (Chandolia, 2020).

2.1.2 Transactional Leadership Theory

To tackle the shortcomings of Transformational Leadership Theory, especially in strict environments like prisons, Transactional Leadership Theory was introduced as a helpful alternative. This approach, first put forth by Burns in 1978 and later expanded by Bass in 1985, centers on structured interactions between leaders and their followers. It highlights the importance of clear roles, expectations, rewards, and consequences.

In contrast to Transformational Leadership, which aims for long-lasting, transformative change, Transactional Leadership is more about maintaining stability and achieving immediate results. This practical method focuses on reaching specific goals through straightforward exchanges between leaders and followers.

One of the key strengths of Transactional Leadership is its knack for providing quick solutions to conflicts, making it particularly effective in settings like prisons where swift action is crucial. By establishing clear expectations and rewards, it creates a stable environment where individuals understand what's required of them, which helps reduce uncertainty and boosts overall compliance. Moreover, the theory's focus on order and discipline proves especially useful for managing everyday conflicts that arise in prison settings.

By blending the immediate, practical conflict resolution strategies of Transactional Leadership with the long-term motivational and inspirational elements of Transformational Leadership, leaders can effectively tackle both short-term challenges and promote lasting institutional change. Transactional Leadership lays the groundwork for daily order,



while Transformational Leadership fosters trust, collaboration, and personal commitment, ultimately enhancing conflict resolution outcomes over time.

2.1.3 Relevance of the Theory

As noted above, the purpose of applying transformational and transactional leadership theories in this study was to provide a comprehensive understanding of how leadership styles influenced conflict resolution within Tanzanian prisons. These theories offered contemporary insights, accumulated research, and conceptual explanations on how leadership behavior affected prison environments and the interactions between leaders and inmates. This study adopted these perspectives because transformational leadership focused on inspiring and motivating subordinates, fostering collaboration, and promoting positive change elements that were essential in rehabilitative settings. On the flip side, transactional leadership focuses on structure, enforcing rules, and implementing disciplinary actions to maintain stability and compliance in correctional facilities (Bass & Riggio, 2006). A key idea behind these leadership styles is that leaders can influence their subordinates' behaviors, just as those subordinates can affect how effective the leadership is. This dynamic is particularly relevant in prison settings, where the way leaders approach their roles can shape inmate behavior, while the challenges faced within the prison system can also impact leadership choices. By adopting transformational leadership, prison officials have been able to foster a rehabilitative atmosphere that promotes positive behavioral changes, mentorship, and builds trust between officers and inmates. At the same time, transactional leadership plays a crucial role in ensuring that rules are followed, providing a structured framework that upholds order and security in correctional institutions.

2.2 Empirical Review

2.2.1 Leadership Styles Used in Resolving Conflicts

The research on leadership styles in conflict resolution offers a detailed perspective on how different leadership approaches impact conflict management in various settings around the world, including Africa and specifically Tanzania.

Globally, studies have shown that leadership styles are crucial in resolving conflicts. For example, transformational leadership, as noted by Goleman (2021), is well-regarded for its ability to ease tensions and encourage teamwork. This style, which focuses on empathy, open communication, and emotional intelligence, proves especially effective in places like correctional facilities, where managing emotions is key to resolving disputes. On the flip side, some research indicates that transactional leadership, which emphasizes structure and compliance, can also be beneficial in certain situations, particularly when quick decisions are necessary (Atkin-Plunk & Armstrong, 2023). Conversely, authoritarian leadership often worsens conflicts, especially when it suppresses collaboration and prioritizes control (Talv, 2022). Meanwhile, participative leadership has been shown to foster inclusivity and shared decision-making, leading to more lasting solutions (Lindsay et al., 2011; Vidal, 2021).

2.2.2 Leadership Procedures in Resolving Conflict

Leadership procedures in conflict management are essential for resolving disputes effectively within organizations. According to Lindsay et al. (2011), key strategies like mediation, negotiation, and consensus-building are fundamental to conflict management frameworks. Nkosi and Maweni (2020) emphasized the importance of structured communication channels, which help foster transparency and understanding among all stakeholders. Additionally, restorative justice practices, as discussed by Mssawe (2023) and Chandolia (2020), focus on mending broken relationships instead of just punishing wrongdoers, ultimately encouraging long-term reconciliation.

2.2.3 Challenges Faced by Prison Leaders in Applying Leadership Styles

Leadership challenges around the world have a big impact on how well conflicts are resolved. Issues like overcrowding and limited resources are often highlighted as major hurdles in correctional facilities (Bippa, 2024; Mwanjenja, 2024). According to Nkosi and Maweni (2020), the low staff-to-inmate ratios make these problems even worse, hindering leaders' ability to manage conflicts effectively.

III. METHODOLOGY

3.1 Research Design

Research design refers to the general strategies used to conduct a study, it gives the direction on how data was collected, analyzed, and interpreted. According to (Miles & Huberman, 1994), a research design refers to the arrangement of conditions for collecting and analyzing data in a way that ensures relevance to the research purpose while maintaining economy in procedure it serves as the framework within which the study was conducted, outlining the approaches and strategies employed. The study chose a case study design because it provided a deep dive into the different leadership styles used in conflict resolution at Ukonga, Keko, and Segerea prisons. This approach allowed for



the exploration of real-life experiences, giving a clearer picture of how prison leaders managed conflicts. It also made it possible to gather information from various sources, like interviews and observations, to build a well-rounded understanding. Since the focus was on specific prisons, this design was perfect for comparing leadership methods and pinpointing effective strategies for resolving conflicts within the prison systems.

3.2 Population of the Study

According to Nachmias (2018), the population refers to the total set of cases that met specific criteria. The study population referred to the group of individuals or entities that possessed specific characteristics relevant to the research objectives. This group formed the basis from which data were collected to address the research questions (Creswell, 2014). For this study focused on the entire population of prison staff and officers as well as all the inmates at Ukonga, Keko, and Segerea Prisons. The study chose these groups because they are uniquely positioned to share valuable experiences and insights about the leadership styles in these facilities and how they affect conflict resolution within the prison system. The targeted population was selected for their direct involvement in leadership and conflict resolution processes in the chosen prisons. Prison leaders and administrative staff offered important information about the strategies they used, the challenges they encountered, and how effective different leadership styles were in resolving conflicts (Herzog-Evans et al., 2023). At the same time, inmates provided their perspectives and experiences, shedding light on how leadership practices influenced their interactions and overall well-being.

3.3 Sample Size

Since this research was qualitative, the aim was not to apply the findings to a broader population but rather to dive deep into specific experiences and phenomena. This meant that the study prioritized selecting a sample rich in information instead of one that represented the entire population. The sample size was guided by the concept of data saturation, which is reached when enough data has been gathered to thoroughly understand and describe the phenomenon being studied (Lakens, 2022; Hennink & Kaiser, 2022; Verma & Verma, 2020). In this case, the study included 100 participants, made up of 30 prison leaders and administrative staff, along with 70 inmates. This mix ensured a variety of perspectives and experiences while keeping the data collection and analysis manageable.

Table 1
Sample Composition

Group	No. of Participants
Prison Leaders	15
Administrative Staff	15
Inmates (served up to 4 years)	20
Inmates (served 5-10 years)	20
Inmates (served 11-15 years)	15
Inmates (served over 15 years)	15
Total	100

3.4 Sampling Procedures

Sampling procedures outline how researchers select a smaller group from a larger population for their studies, and they generally fall into two categories: probability and non-probability methods. Probability sampling techniques, like simple random, systematic, stratified, and cluster sampling, give every individual a known chance of being chosen, which helps in making the findings more generalizable. On the other hand, non-probability sampling methods such as purposive, convenience, snowball, and quota sampling do not guarantee equal chances of selection but are great for honing in on specific traits and gathering deeper insights. For instance, purposive sampling is a popular non-probability method in qualitative research where researchers intentionally pick participants who can offer valuable and relevant information. In this study, the researcher specifically selected prison staff, management, and convicted prisoners because their unique experiences and expertise directly relate to the research questions, allowing for a more thorough and meaningful analysis.

3.5 Data Generation Process and Methods

Data generation was the systematic process of collecting information to address the research questions and achieve the study objectives. This research employed both primary and secondary data collection methods to ensure a comprehensive exploration of leadership styles, conflict resolution procedures, and the challenges faced within Ukonga, Keko, and Segerea prisons in Tanzania.



3.5.1 Primary Data

Primary data is all about the original information that researchers gather specifically for their projects. In this study, collected primary data directly from participants through semi-structured interviews and focus group discussions (FGDs). The semi-structured interviews were more like guided conversations, allowing the researcher to dive deep into the participants' experiences, perceptions, and strategies while still keeping a consistent framework throughout all the interviews. This approach was chosen because it offered the flexibility to dig for detailed insights while ensuring that all the important topics were covered. In this study conducted these interviews with prison leaders and administrative staff.

These participants had a unique vantage point, providing firsthand accounts of how different leadership styles transformational, transactional, and participative were put into practice within the prison system and how effective they were in resolving conflicts. The interviews gathered qualitative data on leadership practices, decision-making processes, and conflict resolution strategies, which helped us evaluate the various leadership styles and assess the overall leadership procedures.

On another note, focus group discussions were all about moderated group interviews that allowed participants to share and reflect on their shared experiences (Krueger & Casey, 2015). These FGDs really shone when it came to capturing a variety of perspectives and understanding the dynamics within the group. In this study, held FGDs with inmates to gather their thoughts on how leadership behaviors influenced conflict resolution in the prison setting. Each focus group had about 8 to 10 participants, and organized three separate groups.

The reason for having three groups was to make sure got a range of viewpoints, possibly divided by factors like how long someone had been incarcerated or other demographic differences. This strategy helped us achieve data saturation and allowed for some comparative analysis. The FGDs tackled the challenges faced by prison leaders by delving into inmates' views on leadership effectiveness, communication gaps, and how conflict resolution practices impacted their well-being.

All in all, these methods gave us a well-rounded understanding of leadership styles, procedures, and the hurdles in conflict resolution within Tanzanian prisons. The semi-structured interviews provided rich individual stories from those directly involved in management, while the FGDs offered a wider perspective on how inmates experienced and perceived these leadership practices.

3.5.2 Secondary Data

Secondary data is all about information that someone else has gathered for reasons that are different from what the researcher is currently working on. In this study, secondary data played a vital role in enhancing the primary data by adding historical and institutional context (Patton, 2015).

The study gathered secondary data from a variety of official documents that shed light on leadership and conflict resolution within Tanzanian prisons. These included prison regulations and policies, like the Prisons Standing Orders (URT, 2019), which laid out the formal procedures for leadership and conflict resolution; leadership training manuals that provided insights into the skills and strategies imparted to prison leaders; and conflict resolution reports, which encompassed grievance logs, mediation records, and disciplinary reports detailing past conflicts and their resolutions. Moreover, administrative and inspection reports brought to light operational challenges, resource limitations, and overall institutional performance, while previous research studies offered an academic lens on leadership and conflict resolution in correctional environments.

The study analyzed these documents using content analysis, a method that involves a thorough review and coding of textual data to pinpoint key themes and patterns. This approach allowed the study to extract valuable information regarding formal conflict resolution procedures, the effectiveness of leadership training, trends in conflict occurrences, and the operational hurdles faced.

The secondary data evaluated the leadership procedures employed in conflict resolution and highlighted the challenges that prison leaders encounter when trying to implement various leadership styles. This provided a well-rounded institutional and historical perspective that enriched the primary data collected from interviews and focus group discussions.

3.6 Data Analysis

Data analysis is all about taking raw data and turning it into insights that really matter insights that can help answer research questions or test hypotheses. This process includes organizing, cleaning, transforming, and interpreting data to spot patterns, relationships, and trends (Selvan & Balasundaram, 2021; Byrne, 2022).

In this study, the researcher used thematic analysis to dive into data gathered from interviews and focus group discussions. Thematic analysis is a powerful method that allows researchers to pinpoint, analyze, and report on patterns within the data, making it perfect for exploring leadership styles and conflict resolution practices in Tanzanian prisons. This approach not only provided structure but also offered the flexibility needed to examine participants' experiences while ensuring transparency and rigor throughout the analysis.



All interview data underwent a thorough thematic analysis, guided by transformational and transactional leadership theories. The analysis kicked off with a verbatim transcription of each audio-recorded interview in Microsoft Word, which was chosen for its reliability and ease of use. The transcripts were meticulously checked against the recordings to fix any errors, ensuring that the participants' words were accurately captured. Each transcript was labeled with demographic details like role, gender, and years of service to make it easier to compare responses across different groups.

Once the transcripts were ready, the researcher kicked off the initial coding phase, known as open coding, right in Word. During this stage, each line of text was carefully scrutinized, and meaningful snippets were tagged with provisional labels that captured the essence of what participants had said. For instance, when an officer described how calmly explaining the rules helped ease tension, it was labeled as transformational communication. On the other hand, comments about swiftly imposing sanctions for rule violations were categorized as transactional enforcement. This inductive method allowed the data to reveal relevant concepts organically, without being constrained by any preconceived notions.

After completing the open coding for all transcripts, the researcher organized the emerging codes into an Excel spreadsheet to make grouping and comparison easier. Codes that shared similar themes were grouped under broader categories like Transformational Practices (which included codes such as empathetic dialogue and inspirational framing) and Transactional Measures (which encompassed codes like contingent reward and rule-based sanctions). The spreadsheet also tracked how many respondents mentioned each code, giving a sense of their relative importance without oversimplifying the rich narratives into mere numbers.

With these provisional categories in place, the researcher then refined the themes, drawing on established theoretical frameworks. The components of transformational leadership idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration were used to shape and name the themes that highlighted supportive, trust-building behaviors.

This comparative analysis led to the identification of three core themes: Empathetic Engagement, Structured Enforcement, and Hybrid Strategies that blended both approaches.

The final themes were woven together into a clear narrative framework. Key quotes were chosen to bring each theme to life. For example, one warden shared, "I remind them of our shared goal: everyone's safety, and then The study followed up with clear consequences if needed," which perfectly captured the hybrid approach. This way, the analysis stayed true to the voices of the participants, creating a transparent audit trail that showed how the themes were developed.

To boost credibility, the study looked at perspectives from different respondent groups. By comparing the views of wardens, officers, and inmates, the researcher was able to spot both common ground (like a general appreciation for empathetic engagement) and differences (such as varying opinions on the long-term effectiveness of punitive measures). In the end, the themes were connected to existing literature on leadership and conflict resolution, showing that transformational practices often build trust and lower recidivism rates, while transactional methods, though effective for immediate compliance, can risk damaging morale over time.

Additionally, thematic analysis was used to tackle the study's objectives. When identifying leadership styles in conflict resolution, the data was sorted into themes related to transformational and transactional approaches.

3.7 Validity and Reliability

Validity and reliability are the backbone of any solid research, ensuring that the results truly reflect what's being studied and that similar outcomes can be achieved under the same conditions (Creswell, 2018). Validity is all about whether the tools and methods used actually measure what they're supposed to (Patton, 2015). In this study, enhanced validity by using a mix of methods interviews, focus groups, and document analysis to back up our findings and reduce bias (Creswell, 2014). As Palermo et al. (2021) point out, for research to be considered valid, it needs to show both internal consistency and external relevance.

On the other hand, reliability refers to how consistent the results are when the same methods are used repeatedly (Palermo et al., 2021). To improve reliability, the study made sure to audio-record all in-depth interviews and transcribe them word-for-word, capturing the participants' exact words. Our research assistants were trained to stick closely to the interview guide, and study carefully reviewed the data for consistency across different methods. By combining in-depth interviews, structured questionnaires, and document reviews, this study ensured that each method, when applied under similar conditions, produced stable and reproducible results.

3.8 Ethical Consideration

Ethical considerations are all about the principles and guidelines that shape how researchers act before, during, and after their studies. They ensure that integrity, respect, and protection are upheld for all participants. In this particular research, the investigator made sure to get permission from the appropriate prison authorities and consulted with social welfare officers and administrative staff to obtain the necessary institutional clearance. Before each interview, participants were given clear information about the study's purpose, their right to refuse or withdraw at any time, and



the steps taken to protect their confidentiality and anonymity. Only those who provided informed, voluntary consent were included in the research.

To maintain ethical standards, the identities of interviewees were coded, and any personal identifiers were stripped from transcripts and reports. All data was securely stored, accessible only to the research team, and used exclusively for academic purposes. The researcher also followed strict anti-plagiarism guidelines by properly citing all sources and ensuring that no respondent's words were altered in a way that could misrepresent their intended meaning.

IV. FINDINGS & DISCUSSION

4.1 Leadership Styles Used in Resolving Conflicts in Prisons

The study intended to determine leadership styles used by prison leaders in resolving conflicts in prisons. This section includes subthemes such as the leadership style most commonly used in resolving conflicts in prison, the effectiveness of the leadership style in resolving conflicts, and the leadership style best suited for conflict resolution in prisons. The interviews highlighted three broad leadership approaches: authoritarian/transactional leadership, supportive/transformational leadership, and collaborative/participative leadership. Each group of responders emphasized different aspects of these styles based on their role, proximity to leadership individuals, and frequency of involvement in conflict resolution situations.

The study intended to establish which leadership style is most commonly used in resolving conflicts in prison. A considerable proportion of prison officers, particularly those in higher positions, recognized authoritarian leadership as the most prevalent and anticipated style of leadership within the institution. Officers regarded it as a sensible and essential response to the prison's overcrowding and tense and high-risk conditions. PRO-01 stated,

"The only way to maintain order is by command. In prison, delay causes disorder, so we move quickly, punish when necessary, and strictly enforce the regulations."

Another officer, PRO-11, stated,

"We are trained that power must be evident. If you are too lenient, the convicts take advantage, and the problems escalate."

However, inmates were more critical of this leadership approach. Many people said that authoritarian leadership failed to address the underlying reasons for conflict, instead encouraging fear, silence, or secret animosity. PR-24, an inmate in Keko Prison, explained that police frequently come in shouting. When two individuals argue, they do not ask questions; they simply punish both. Even if you were defending yourselves. " Another inmate, PR-39, stated that

"When an officer utilizes threats or force to resolve a conflict, it works in that time. But the rage persists, and individuals find new ways to settle scores."

These insights reveal that authoritarian leadership may achieve short-term order but risks fueling long-term resentment and unresolved tensions. From my perspective, the comments by PRO-01 and PRO-11 reflect the institutional pressure to maintain strict control, which is understandable given the volatile environment. Yet the concerns of PR-24 and PR-39 highlight that such methods may worsen hidden grievances and undermine rehabilitation goals.

This aligns with Talv (2022), who found that authoritarian leadership in correctional facilities often escalates tensions rather than providing sustainable solutions. Furthermore, this observation resonates with Transactional Leadership Theory, which stresses command, rules, and immediate compliance but may overlook long-term rehabilitation goals (Burns, 1978; Bass & Avolio, 1994). In contrast, Transformational Leadership Theory (Bass & Riggio, 2006) emphasizes trust, individualized consideration, and inspiration, offering more sustainable pathways for reducing tensions and promoting positive behavioral change in prisons. Similar findings are echoed by Atkin-Plunk and Armstrong (2023), who argue that transactional approaches are effective only for immediate order but fail to reduce recurring conflicts, and by Goleman (2021), who emphasizes the value of emotional intelligence and transformational practices in fostering durable rehabilitation and conflict prevention.

The study intended to establish the effectiveness of the leadership style in resolving conflicts. In contrast, both officers and convicts identified supportive/transformational leadership as a more constructive and humane approach. This style was distinguished by open communication, emotional intelligence, mutual respect, and the ability to influence behavior change. Officers who adopted this method frequently sought to identify the root causes of conflicts and to educate rather than punish. PRO-07 observed that

"Sometimes a fight is about impatience rather than contempt. When we take the time to discuss, we discover answers without repercussions."

Inmates acknowledged these efforts and thanked the cops who engaged them respectfully. PR-28 stated,

"There's an officer in our block who listens." If you're upset, you can speak with him. That has ended numerous battles."

Another inmate added,

"When someone treats you like a person, you don't want to let them down." It alters the way you think."



These accounts suggest that transformational leadership fosters trust, respect, and long-term conflict prevention within prisons. From my perspective, the voices of PRO-07 and PR-28 illustrate how empathy and dialogue can transform potential hostilities into opportunities for learning and mutual respect. Their experiences demonstrate that when leaders employ listening and individualized consideration, inmates are more likely to adopt cooperative behaviors. This observation aligns with Goleman (2021), who emphasized that emotional intelligence in leadership significantly reduces conflict and supports rehabilitative goals in correctional settings. Further support is provided by Lindsay et al. (2011), who highlight that participative and transformational practices encourage inclusivity and improve institutional harmony, and by Mssawe (2023), who stresses that restorative leadership approaches foster reconciliation and long-term peace in correctional environments.

Some officers and inmates described instances of collaborative or participative leadership, albeit this was uncommon in practice. This leadership style included inmates in decision-making, peer mediation forums, and systematic feedback sessions. Officers who applied this technique observed that it reduced mistrust and enabled inmates to take responsibility for maintaining peace.

PRO-15 stated that

“Following a heated argument in our wing, we formed a committee of inmates and officers to discuss problems weekly.”

Since then, fights have decreased. A convict from Ukonga, PR-50, remarked,

“I once helped mediate between two prisoners. The officer encouraged it. That gave us pride and power over our surroundings.”

Participatory methods were hailed for increasing morale, trust, and self-governance within prisons. Nonetheless, collaborative leadership has been observed to confront problems. Some police saw it as hazardous, fearing that giving inmates more say might lead to manipulation or a loss of power. PR-20 noted that

“Not every officer is willing to involve convicts. Some are concerned that it diminishes control or reveals weakness.”

Despite the benefits, cultural and institutional barriers hampered the adoption of participatory activities. The research also found that many cops lack formal training in leadership and conflict resolution skills. Several participants stated that their understanding of leadership styles was based on observation and imitation rather than formal instruction. From my perspective, the voices of PRO-15, PR-50, and PR-20 reveal the dual nature of participative leadership: it empowers inmates to take responsibility and fosters collaboration, yet it also raises concerns among officers about losing authority. Linking this with transformational leadership theory, participatory practices mirror the emphasis on shared vision and empowerment, encouraging inmates to internalize responsibility for peace (Bass & Riggio, 2006). At the same time, aspects of Transactional Leadership Theory remain relevant, as officers still require clear rules and boundaries to ensure stability during such initiatives (Burns, 1978; Bass & Avolio, 1994). This is further supported by Vidal (2021), who found that participative forums reduce mistrust and foster self-governance in correctional settings, and by Herzog-Evans et al. (2023), who highlighted that culturally adaptive leadership styles enhance collaboration and conflict resolution outcomes in African prisons.

4.2 The Leadership Procedures used in Resolving Conflict in the Prisons

The second research objective was to evaluate the leadership techniques utilized to resolve conflict in prisons. This section included the research on how prison authorities and other stakeholders handle conflicts in Tanzanian correctional facilities. These findings are based on data collected from interviews (with prison personnel, inmates, and community service officers), observations within prisons, and document analysis of prison regulations. Both formal and informal dispute resolution techniques were identified, and their application reveals significant trends, inconsistencies, strengths, and limitations.

The study intended to establish which procedures are commonly used to resolve conflicts in prison. One prominent topic emerging from the interviews was jail leadership's use of formal procedures to manage conflicts, particularly serious ones. Prison officers outlined a formal disciplinary process required by prison laws for violations such as fights, assaults, and insubordination. For example, a senior prison officer (PRO-01) stated that

“When inmates fight or break the rules, we have to write a report and conduct a disciplinary hearing in front of the Officer-in-Charge.”

This means that an official inquiry or hearing has been scheduled, during which the incident will be investigated and the inmate will be given the opportunity to respond to the claims. Document examination of the Tanzanian Prisons Act and rules confirmed this practice, indicating that an official investigating a prisoner's disciplinary infraction has the authority to invite witnesses and examine evidence as part of a formal hearing. From PRO-01's perspective, this procedure provides transparency and ensures that even within a restrictive environment, fairness is observed by allowing inmates to be heard before judgment is passed. This viewpoint echoes findings by Goleman (2021), who emphasized that structured hearings anchored in procedural justice enhance legitimacy in correctional settings, and Mssawe (2023), who argued that adherence to disciplinary frameworks can reduce tension and improve institutional order by balancing



authority with fairness. These insights also link with transformational leadership theory, which stresses fairness, motivation, and trust-building as ways to inspire compliance, and transactional leadership theory, which emphasizes structured rules, rewards, and sanctions to maintain order in hierarchical contexts such as prisons. According to another officer (PRO-03),

“The hearing gives the inmate a chance to explain their side of the story, then a punishment is decided based on the prison guidelines.”

From PRO-03’s perspective, the procedure not only enforces rules but also upholds a culture of fairness where inmates perceive that their voice is valued. This resonates with Bass and Riggio (2006), who emphasized that fairness and consideration within disciplinary structures encourage compliance and reduce resistance, and with Nkosi and Maweni (2020), who found that transparent grievance-handling procedures in correctional facilities enhanced trust and institutional legitimacy. In concept, this formal procedure is designed to provide fairness and accountability by incorporating components of procedural justice, in which judgments are made in a fair manner and the affected person’s perspective is heard. When correctly followed, such procedures can increase the legitimacy of outcomes; as one officer (PRO-07) explained,

“If we follow the rules and an inmate is heard, even if they are punished, they know it was done by the book.”

This point of view is consistent with the idea that transparent and fair processes promote decision acceptability. From PRO-07’s viewpoint, following established guidelines not only preserves order but also reassures inmates that decisions are anchored in fairness rather than arbitrariness. This aligns with Atkin-Plunk and Armstrong (2023), who noted that adherence to structured disciplinary processes improved inmate perceptions of justice, and with Mwankenja (2024), who highlighted that consistent application of formal procedures reduces conflict recurrence by strengthening institutional authority. These perspectives also connect with transformational leadership theory, which emphasizes motivating and inspiring trust by ensuring fairness and inclusivity in decision-making, and with transactional leadership theory, which underscores the importance of clear rules, sanctions, and rewards in maintaining compliance and institutional order. This point of view is consistent with the idea that transparent and fair processes promote decision acceptability.

4.3 Challenges Faced by Prison Leaders in Applying Different Leadership Styles

The third objective of the research aimed to uncover the difficulties faced by prison leaders in employing various leadership styles to manage conflicts in Tanzanian prisons. This study found that prison administrators face numerous cultural and systemic challenges when attempting to utilize leadership strategies (transformational, transactional, situational, etc.) to handle and alleviate conflicts. The conditions within Tanzanian prisons are marked by severe overcrowding and a lack of resources, which create a tense atmosphere for both staff and inmates. These circumstances heighten the frequency and severity of conflicts, making effective leadership essential yet challenging. Moreover, existing institutional norms and limited training restrict prison leaders’ capacity to adjust their leadership style to suit different conflict situations. Data gathered from field interviews supports these conclusions, with respondents detailing obstacles such as insufficient leadership training, rigid hierarchical structures, overwhelming inmate numbers, restricted decision-making authority, conflicting institutional goals, and low staff morale. These findings align with Skinner (2020), who emphasized that transformational leadership in hierarchical prison systems is hindered by limited trust and inadequate training, leading to reduced effectiveness in conflict resolution. Likewise, Herzog-Evans et al., (2023) demonstrated that transactional leadership approaches often struggle in overcrowded correctional facilities, where structural rigidity undermines reward and punishment mechanisms. Both studies affirm the present research by showing that without institutional support and contextual adaptability, neither transformational nor transactional leadership theories can fully address the persistent conflict management challenges in Tanzanian prisons.

The study intended to establish the major challenges faced in resolving conflicts in prison. A significant issue is the absence of formal leadership training for prison staff and management. Many prison leaders ascend through the ranks without receiving specific education in management or conflict resolution methods. Consequently, they often resort to trial-and-error approaches or conventional authoritarian techniques. This challenge is consistent with findings by Mssawe (2023), who reported that insufficient training in Tanzanian prisons perpetuates authoritarian conflict management styles, thereby limiting the adoption of transformational and transactional strategies.

PRO-01 remarked that

“I have never received any special training on how to lead or resolve conflicts we just learn on the job procedures.”

Underscoring the lack of leadership development initiatives within the prison system, this observation aligns with the understanding that in multiple countries there is little concept of prison management as a profession which requires specific training and development. Newly appointed prison directors are expected to intuitively possess the management skills necessary for the complex and high-stakes environment they enter. Similar concerns were raised by Vidal (2021), who found that in Latin American prisons, the absence of structured leadership training programs led to

inconsistent conflict resolution outcomes. In addition, Chandolia (2020) emphasized that equipping prison leaders with transformational and transactional leadership skills through formal training significantly improved their ability to manage disputes and build institutional trust.

PRO-11 stated that...

“Most of us only have the basic officer training; we lack advanced skills in mediation or transformational leadership, so we stick to what we know.”

The National Institute of Justice similarly highlights that enhancing staff training and leadership development is an urgent need in corrections. In the absence of adequate training, prison leaders feel unprepared to apply contemporary leadership methods (such as collaborative or transformative tactics) for conflict resolution. This deficiency in training not only hampers individual leadership capabilities but also reinforces a cycle of reliance on outdated, punitive practices. In alignment with global standards, experts have long advocated for ongoing leadership training for correctional staff; for example, Penal Reform International (1996) stressed that enhanced staff training is essential for professionalism and better prison conditions. The lack of such training in Tanzanian prisons continues to be a critical impediment to the adoption of varied leadership styles. Supporting this, Robins (2019) found that Tanzanian prison officers often lacked exposure to modern leadership frameworks, resulting in reliance on coercive methods. Likewise, Makinde and Olabode (2020) observed that in African prisons, limited professional development constrained leaders' ability to apply transformational and transactional leadership principles effectively in conflict resolution.

Another significant challenge identified is the institutional resistance to adopting new leadership styles, stemming from a rigid, hierarchical prison culture. Tanzanian prisons (similar to many worldwide) have historically been governed by a paramilitary discipline and a punitive mindset. This cultural approach can be deeply resistant to change, often regarding innovative or participatory leadership styles skeptically. Consistent with this, Thadeo (2020) reported that rigid organizational hierarchies in East African prisons undermined efforts to implement transformational leadership practices. Similarly, Sibisi and Olofinbiyi (2021) found that transactional strategies were frequently limited by entrenched punitive traditions, reducing leaders' ability to integrate participatory conflict resolution mechanisms. PRO-05 commented that

“If you try a soft approach or involve juniors in decision-making, some old guards think you are weak here, they expect the boss to be strict.”

Such attitudes reflect a persistent “us-versus-them” mentality and inflexibility in leadership methodologies. Research indicates that the cultural practices among prison staff in many countries have persisted largely unchanged and punitive throughout history. Even when new leaders enter with novel concepts (for example, focusing on rehabilitation or open communication), the ingrained norms tend to re-emerge swiftly. PR-07, said that

“I wanted to encourage officers to talk calmly with inmates to defuse tensions, but the typical response here is to show force. Changing that mindset is very hard.”

This aligns with findings from another study that examined a different scenario: while initial training may instill rehabilitative principles, these are often contradicted by the punitive organizational culture present in prisons. In practice, prison administrators discover that attempts to implement transformational or democratic leadership approaches face resistance.

One of the primary challenges faced by prison leaders is resistance from employees who are accustomed to transactional, command-and-control directives. Such employees often oppose or even sabotage leaders who attempt to implement more participatory or inclusive approaches. This challenge is rooted in the entrenched institutional culture of prisons, which prioritizes discipline, obedience, and authority over dialogue and shared decision-making. Leaders in this environment must strike a delicate balance, often modifying their leadership style to align with existing norms while attempting to introduce alternative methods. As one prison officer (PRO-11) noted:

“I usually begin by listening and advising, but in the end, I must be strict because that's the only language our system acknowledges.”

This statement reflects how the dominance of tradition and group norms within prison systems restricts leaders' ability to adopt diverse conflict resolution strategies. Similar findings were highlighted by Bass and Riggio (2006), who argued that transformational leadership thrives only when leaders can build trust and openness, conditions often undermined in rigid institutional cultures. Likewise, Burns (1978) observed that transactional leadership, though effective in enforcing compliance, can stifle innovation and dialogue when overly entrenched, making it difficult for leaders to shift toward transformational practices in conflict management.

Overcrowding emerged as a significant contextual hurdle that hampers the effectiveness of leadership in conflict situations. Prisons in Tanzania are accommodating significantly more inmates than their original capacities, with over 45,000 prisoners in facilities built for around 22,669 (exceeding capacity by over 100%). This challenge echoes findings by Bippa (2024), who noted that prison congestion in Tanzania undermines leaders' ability to apply transformational leadership practices, since they spend more time on crisis management than on inspiring or motivating subordinates. Similarly, Mwanjenja (2024) emphasized that overcrowding in African prisons reinforces transactional approaches



focused on control and compliance, leaving little room for participatory conflict resolution. PRO-03 illustrated the situation vividly, stating,

“We have 150 inmates packed into a unit designed for 30, and tensions are perpetually high.”

Severe overcrowding results in conflicts (whether among inmates or between inmates and staff) that can ignite easily and frequently due to shortages of space, food, or essential services. In this crisis-driven context, prison leaders dedicate most of their time to responding to emergencies rather than proactively applying more sophisticated leadership strategies. As highlighted in an international prison management guideline, when prisons become overcrowded and under-resourced, management might be confined to providing the essential necessities of life. Ensuring that prisoners receive food, water, a bed, and fresh air may become a full-time role. This is consistent with Robins (2019), who found that overcrowding in Tanzanian prisons forces leaders into transactional modes of management, prioritizing immediate survival needs over transformational practices aimed at rehabilitation and dialogue. PRS-03 validated this by saying,

“Most days, I’m just putting out fires, distributing food, and defusing fights; there’s no opportunity for team meetings or coaching sessions with staff.”

Overcrowding is further exacerbated by understaffing and limited resources, leaving officers overwhelmed and supervision inadequate. Skinner (2020) notes that a staffing shortage impacts many prisons, diminishing leaders’ ability to maintain order and mentor their subordinates. In Tanzania, a single officer might oversee numerous inmates, fostering a security-first environment where nuanced aspects of leadership style take a back seat. PRO-08 pointed out that

“Due to our insufficient number of officers, we depend on strict rules and penalties to maintain control we simply cannot afford to try a lenient approach amidst this chaos.”

This indicates that under such pressure, leaders revert to a directive or authoritarian approach as the only viable option. The path-goal theory of leadership posits that leaders should remove barriers and offer support so followers can achieve their goals. However, in this case, many obstacles, such as chronic overcrowding, inadequate facilities, and health crises, are beyond the influence of local prison leaders. These resource limitations significantly constrain the practical application of leadership styles that necessitate calm environments or additional programs (such as conducting conflict mediation workshops or staff training sessions). Instead, leaders operate in “crisis mode,” prioritizing immediate survival and security needs. This context illustrates how material conditions (overcrowding, insufficient funding, and limited staffing) diminish the effectiveness of even the most competent leaders and restrict the range of leadership styles they can adopt to address conflicts.

Prison leaders in Tanzania also contend with limited autonomy and bureaucratic barriers, which impede their adaptability in conflict resolution. The prison system functions under a highly centralized structure within the Tanzania Prison Service, meaning that critical decisions often necessitate approval from headquarters or must comply with stringent regulations. This aligns with findings by Mssawe (2023), who emphasized that bureaucratic rigidity in Tanzanian prisons constrains leaders’ ability to apply transformational leadership principles, forcing them instead toward transactional compliance. PRO-11 clarified that

“Even if I notice a more effective method to address a conflict here, I must obtain authorization through the chain of command, which can be time-consuming or denied.”

This hierarchical bureaucracy provides little opportunity for situational leadership, the notion that a leader can quickly adapt their style to meet the demands of a particular conflict. Instead, wardens and officers are required to follow standardized procedures and are often concerned about facing consequences for deviating from directives. Research on prison management indicates that many wardens have become “more politically inclined and less independent” over time, as they are accountable to departmental authorities and political supervisors. Ultimately, all wardens “function within their department’s bureaucracy,” which can limit innovative or immediate responses to on-the-ground conflicts. For example, a prison leader may want to adopt a more rehabilitative strategy (like involving counselors after an inmate altercation), yet the official policy may specify a punitive reaction (such as solitary confinement), restricting the leader’s discretion. These challenges resonate with Talv (2022), who found that rigid hierarchical structures in correctional systems suppress transformational leadership by curbing leaders’ flexibility. Similarly, Vidal (2021) highlighted that authoritarian approaches, reinforced by bureaucracy, tend to escalate tensions rather than resolve them, making transactional compliance the default mode for leaders. PRO-06 remarked that

“We are bound by regulations; if two inmates fight, we are required to punish them according to the rules, not mediate. Departing from that could get me in trouble.”

This showcases a traditional bureaucracy that values adherence to procedure more than individual judgment. The lack of autonomy also influences how leaders manage their teams: opportunities to reward initiative or address staff concerns may be limited due to civil service regulations and top-down decision-making. From a leadership theory perspective, this environment aligns with a contingency viewpoint. In Fiedler’s terms, a leader’s effectiveness depends on situational control. The situation (strict bureaucratic control) is unfavorable for leader flexibility, often compelling a more transactional or directive style, regardless of a leader’s personal preferences. This observation is consistent with Herzog-Evans et al., (2023), who found that socio-political constraints in African correctional institutions restrict leaders’ ability to exercise adaptive or transformational strategies, reinforcing reliance on transactional approaches.



It also presents a challenge to Path-Goal theory, which asserts that leaders should modify their style (directive, supportive, participative, or achievement-oriented) based on followers' needs. In a rigid structure, leaders cannot easily adopt a participative or supportive approach if the framework does not allow for subordinate involvement in decision-making. Consequently, the restricted autonomy creates a disparity between the leadership styles advocated in theory and those permitted in practice. The conflicting responsibilities of security and rehabilitation further complicate prison leaders' implementation of leadership styles. By the nature of their positions, prison managers must guarantee safety, order, and custody (a commitment to security), while also ideally fostering inmate rehabilitation and conflict resolution through constructive methods. These objectives can push leaders in opposing directions. This tension reflects findings by Nkosi and Maweni (2020), who noted that limited decision-making latitude in African prisons hinders leaders' ability to apply participative and supportive approaches. Likewise, Hamadou (2023) observed that rigid organizational frameworks in correctional facilities create structural contradictions between security priorities and rehabilitative goals, limiting the applicability of adaptive leadership theories such as Path-Goal. PRO-02 pointed out that

"Our instructions from HQ are unmistakable: no escapes, no riots. Rehabilitation is mentioned, but if there's a conflict, we're expected to enforce strict measures, not to be lenient."

This statement highlights the pressure on leaders to emphasize immediate security over longer-term relational or rehabilitative approaches. Effective leadership in corrections truly necessitates "balancing security and rehabilitation: security is crucial, but it should not undermine rehabilitation efforts." According to one corrections expert, the most effective supervisors discover ways to ensure safety while advocating for programs that prepare inmates for reintegration. However, in Tanzania's prisons, interviewees indicated that the system continues to focus heavily on control. This reflects findings by Makinde and Olabode (2020), who emphasized that African prison systems often prioritize custodial security at the expense of rehabilitative programs, thereby constraining the application of transformational leadership. PRO-11 conveyed that

"We are caught between two roles theoretically I should rehabilitate offenders, but in practice, my performance is evaluated based on discipline and order."

This conflict complicates the ability to consistently utilize a transformational leadership approach, which would promote personal growth and positive change. Transformational leaders aim to inspire and motivate towards a shared vision; in a prison environment, this could involve encouraging both staff and inmates to cultivate a peaceful, reform-focused setting. This aligns with Goleman (2021), who demonstrated that high-stress correctional environments hinder the capacity of leaders to apply motivational and emotionally intelligent practices, limiting the effectiveness of transformational strategies. However, when a conflict emerges, a prison leader may revert to transactional tactics (punishments, strict enforcement) due to the pressure to demonstrate that the situation has been controlled swiftly. A participant noted that any indication of leniency could be seen as a loss of authority:

"If I attempt to negotiate with inmates during a standoff, my superiors question my toughness. Consequently, I often resort to using force to assert my control," PRO-10 acknowledged."

This situation aligns with perspectives indicating that many African prisons continue to prioritize containment over rehabilitation, favoring punitive actions instead of restorative ones. The conflicting directives also create confusion among front-line staff: one leader might advocate for a more communicative method to minimize future conflicts, but the line officers may resist, believing that only strict discipline fulfills institutional expectations. The outcome is that leadership approaches aimed at resolving conflicts through dialogue or rehabilitation are undermined by a predominant focus on security. Leaders find it challenging to balance these competing mandates, frequently defaulting to authoritarian conflict management measures (lockdowns, transfers, punishments) instead of transformative conflict resolution strategies (mediation, counseling, problem-solving), even though the latter are more aligned with contemporary leadership theories and favorable long-term outcomes. This reflects Bass and Riggio (2006), who contended that transformational leadership requires trust and space for dialogue, both of which are constrained in punitive prison cultures. In contrast, Burns (1978) and later Bass (1985) explained that transactional leadership thrives under conditions where compliance and discipline are prioritized, which explains why prison leaders often revert to transactional practices under pressure. Finally, low staff morale and subsequent burnout among prison officers present a major hurdle to leadership initiatives, a challenge also observed by Nkosi and Maweni (2020), who found that chronic stress and rigid expectations reduce leaders' ability to apply transformational strategies effectively.

The interviews unveiled that ongoing stress, subpar working conditions, and lack of acknowledgment have left many prison personnel feeling demoralized. PR-04 commented:

"Officers here feel overlooked and drained. Many only do the bare minimum they're uninterested in any new initiatives from management."

This level of apathy or cynicism among subordinates complicates prison leaders' efforts to apply a collaborative or inspiring leadership style. Transformational leadership depends on encouraging and uplifting followers; however, with staff morale at such low levels, there is minimal openness towards inspiration. This corresponds with Mssawe (2023), who observed that demoralized staff in Tanzanian prisons resist transformational initiatives, while transactional directives remain more effective in compelling short-term compliance. PRO-11 explained that



“My staff have experienced ‘vision’ and ‘reform’ discussions before and seen no changes in their compensation or safety. They are disillusioned. Winning their trust is a challenge.”

This corresponds with the belief that effective leadership plays a crucial role in shaping the internal culture and morale. Ineffective leadership or a lack of support can create a divide and a culture of distrust between officers and management, further diminishing morale. Indeed, research by Pittaro suggests that the primary source of stress among correctional staff is “inadequate and weak leaders,” rather than solely the inherent risks of the profession. In Tanzanian prisons, the causality appears to operate in both directions: ineffective leadership fails to address officers' concerns (e.g., low salaries, long hours), resulting in low morale; and conversely, low morale makes it increasingly difficult for leaders to guide effectively, creating a vicious cycle. Furthermore, many Tanzanian prison staff are compensated poorly and receive limited training, which contributes to minimal professional pride or commitment. As one report notes, if officers are “poorly trained and underpaid... it is predictable that they possess little professional pride in their duties... and have no perception of serving a meaningful public role.” PRO-08 agreed, stating,

“Most of our officers feel unappreciated. They don't view this as a career merely a demanding job. Thus, motivation is extremely low.”

In such an environment, leaders often resort to a purely transactional style, issuing orders with the threat of punishment to get compliance, since fostering higher motivation seems daunting. However, this can further depress morale, as staff feel their contributions are only met with criticism or disciplinary action. The challenge for prison leaders is how to break this cycle: without improving morale, advanced leadership styles (like supportive or participative leadership) may not take root, yet without adopting those people-oriented styles, morale will not improve. This aligns with Vidal (2021), who found that authoritarian and transactional strategies tend to escalate tensions in correctional settings, undermining long-term morale. Similarly, Atkin-Plunk and Armstrong (2023) noted that transformational practices, such as dialogue and motivation, require a foundation of trust and recognition—conditions often absent in prisons dominated by transactional enforcement.

Burnout also means high turnover and absenteeism, which undermines any consistent leadership strategy. The qualitative evidence thus paints a picture of a demoralized workforce that limits a leader's influence beyond basic command authority. Addressing staff welfare through recognition, support, and fair treatment is necessary before styles like transformational leadership can be effective. As one article suggests, correctional supervisors must “actively work to build morale through recognition, professional development, and support,” but doing so is challenging amid systemic issues. Low morale is both a symptom and a cause of leadership difficulties in the prison context.

These challenges faced by prison leaders in Tanzania can be further understood through the lens of leadership theories. They illustrate a gap between idealized leadership styles and the realities of a high-stress institutional environment. Transformational leadership theory posits that leaders who inspire a shared vision and attend to followers' needs can achieve remarkable change.

In correctional settings, transformational leadership has been linked to positive outcomes like reduced violence and improved staff job satisfaction. However, our findings show that the preconditions for transformational leadership—trust, motivation, and a supportive culture are often absent. It is difficult for a prison leader to act as a transformative role model when they lack training, operate in a punitive culture, and oversee demoralized staff.

The challenges of low morale and institutional resistance mean that attempts at inspiration may be met with skepticism or fail to take hold. This does not negate the value of transformational leadership; rather, it explains why leaders struggle to practice it. Indeed, traditionally, transactional leadership has been the norm in prisons, focusing on order through rewards and punishments.

Moreover, the dominance of transactional approaches in Tanzanian prisons (seen in leaders emphasizing discipline and rule enforcement) aligns with transactional leadership theory, which is effective for maintaining baseline compliance but often insufficient for deeper conflict resolution or cultural change. Transactional methods might stop an incident in the moment (through punitive action) but do not address root causes of conflict or build commitment. Over-reliance on this style can thus perpetuate a cycle of conflict and control, rather than conflict resolution.

Situational leadership theory (Hersey and Blanchard) and contingency theories argue that effective leaders adjust their style (from directive to delegative, for example) based on follower readiness and contextual demands. In an ideal case, a prison leader would be more directive during a riot (high structure needed) but could be more participative when brainstorming improvements with experienced staff. In practice, the challenges identified, especially bureaucratic constraints and low skill levels, limit such adaptation.

Leaders in Tanzanian prisons often face a uniformly high-pressure situation with “unready” followers (due to limited training and morale), which in effect forces them into a constant directing (or commanding) style. There is little opportunity to display a supportive or delegating style when even basic safety is at stake daily.

Despite this, situational theory highlights the source of leaders' frustrations: they understand that alternative methods may be more effective in specific conflict scenarios (such as mediating a minor disagreement between two inmates instead of opting for punishment), yet situational factors (overcrowding, unavailability of counselors, and pressure from higher-ups) drive them toward a more authoritarian style. Path-goal theory adds further perspective by



proposing that a leader's responsibility includes setting goals, clarifying the route, eliminating barriers, and providing support for subordinates to achieve success.

In the context of prisons, a warden applying Path–Goal principles would ensure that officers are aware of the objective (for example, maintaining a safe and conflict-free prison), outline the necessary procedures, eliminate obstacles (potentially by securing funding or modifying workloads), and encourage the staff (through recognition or rewards). The situation in Tanzania demonstrates that many barriers are beyond a leader's ability to address (such as overcrowding and insufficient budgets) and that support mechanisms are limited (with few incentives or training options for staff).

Leaders often cannot fully implement the supportive or participative elements of Path-Goal theory when the existing structure does not allow it. For instance, even if a warden aims to support overwhelmed officers by enhancing working conditions, they may lack the financial resources or permission to make changes. This frequently forces prison leaders to resort to a directive approach (similar to directing subordinates on precisely what to do) since it is the only feasible method in an environment fraught with crises. Tackling the difficulties highlighted in this research objective is crucial for enabling prison leaders to utilize a wider range of leadership styles for resolving conflicts.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study found that while prison leaders in the sampled Tanzanian facilities use a mix of formal and informal conflict-resolution procedures, authoritarian/transactional leadership remains dominant, producing short-term order but failing to address root causes of disputes and contributing to ongoing tension, mistrust, and low morale among staff and inmates.

Supportive/transformational and participative practices where they occur were associated with better outcomes: greater trust, fewer repeat incidents, and more willingness by inmates to accept decisions. However, these approaches are rare and uneven because most officers lack formal training in mediation, emotional intelligence, and restorative techniques; informal mediation is common but undocumented and inconsistent.

Systemic constraints critically limit leaders' ability to adopt alternative styles. Severe overcrowding (facilities holding many more inmates than designed), understaffing, limited resources, rigid bureaucracy, and low staff morale force leaders into "crisis mode," where directive, rule-bound responses are the only practicable option. These contextual factors both precipitate conflicts and reduce the space for transformational or participative interventions.

Taken together, the evidence indicates that sustainable improvements in prison conflict management require both (a) changes in leadership capacity and practice (training, recognition of restorative/participative methods, clearer guidance on when to use alternatives to punishment) and (b) structural reforms that reduce the chronic pressures on leaders (address overcrowding, increase staffing and resources, decentralize limited decision-making authority where appropriate).

5.2 Recommendations

The Prisons Headquarters and the Ministry of Home Affairs should adopt a formal mixed-leadership policy that clarifies when to apply directive/transactional responses (for immediate security threats) and when to use transformational/participative approaches (for routine disputes and rehabilitation). This policy should be developed within six months and rolled out over the following 6-12 months, and its success can be measured by the existence of the published guidance and an increasing percentage of incidents managed under non-punitive approaches. Additionally, human resources units should incorporate leadership-style criteria into staff performance appraisals within 6-12 months so that promotions and evaluations incentivize use of mediation, participative methods, and restorative practices; an appropriate indicator is the proportion of appraisals recording demonstrated use of these techniques.

The Prisons Headquarters (with legal and psychosocial partners) should standardize and formalize simple Standard Operating Procedures (SOP) that define steps for immediate crisis management, mediation/restorative processes, and documentation/escalation pathways; these Standard Operating Procedures (SOP) should be drafted in 3-6 months and piloted in a few facilities within 6-9 months, with uptake measured by the presence of the Standard Operating Procedures (SOP) document and the percent of incidents logged using the standard form. Facility management, supported by civil-society partners, should also establish supervised peer-mediator programs and unit-level prisoner councils with clear selection criteria, training and oversight, piloting them in 6-9 months and scaling over 12-24 months; success indicators include the number of active peer-mediators and reductions in repeat incidents in pilot units. Finally, facility record officers and central monitoring units must introduce a lightweight register for informal mediations within 3-6 months so that informal resolutions are recorded and trends can be analysed; the indicator is the percentage of informal mediations entered into the register and evidence of management follow-up.

The Prisons Training Institute, with NGOs and universities, should launch mandatory in-service modules on transformational leadership, mediation, emotional intelligence, basic counselling and de-escalation, combining



classroom work, role-play and on-the-job coaching; training should begin within three months for priority cohorts and reach full roll-out within 12 months, measured by the percentage of staff trained and pre/post training assessment improvements. The Ministry of Home Affairs and the Prisons Service should prioritise recruitment to reduce vacancy rates and assign psychologists, social workers and conflict-resolution specialists to high-need facilities within a 12-24 month hiring window, with interim secondments from partners where possible; success can be tracked by reductions in vacancy rates and improved staff-to-inmate ratios. In parallel, Ministries and development partners must invest in decongestion measures (alternative sentencing, improved case processing) and immediate small infrastructure fixes (mediation rooms, private interview spaces) on a medium time horizon (12-36 months for larger policy changes; 6-12 months for small fixes), monitored through occupancy-to-capacity rates and the number of mediation spaces created. To encourage uptake, Prisons Service leadership should introduce an incentive scheme within 6-12 months to recognise units or officers who reduce repeat incidents through non-punitive means, with documented cases and measurable reductions in incident recurrence as the key indicators.

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Utilising the three delays model in understanding barriers to accessing birth registration services in Kabwe District, Zambia

Royd Malisase¹
Lisuba Kabanda²

¹royd.malisase@unza.zm

²lisuba2013@gmail.com

^{1,2}The University of Zambia

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ABSTRACT

Proof of age, through a birth certificate, helps to protect children from abuse, promotes their rights and establishes their legal identity. However, even though the rate of registration stands at 77% globally, 150 million children under the age of five remain unregistered. Zambia's birth registration rate of 14% is the second lowest in the world. Therefore, this paper utilises the Three Delays Model to understand barriers to accessing birth registration services in Zambia's Kabwe District. It adopts a descriptive-exploratory case study, employing a sequential mixed-methods approach. Quantitative data, collected through questionnaires submitted to 105 randomly selected parents from an estimated 10,500 households in the three sampled wards (Munga, Chililalila and Justin Kabwe), was analysed using SPSS. Qualitative data, gathered using interviews held with eight purposively selected key informants, was analysed thematically. The study discovered that only 23% of parents have registered their children's births. However, the only two first-delay barriers are lack of incentives for birth certificates and lack of information on birth registration, affecting 51% and 56% of parents, respectively. The only two second delay barriers are distance to birth registration facilities, affecting 31% of the parents, and geographical location, with rural-based parents less likely to access birth registration services (0%) compared to 37% and 31% of those residing in urban and peri-urban areas, respectively. There are no third-delay barriers. And regression analysis indicates that none of the barriers have a statistically significant strong relationship with the registration status of children. The study recommends improving sensitisation, decentralising birth registration further and making birth certificates a requirement in accessing public services, especially school enrolment.

Keywords: Barriers, Birth Registration, Kabwe District, Three Delays Model, Zambia

I. INTRODUCTION

The United Nations Children's Fund (UNICEF) defines birth registration as the official recording of the occurrence and characteristics of a birth by the civil registrar in the civil registry. This is done in accordance with the legal requirements of a country and establishes the existence of a person under the law and provides legal proof of their identity (UNICEF, 2024a). A birth certificate is a record issued by the civil registrar that documents the birth of a child. It is a certified extract from the birth registration record and serves as proof that registration has occurred. It is the first, and often only, proof of legal identity for children (UNICEF, 2024a).

Promotion of the rights and welfare of children has been on top of the global development agenda (UNICEF, 2019). This is evidenced by the 1989 United Nations Convention on the Rights of the Child (UN-CRC) which enshrines the rights of children that UN member countries have agreed to uphold (United Nations, 2018). The UN-CRC recognises birth registration as an important aspect when it comes to the protection of children from abuse, promotion of their rights and establishment of their legal identity (Malisase, 2015; Shi et al., 2022). To this effect, Article 7 of the UN-CRC provides that the child shall be registered immediately after birth and shall have the right from birth to a name, the right to acquire a nationality and, as far as possible, the right to know and be cared for by their parents (Pais, 2002). The importance of birth registration is further reflected in the Sustainable Development Goals (SDGs), especially target 16.9, which recognises birth registration as the foundation for legal identity (United Nations, 2018). The African Charter on the Rights and Welfare of Children (ACRWC), under Article 6.2, equally requires every child to be registered immediately after birth (UNICEF, 2019).

The global birth registration rate has increased from 75% in 2019 to 77% in 2024, meaning that about 8 in 10 children under the age of five are registered worldwide. However, this still leaves 150 million or around 2 in 10 children under the age of five unregistered, with 3 in 10 children lacking a birth certificate (UNICEF, 2024a). Over 50 million children whose births are registered lack birth certificates. The highest registration rates are in Europe, North



America, Latin America and the Caribbean as well as most of Asia (especially Northern and Western Asia) with less than 30% of children unregistered (UNICEF, 2024b). Sub-Saharan Africa, where only 51% of children are registered, is home to over half (90 million) of the world's unregistered children. And with rapid population growth in the region, projections suggest over 100 million African children will be unregistered by 2030 if current trends continue (United Nations, 2024).

Birth registration in Zambia started during the colonial era. It was introduced in 1898 through the European, Aliens and Coloured Births and Deaths Registration Act No. 12 of June 1898 (Kambole & Silanda, 1994). However, this law only applied to children of white British settlers, leaving out the indigenous population (DNRPC, 2015). It was only in 1973, some nine years after gaining independence in 1964, when the Zambian Government put in place an all-inclusive legal framework, the Birth and Death Registration Act (CAP 51) of 1973. The Act provides for the registration of every birth that occurs within the boundaries of Zambia, regardless of race (Republic of Zambia, 1973). The Act also established the Department of National Registration, Passport and Citizenship (DNRPC) as a specialised institution responsible for birth registration in the country. Statutory Instrument No. 44 of 2016 was passed to provide for decentralising birth certification to district levels (Zamstats, 2019). These laws are supplemented by the adoption of the National Civil Registration and Vital Statistics (CRVS) Policy in 2022.

Other measures aimed at improving birth registration includes development of the CRVS National Strategic Action Plan 2015-2019 and signing of the Memorandum of Understanding with the Ministry of Health to register births in health facilities. This resulted in the establishing of Health Facility Birth Registration desks in 615 health facilities throughout the country (Kasonde et al, 2016; Yokobori et al., 2021). Currently, 50 out of 116 districts in Zambia have the capacity to issue birth certificates following decentralisation efforts beginning in 2017 (UNICEF, 2024b). The DNRPC is also implementing the Integrated National Registration Information System, intended to digitise birth registration and link it to legal identification. Mobile registration exercises to capture rural communities are also conducted (Dokovic, 2020).

1.1 Statement of the Problem

Despite the reforms that have been put in place, birth registration coverage in Zambia is very low. Zambia is one of only three countries in the world, together with Ethiopia and Papua New Guinea, with birth registration rate below 25% (UNICEF, 2024a). The country had a birth registration coverage of only 10% in 2010 before increasing to only 11% in 2014 and then 12% in 2015 (UNESA, 2010; DNRPC & MOH, 2017). Even though the birth registration rate rose to 16% in 2016, it was still the fourth lowest registration rate in the world (CSO & DNRPC, 2016; UNESA, 2016; DNRPC & MOH, 2017). The registration rate even reduced to 14% in 2018, before increasing to 20% in 2019 (ZamStats, 2019). By 2024, the registration rate reduced to 14%, with only 6% of children possessing birth certificates, the second lowest rate in the world (UNICEF, 2024b). This has left 86% of children unregistered, with 96% not having birth certificates.

While there are no current statistics, the birth registration rate in Kabwe District was only 10% in 2016. This was below the national average and left 9 out of 10 children not registered (DNRPC & MOH, 2017; Central Statistical Office (CSO) & DNRPC, 2019). This was despite the government establishing the first birth registration centre, outside Lusaka, in Kabwe District in 2015 (CSO & DNRPC, 2019). This also means that Kabwe District, like most districts in the country, lacked accurate vital statistics on births to support evidence-based planning and allocation of resources. The unregistered children continue being invisible to the government system. They are also at risk of child labour, child marriage, child trafficking, as well as being denied the right to an official identity, a recognised name and nationality, and various rights afforded to citizens (ZamStats, 2019; United Nations, 2024).

The current situation implies that the country is unlikely to achieve its target of increasing the birth registration rate to 50% by 2026 (UNICEF, 2024b). This creates the need to understand the barriers faced by parents in accessing birth registration services in Kabwe District, and Zambia at large. Therefore, this study utilised the Three Delays Model to understand barriers to accessing birth registration services in Zambia's Kabwe District. To achieve this, the paper is arranged as follows: the above introduction and this section is followed by the theoretical framework, a review of related empirical literature, methodology, presentation and discussion of findings and finally a conclusion.

1.2 Research Objectives

- i. To investigate the First Delay barriers to accessing birth registration services in Zambia's Kabwe District.
- ii. To establish the Second Delay barriers to accessing birth registration services in Zambia's Kabwe District.
- iii. To posit the Third Delay barriers to accessing birth registration services in Zambia's Kabwe District.



II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 The Three Delays Model

The Three Delays Model was proposed by Thaddeus and Maine in 1994 to explain critical delays in receiving care that lead to women and new-borns dying during pregnancy and childbirth (Danna et al, 2020). These delays are 1) the delay in deciding to seek help, 2) the delay in reaching a suitable health facility, and 3) the delay in receiving satisfactory care once at the health facility (Thaddeus & Maine 1994). First delays can be due to sociocultural factors, perceived accessibility and previous negative experiences with healthcare. Second delays include distance to healthcare facilities and availability of and cost of transportation (Mgawadere et al, 2017). Third delays include poor health facilities, poor quality of care and shortages of medical supplies, equipment and trained personnel (Thaddeus & Maine, 1994).

Evidence has shown that the Model is of great value in a variety of contexts, including civil registration (Kusumaningrum et al, 2016). With regards to accessing barriers to birth registration services, the three delays are 1) delay in deciding to seek birth registration services, 2) delay in reaching a suitable birth registration facility and 3) the delay in receiving satisfactory services once at the birth registration facility. Therefore, first delays can be due to lack of incentives for birth certificates, lack of information on birth registration, previous negative experiences with birth registration, registration fees, gender of the child as well as parent's tribe, marital status and religious beliefs (Kusumaningrum et al, 2016). Second delays may include the geographical location where parents live, distance to birth registration facilities and availability of and cost of transportation. Third delays may include language barriers, lack of required supporting documents, long registration process and shortages of trained personnel (Mgawadere et al, 2017; Kusumaningrum et al, 2016).

However, the Model has been criticised for being too simplistic, one-dimensional and sequential (Danna et al, 2020). It is also more applicable to emergency medical services. Therefore, its application to non-emergency services, such as civil registration, may lead to wrong conclusions. Nevertheless, studies have shown that similar social, behavioural and systems factors constrain access to non-emergency services (Kusumaningrum et al, 2016).

2.2 Empirical Review

Literature was reviewed in line with the three delays. Studies have identified a number of barriers associated with first delays. Most countries have not made birth certificates a requirement for accessing public services. As a result, children do not need birth certificates to access services like enrolment in schools or healthcare. They are able to utilise other documents like the Under-Five Health Cards or an affidavit (Kasonde et al, 2016; Dokovic, 2020). And when they become adults, they rely on National Registration Cards or driver's licenses, which are equally obtained without needing to produce birth certificates. Therefore, parents do not see incentives or benefits to warrant the trouble of getting birth certificates (Pelowski et al, 2015). Nepal made birth registration mandatory for school enrolment in addition to introducing a cash transfer incentive programme for parents who registered their children. This contributed to birth registration rising from 35% in 2006 to 77% in 2019 (Sharma et al., 2023). UNICEF (2013) found that countries in Central and Eastern Europe (98%), Latin America and the Caribbean (92%), and the Middle East and North Africa (87%) had the highest birth registration coverage after making birth certificates the first step towards citizenship and a pre-requisite to obtaining other important papers. In Uzbekistan, the state pays mother a bonus when they register their children. And birth certificates are needed for immunization, health care and school enrolment (Pais, 2002; Pelowski et al, 2015).

UNICEF (2024b) discovered that lack of knowledge about the registration process continues to be a barrier in many countries. Data from 51 countries indicates that a majority (53%) of parents with unregistered children lack knowledge of how to register a child's birth. Only 47% of parents are aware of the birth registration process. According to CSO & DNRPC (2016), ignorance accounts for 82% of the main reasons for Zambian parents not registering their children's births. In some instances, parents who had previously attempted birth registration were put off by their experience of the protracted process of producing a birth certificate. It required them to visit registration facilities multiple times before a birth certificate could be obtained (Kasonde et al, 2016). These parents make a partially deliberate and conscious decision to not pursue registration (Mgawadere et al, 2017). Many countries have thus intensified community awareness campaigns on the needs and procedures of birth registration. They have also enhanced speed of issuing birth certificates by streamlining the process and digitising records at the registration offices. In Kenya, these measures more than doubled the registration rate in less than 10 years (Pelowski et al, 2015).

Parents still struggle to meet the costs associated with birth registration. Some countries still charge a fee for birth certificates (Msiska, 2020). This is one of the main reasons for the birth registration rate in Indonesia being only 56% despite the country institutionalising CRVS (Kusumaningrum et al, 2016). Similarity, families from poor and rural households in Latin America and the Caribbean countries, like Bolivia, the Dominican Republic, Guatemala, Nicaragua, and Peru, failed to afford birth registrations services (Brito et al., 2013). In these countries, most parents



make cost-benefit analysis and decide against birth registration believing that it is not worth the trouble. Most countries, including Zambia, have mitigated against this barrier by making birth certificates free (United Nations, 2024; CSO & DNRPC, 2016; Dokovic, 2020).

Social-cultural barriers include poverty, illiteracy, gender biasness, delayed naming of children, statelessness and migrant or refugee status (World Bank, 2016). Children from very poor or rural households, whose mothers have low levels of education, are more likely to lack a birth certificate (UNICEF, 2024a). Children born in health facilities are more than eight times likely to be registered than those born at home (UNICEF, 2019; CSO, 2019). Children of single mothers, foreign and/or undocumented parents also face lower chances of being registered (Brito et al, 2013). Additionally, religion and ethnicity equally plays a role because in some countries, certain ethnic or religious groups have lower birth registration rates than the national average (UNICEF, 2019; Makinde, et al, 2016). In Sudan, parents prefer to register male than female children (Ehab, 2015). Generally, being socially disadvantaged plays a role in the likelihood of a child not being registered (UNICEF, 2024b).

Studies have identified a number of barriers associated with second delays. These include the geographical location. In most countries, the birth registration coverage is higher in urban than rural areas. Globally, children living in urban areas are around 30% more likely to be registered than their rural counterparts (UNICEF, 2024a). This is the case in Zambia where the rate is around 25.5% in urban areas compared to 9.5% in rural areas (UNICEF, 2024a).

This is usually related to the inadequacy of birth registration centres. Brito et al (2013) found that in Latin America and the Caribbean, long distances between households and civil registry offices impeded birth registration, especially for people living in rural areas. The same issue affects about 42 developing countries in Africa and Asia (World Bank, 2016). In Zambia, distance to registration centres accounts for about 10% of the main reasons for parents not registering their children (CSO & DNRPC, 2016). Currently, only 50 out of 116 districts in the country have the capacity to issue birth certificates despite the system having been decentralized in 2017 (UNICEF, 2024b). To overcome this, some countries have decentralised the service. For instance, Nepal decentralised birth registration and issuance of birth certificates to the ward level in addition to building the capacity of Local Government bodies to handle the services (Sharma et al., 2023). Other countries have created birth registration points in health facilities (UNICEF, 2019; United Nations, 2024).

However, even when registration centres are nearby and birth certificates are given for free, other associated costs like transport still prove to be a barrier. Parents in most low income countries make cost-benefit analysis and decide against birth registration believing that it is not worth the trouble (Kusumaningrum et al, 2016). This is the case in the 13 SADC member countries where parents deliberately and consciously decide against registering their children's births because of associated costs (Pelowski et al, 2015; Shi et al., 2022; UNESA, 2010). In the case of Zambia, despite birth registration being free, parents are still forced to spend huge amounts of money on transport visiting registration facilities multiple times before a birth certificate is obtained (Msiska, 2019). This leads to some parents deciding to either not attempt the process or abandon it before obtaining the birth certificate (CSO & DNRPC, 2016; Dokovic, 2020).

A number of third delay barriers have equally been established. Parents' inability to speak the official language is not one of the barriers in most countries. This is because of sensitisation measures and the entire registration process being conducted in vernacular, if need be (Sharma et al., 2023; Shi et al, 2022; Kusumaningrum et al, 2016). However, the registration process itself usually involves declaration of birth to the civil registrar, registration of birth by the civil registrar and issuance of birth certificate by the civil registrar (UNICEF, 2024a). Declaration of birth is simple and can be done by health personnel (like birth attendants) and local official (such as a village chief). However, registration of birth and issuance of birth certificates is usually protracted, putting off some parents (World Bank, 2016). In Zambia, it takes upwards of two months before parents are given birth certificates (Dokovic, 2020). One reason for this is lack of the necessary materials, especially for producing the birth certificates. This partially explains why most countries have higher birth registration compared to actual birth certificates. This explains why 8 in 10 of children under the age of five in the world are registered yet 3 in 10 lack birth certificates (UNICEF, 2024a). In Zambia, only 6% have birth certificates even though 14% are registered (UNICEF, 2024b)

The protraction is also linked to inadequate trained personnel and limited materials. In most developing countries, civil registration officers lack training and thus fail to efficiently register births and issue certificates. They even fail to procure necessary equipment and make use of information and communications technology (Shi et al., 2022). Most qualified personnel are transferred from remote areas to more affluent sub-districts. In Indonesia, this led to the hiring of untrained staff or villagers as volunteer civil registry operators in some rural districts. In some cases, it is a part-time job for senior high school students (Kusumaningrum et al, 2016).

In most countries, a record of birth is usually needed for a notification form to be issued. The notification form is then the basis upon which a birth is declared to the civil registrar. The civil registrar then demands for the parent's proof of identity in order to proceed with the registration of birth and issuance of a birth certificate (UNICEF, 2019; Shi et al., 2022). However, parents who deliver outside health institutions tend to lack records of birth and thus struggle to acquire notification forms. This explains why Children born in health facilities are more than eight times



likely to be registered than those born at home (UNICEF, 2024a). Migrants and undocumented parents also struggle to produce the necessary identification documents. In Latin America and the Caribbean, the mother's lack of valid identity papers lowered the probability of birth registration by 32% (Brito et al., 2019). Some countries, like South Africa, have laws that bar registration and insurance of birth certificates to children born from foreigners without permanent residence (Republic of South Africa, 1992). Other countries, like Indonesia, have made marriage certificates a requirement, leading to single mothers being turned away by civil registration officials (Kusumaningrum et al., 2016).

III. METHODOLOGY

The research was confined to Kabwe District, located in Central Zambia, the provincial capital for Central Province. The district's population of children under the age of five is 33,662, consisting of 16,723 males and 16,940 females (Zamstats, 2022). Kabwe District was selected because its birth registration coverage is below the national average despite it being the location of the first birth registration centre outside Lusaka, established in 2015 (DNRPC & MOH, 2017; CSO, 2019). It also has urban, peri-urban and rural residential areas that embody the characteristics of high, middle and low-income households that fairly represent the situation in Zambia (ZamsStats, 2022).

The study is descriptive-exploratory in nature, conducted to gather insights on the barriers encountered, rather than how or why they exist (Saunders et al, 2023). It is a case study of Kabwe District, enabling collection of detailed information on the issue under study (Malisase & Litaba, 2023). It employs a mixed methods approach, combining elements of both quantitative and qualitative research methods. The quantitative method involves the collection, analysis and presentation of numerical data from parents (Creswell & Creswell 2017). The qualitative method focuses on collection, analysis and presentation of non-numeric data from key informants. Specifically, the study adopts a sequential mixed methods approach by first collecting and analyzing quantitative data and then collecting and analyzing qualitative data. The two types of data are then presented together (Malisase & Litaba, 2023). This makes it possible to provide a more comprehensive understanding of the issue under study (Saunders et al, 2023).

Research findings are based on primary data collected between October 2023 and January 2024 from a sample size of 113, consisting of 105 respondents (parents) and eight key informants. The sample size of 105 respondents is about 1% of the estimated 10,500 households in the three sampled wards (Republic of Zambia, 2022). The eight key informants consists of five officials from the DNRPC – two at provincial level (DNRPC1 and DNRPC2) and three at district level (DNRPC3, DNRPC4 and DNRPC5). Others are three officers from the Ministry of Health - one District Mother and Child Health Coordinator (MH1) and two nurses - one each from two health facilities with birth registration desks (Nurse1 and Nurse2). Data saturation had been reached after interviewing the eight key informants (Bryman, 2016).

Purposive and Multi-Stage sampling are used to select key informants and respondents, respectively. The researchers purposively selected informants who have the necessary information due to their positions (Creswell & Creswell, 2017). The multi-stage sampling procedure is as follows: The district is stratified into its 27 wards. Next, the wards are grouped into lists of rural, peri-urban and urban wards. Next, using simple random sampling, Munga, Chilililalila and Justin Kabwe wards are selected from the list of rural, peri-urban and urban wards, respectively. Next, each ward is subdivided into households. Households are selected using an interval of four, six and 10 in Munga, Chilililalila and Justin Kabwe wards, respectively. An introductory question "*do you have a child under the age of five years living in this household?*" is asked to the head of the household. If the answer is yes, a questionnaire is submitted to the head of the household. If the answer is no, the household is skipped and the household at the next interval is selected. The process is repeated until questionnaires are submitted to a total of 35 households in each ward. Multi-stage sampling allows for an efficient, yet random, collection of data from a large and sparse population in the district (Saunders et al., 2023).

Quantitative data from respondents is collected using researcher administered closed-ended questionnaires. It is analyzed using the Statistical Packages for Social Sciences (SPSS). SPSS is used to produce frequency distributions and regression analysis (Saunders et al, 2023). Qualitative data from key informants is collected through interviews held using semi-structured interview guides. It is then analysed using thematic analysis, which involves identifying, analyzing and reporting themes within the data (Bryman, 2016).

The study relies on content validity by ensuring that the questions in the interview guides and questionnaires cover the potential three delays that could be faced by parents in accessing birth registration services in the district (Creswell & Creswell, 2017). Internal consistency is used to ensure reliability. This is achieved by ensuring that questions in the research instruments are logically related. And only logically related responses are taken to be reliable (Saunders et al, 2023).

Prior to conducting field work, ethical clearance was obtained from the University of Zambia Humanities and Social Sciences Research Ethics Committee (HSSREC). The ethical certificate number is HSSREC-2020-SEPT-034. Permission to collect data is obtained from all the sampled organizations. All participants, officials and parents



consent before taking part in the study. They are informed of their participation being voluntary and ability to stop doing so at any moment without explaining themselves (Resnik, 2018). To uphold confidentiality, raw data is only accessed by the research team. The study ensures anonymity by using codes, rather than names, when making direct quotations in the findings (American Psychological Association, 2017).

However, the study does have some limitation. Firstly, it was conducted in one unique district out of the 116 districts in Zambia. This might limit the generalizability of the findings. Secondly, the sample size of 105 may not be large enough to be accurately representative. Thirdly, having the same sample size for all three wards means that the sample distribution is not probability-proportionate-to-size. Nevertheless, the impact of these limitations is minimised through a properly undertaken multi-stage sampling procedure which increases the representativeness of the sample.

IV. FINDINGS & DISCUSSION

4.1 Levels of Birth Registration in Kabwe District

Figure 1 below indicates that only 23% of the children have their births registered, with only 7% having birth certificates. This implies that the birth registration coverage for Kabwe District in 2024 is 23%. This is an improvement (more than double) from the 10% recorded in 2016 (DNRPC & MOH, 2017; CSO, 2019). It is also slightly higher than the national birth registration rate of 14% and certification rate of 6%. However, it is not on track to reaching the targeted 50% and 100% registration rate by 2026 and 2030, respectively (UNICEF, 2024b).

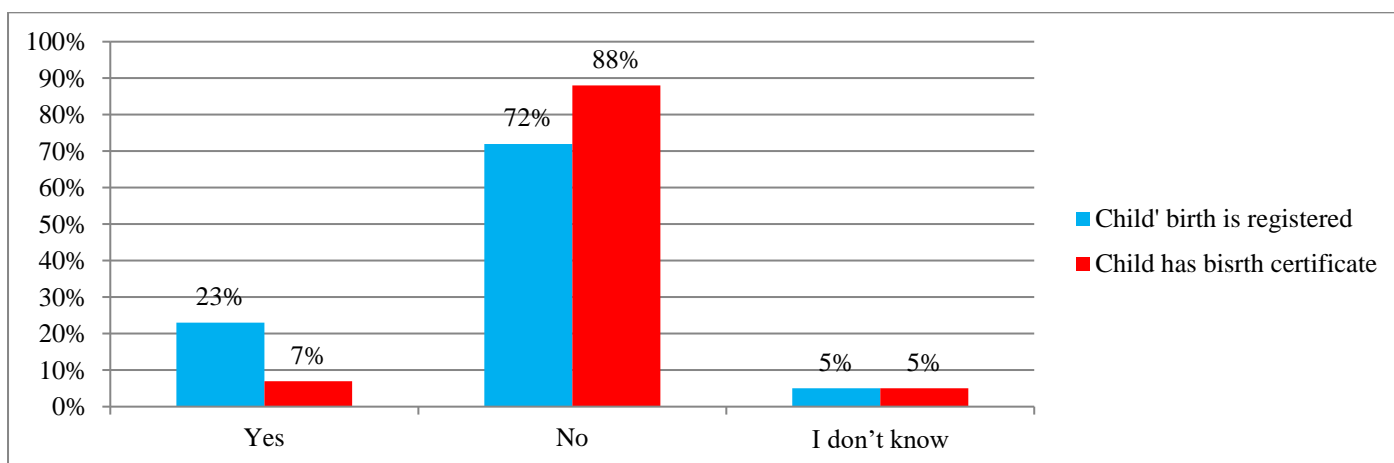


Figure 1
Birth Registration Status

Moving forward, an issue will only be considered to be a barrier if it affects at least 30% of parents. This is because a lower threshold would not qualify as a valid reason for why 72% of parents did not register their children's births.

4.1.1 First Delays: Delay in Deciding to Seek Birth Registration Services

To determine barriers related to delays in deciding to seek birth registration services, statistics were run on lack of incentives for birth certificates, lack of information on birth registration, registration fees, previous negative experiences with birth registration, gender of the child and parent's tribe, marital status and religious beliefs. The findings are presented in Table 1 below.

Table 1
To what extent do these Barriers Prevent you from Seeking Birth Registration Services?

Statement	No Effect	Low Extent	Moderate Extent	High Extent	Don't Know	Total
Lack of incentives for birth certificates	46 (44%)	0	16 (15%)	38 (36%)	5 (5%)	105 (100%)
Lack of information on birth registration	34 (33%)	1 (1%)	13 (12%)	45 (43%)	12 (11%)	105 (100%)
Registration fees	89 (85%)	0	0	1 (1%)	15 (14%)	105 (100%)
Previous negative experiences	83 (79%)	0	17 (16%)	5 (5%)	0	105 (100%)
Gender of the child	90 (86%)	0	0	0	15 (14%)	105 (100%)
Your tribe	88 (84%)	0	0	0	17 (16%)	105 (100%)
Your marital status	77 (73%)	3 (3%)	4 (4%)	6 (6%)	15 (14%)	105 (100%)
Religious beliefs	85 (81%)	4 (4%)	0	1 (1%)	15 (14%)	105 (100%)



Table 1 above indicates that 51% of parents cite lack of incentives to having birth certificates as a barrier to them seeking birth registration services, with 36% being significantly affected. Key informants equally note that birth certificates are not needed access any services. This lack of clearly discernible immediate benefits demotivates parents from acquiring them for their children. An informant from Central Province DNRPC Office notes that:

“It is difficult to convince parents to get birth certificates. They ask us what the benefits are and we fail to give a convincing answer. So, parents know that they can access any service they needed for their children, including travel, school enrolment and health services, without needing a birth certificate.”
DNRPC1, 24th October, 2023.

The findings mean that more than half of the parents do not see any incentives or benefits in acquiring birth certificates for their children. This is similar to Dokovic (2020) who equally notes that parents in Zambia use Under-Five Health Cards or affidavits to access services like enrolment in schools or healthcare. They also know that their children will be able to acquire NRCs at 16 years old, without needing birth certificates. This is the reason why a number of countries have boosted registration by providing incentives like paying bonuses as well as making birth certificates a pre-requisite for school enrolment, immunisation, healthcare and obtaining citizenship (Sharma et al., 2023; UNICEF, 2013; UNICEF, 2019; Pais, 2002; Pelowski et al, 2015).

Table 1 also shows that 56% of parents cite lack of information on birth registration as a barrier to them seeking birth registration services. It has a significant effect on 43% of the parents. However, key informants insist that the DNRPC conducts adequate sensitisation campaigns on birth registration. For instance, an official from Kabwe District DNRPC Office argues that:

“We conduct outreach activities where we tell parents about the importance of registering the birth of their children. We also tell them the process they need to follow, the institutions as well as the necessary documents, which are just about two. The nurses in health facilities also help us with the sensitisation.”
DNRPC5, 12th November, 2023.

This means that despite the sensitisation campaigns, the majority of parents lack information, like the process involved required documents and expected benefits. This is similar to the discovery by UNICEF (2024b) that lack of knowledge about the registration process is a barrier to about 53% of parents of unregistered children in 51 developing countries, including Zambia.

Table 1 also shows only 1% of parents cite registration fees as a barrier to them seeking birth registration services. Similarly, key informants stated that officials at health facilities inform parents of birth registration being free. A nurse at a health facility birth registration desk states that:

“Before parents are released from hospital following successful delivery, we give them copies of the birth notification forms. We then inform them of the process and emphasis that the entire process is free. We even advise them to report anyone who tries to charge them.” Nurse1, 13th November, 2023.

This means that most parents are aware of birth registration services being free, in line with the provisions of the Birth and Death Registration Act and Statutory Instrument No. 44 of 2016. Therefore, parents might be struggling to meet other associated costs. This would be similar to Brito et al (2013) discovery of the struggle among poor families in Latin America and the Caribbean countries like Bolivia, the Dominican Republic, Guatemala, Nicaragua, and Peru.

Table 1 also indicates that only 21% of parents cite their previous negative experiences as a barrier to them seeking birth registration services. It is a significant barrier to only 5% of the parents. Key informants equally admit that parents seeking birth registration services are treated with respect and helpfully by officials from both the DNRPC and health facilities. A nurse at a health facility birth registration desk states that

“The same way we are helpful to the parents when they come to deliver is the same way we treat them when they come to register their children’s births. We are actually the ones who even encourage them to register.” Nurse2, 13th November, 2023.

This means that most parents have no negative experience trying to register their children’s births previously. However, they could have been put off due to their previous attempts being protracted. This would be similar to the findings by World Bank (2016) and (Mgawadere et al, 2017).

Table 1 also highlights that none of the parents cite the gender of their children as being a barrier to them seeking birth registration services. Key informants equally observe no discrepancy between the registration rate for male and female children. This implies that parents make the same decision on whether or not to register their children’s births regardless of them being male or female. The situation in Kabwe District is different from other countries, like Sudan, where parents prefer to register male than female children (Ehab, 2015). Table 1 also indicates that none of the parents cite their tribe as preventing them from seeking birth registration services. Key informants equally agree, with one from Central Province DNRPC Office noting that:

“Some tribes in the country consider naming a child immediately it’s born as a bad omen, preferring to give the name two to three months later. However, we do not encounter such issues in Kabwe District.”
DNRPC1, 24th October, 2023.



The findings imply that none of the tribes in the district have practices or beliefs that oppose birth registration. This contradicts UNICEF, (2019) and Makinde et al (2016) who found that in some countries, certain ethnic groups have lower birth registration rates than the national average. Table 1 also shows that only 13% of parents cite their marital status as a barrier to seeking birth registration services, with only 6% being significantly constrained. Key informants add that single mothers are not discriminated against by civil registration officials. This is because there is no legal provision requiring the father’s presence when registering a birth. Therefore, single mothers are able to register a child using their maiden name, if they wished. This means that parents can access birth registration services, if they wanted, regardless of their marital status. The findings contradicts those of Kusumaningrum et al (2016) who discovered that in some countries, like Indonesia, laws requiring the production of marriage certificates disadvantage single mothers.

Table 1 also shows that only 5% of parents cite their religious beliefs as a barrier to them seeking birth registration services, with only 1% being significantly constrained. Key informants note that the district was predominantly Christian, with less than 1% being other religions. And that Christianity does not bar children from being registered. A nurse at a health facility birth registration desk stated that:

“Almost all the parents who deliver from here are Christians. And as a Christian myself, I know that the bible does not say children cannot be registered. Even Jesus was registered as a child.....not so?”
Nurse1, 13th November, 2023.

This means most parents can access birth registration services, if they wanted, regardless of their religion. It contradicts UNICEF (2019) and Makinde et al (2016) who found that religion is a barrier to birth registration. And that it results in certain religious groups having lower birth registration rates than the national average.

4.1.2 Second Delays: Delay in Reaching a Suitable Birth Registration Facility

To determine barriers related to delays in reaching a suitable birth registration facility, statistics were run on geographical location where parents live, financial constraints, distance to birth registration facilities and availability of and cost of transportation. The findings are presented in Figure 2 and Table 2 below.

The findings indicate that the geographical location where parents live is a factor in the likelihood of them registering their children’s births. Figure 2 below shows that none of the parents residing in rural areas registered their children’s births compared to 37% and 31% of those residing in urban and peri-urban areas, respectively.

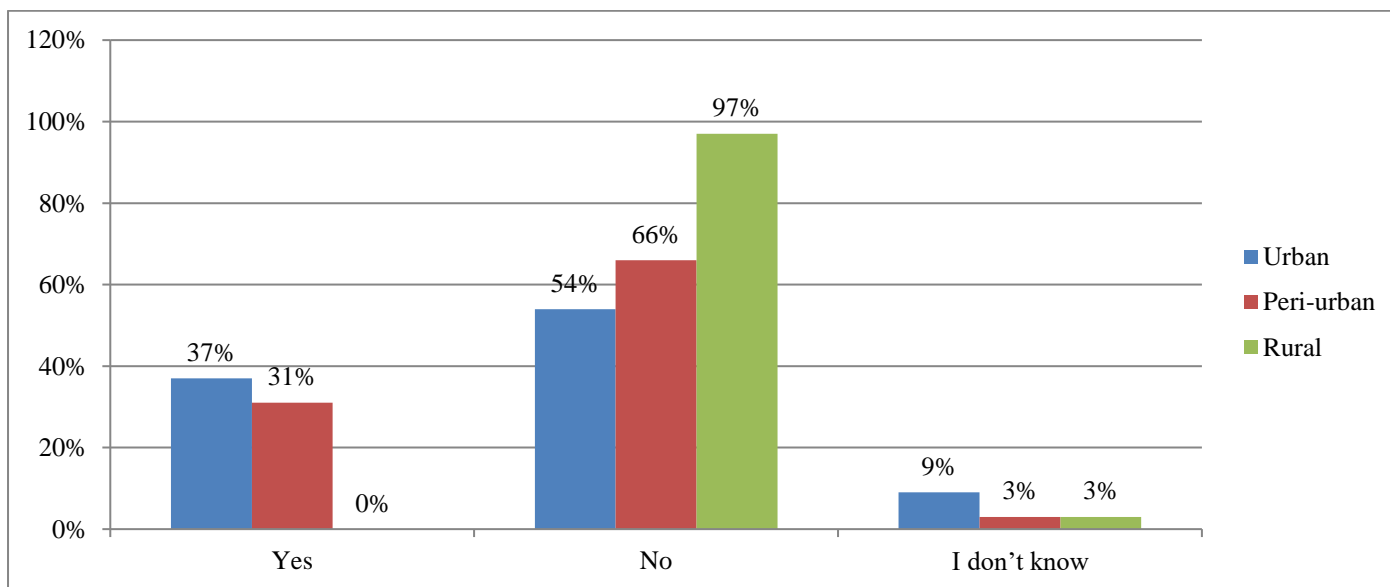


Figure 2
Level of Registration per Geographical Location

This implies that there is a significant likelihood of an urban or peri-urban birth being registered compared to a rural birth. UNICEF (2024a) equally notes birth registration coverage in Zambia being higher in urban (25.5%) than rural areas (9.5%). And that globally, urban based children are 30% more likely to be registered than those in rural areas.

**Table 2**

Extent to Which Barriers Prevent Reaching a Suitable Birth Registration Facility

Statement	No Effect	Low Extent	Moderate Extent	High Extent	Don't Know	Total
Distance to birth registration facilities	71 (67%)	0	3 (3%)	29 (28%)	2 (2%)	105 (100%)
Cost of transportation	87 (83%)	1 (1%)	0	2 (2%)	15 (14%)	105 (100%)
Availability of transport	72 (69%)	0	5 (5%)	16 (15%)	12 (11%)	105 (100%)

Table 2 indicates that 31% of parents cite distance to birth registration facilities as a barrier preventing them from reaching suitable birth registration facilities. It is a significant barrier to 28% of the parents. However, key informants insist that birth registration services are decentralised to health facilities close to where parents live. For instance, a nurse at a health facility birth registration desk argues that:

“We (nurses) give copies of birth notification forms mothers after they deliver in our facilities. We give them the option to fill in and leave the form before they are discharged or bring it back latter. Most of the mothers who deliver from here leave nearby. So, they can easily bring back the document once they fill it in. But, most of them refuse to sign the forms or fail to bring them back.” Nurse2, 13th November, 2023.

This means that perhaps some parents mistakenly think they had to submit the notification forms at the DNRPC offices. However, Kabwe is one of 50 districts in the country with the capacity to issue birth certificates (CSO, 2019; UNICEF, 2024b). And CSO & DNRPC (2016) found that distance to registration centres accounts for only 10% of the main reasons for parents not registering their children in Zambia.

Table 2 above also indicates that only 3% of parents cite the cost of transportation as a barrier preventing them from reaching suitable birth registration facilities, with only 2% being significantly constrained. In addition, only 20% of parents cite unavailability of transportation as a barrier preventing them from reaching suitable birth registration facilities, with only 15% being significantly constrained. Key informants attribute this to the opening of birth registration desks at health facilities close to residential areas, especially those in urban and peri-urban areas. Both declaration of birth and collection of birth certificates can be done at health facilities. An official from Kabwe District DNRPC Office states that,

“Opening up of birth registration desks at health facilities is benefiting communities. Parents don't have to travel to the District Registration Office. Rather, they are able to access birth registration services in health facilities close to them.” DNRPC3, 30th October, 2023.

An informant from Kabwe District DNRPC Office also explains that:

“Some parents can even walk to the nearest health facility. For those in urban and peri-urban areas, there are plenty of mini buses available. And remember, we also have registration desks in some rural clinics.” DNRPC5, 12th November, 2023.

This means that transport needed to visit registration facilities is readily available and affordable. Some parents are even able to walk to the health facilities. Therefore, it does not explain their decision to not visit registration facilities. This contradicts the assertion by Msiska (2019) that parents in Zambia are encumbered by transport money needed to repeatedly visit registration points just to obtain a birth certificate. The situation in Kabwe is also different from the case in other 13 SADC member countries where parents are put off by associated costs (Pelowski et al, 2015; Shi et al., 2022; UNESA, 2010).

4.1.3 Third Delays: Delay in Receiving Satisfactory Services Once at the Birth Registration Facility

To determine barriers related to delay in receiving satisfactory services once at the registration facility, statistics were run on language barriers, lack of required supporting documents, the registration process, and shortages of trained personnel. The findings are presented in Table 3 below.

Table 3

Extent to Which Identified Barriers Hinder Receiving Satisfactory Services at Birth Registration Facilities

Statement	No Effect	Low Extent	Moderate Extent	High Extent	Don't Know	Total
Language barriers	83 (79%)	0	17 (16%)	5 (5%)	0	105 (100%)
Lack of required supporting documents	79 (75%)	0	8 (8%)	12 (11%)	6 (6%)	105 (100%)
Long registration process	71 (67%)	0	3 (3%)	7 (7%)	24 (23%)	105 (100%)
Shortage of trained personnel	74 (70%)	5 (5%)	7 (7%)	8 (8%)	11 (10%)	105 (100%)

Table 3 above indicates that only 21% of parents cite language as a barrier receiving satisfactory services once at the birth registration facilities, with only 5% being significantly affected. Key informants equally note that officials



at both the DNRPC and health facilities used local languages, especially Bemba, when communicating with parents seeking birth registration services. This means that most parents are able to communicate with birth registration officials in a language they understand. The findings align with reviewed literature which discovered that officials in most countries conduct sensitisation campaigns and registrations in languages parents understand (Sharma et al., 2023; Shi et al, 2022; Kusumaningrum et al, 2016).

Table 3 also indicates that only 19% of parents cite the lack of required supporting documents as a barrier to them receiving satisfactory services once at the birth registration facilities, with only 11% being significantly affected. This means that most parents likely have the required supporting documents. Key informants equally add that the required documents are generally readily available to the parents. Parents only need to produce their NRCs as well as the children's records of birth and/or Under-Five Health Cards gotten from the health facilities. An official from Kabwe District DNRPC Office explains that:

"During field work or outreach activities, we remind parents that the needed documents are few and easy for them to find. Registration officers only request to see the Birth Record, the Under-Five Clinic Card and NRCs for the parents. This is enough for them to process the birth certificate." DNRPC4, 11th November, 2023.

However, Kusumaningrum et al (2016) found that in countries like Indonesia, civil registration officials turn away single mothers for lacking marriage certificates. In South Africa, migrants without permanent residence permits are equally stopped from registering their children (Republic of South Africa, 1992). Therefore, when the needed documents mostly relates to the identity of the child, parents are not likely to struggle producing them and vice versa.

Table 3 also shows that only 10% of parents cite the long birth registration process as a barrier to receiving satisfactory services once at the birth registration facility, with only 7% being significantly affected. This means that most parents are not put off by the time it takes for them to fill in the notification form and receive the birth certificate. This tally with the views of key informants who insist that birth registration, initiated by health personnel following delivery, involves parents filling in notification forms, attaching the easy to acquire required supporting documents, submitting and then waiting to be informed when to collect the certificate once it is ready. The process of applying for birth registration only takes a few minutes. It is usually the time between submitting documents and receiving the birth certificate which takes long. An informant from Central Province DNRPC Office admits that:

"The entire process, from filling in the notification forms to issuance of certificates, takes about two months. However, parents fill in the notification forms and attach supporting documents in just minutes. We then call them to come and pick the certificate when it's ready. They don't have to spend too much time at the birth registration facilities." DNRPC2, 5th January, 2024.

A nurse at a health facility birth registration desk states that:

"Remember, they (parents) can fill in these documents at the health facility while waiting to be discharged or even at home. They do not need to go to the district registration office." Nurse1, 13th November, 2023.

However, an informant from Central Province DNRPC Office did admit that the prolonged period before the birth certificates were issued could put off some parents. Stating that:

"Parents still have to spend up to two months waiting for the birth certificates. So, some of them just stop makes any follow-ups. Others don't even come to get the certificates by the time they are out." DNRPC2, 5th January, 2024.

A nurse at a health facility birth registration desk adds that:

"Some parents ask us how long it will take for certificates to come out. When we tell them the truth, they became reluctant to sign the notification forms saying that they can't wait that long. This is even when we tell them that they don't have to check, we will call them when the certificate is out." Nurse2, 13th November, 2023.

This can explain why 23% of parents registered their children's births while only 7% collected the birth certificates. It also aligns with UNICEF (2024a) findings that while 8 in 10 of children under the age of five are registered globally, 3 in 10 lacked birth certificates. It seems the protracted registration process puts off most parents from even attempting to initiate the notification.

Table 3 also shows that only 20% of parents cite shortage of trained personnel as a barrier to receiving satisfactory services once at the birth registration facility, with only 8% being significantly affected. Key informants equally note that bringing health officials into the fold has helped to reduce staff shortages. However, some of the trained midwives and nurses tend to be transferred to other districts. They end up being replaced by untrained personnel, negatively affecting the process. Some of them only get involved when donors, like UNICEF, funds registration projects. Once the projects end, they also stop participating, claiming that it is not part of their job description. The situation in Kabwe is similar to most developing countries where some civil registration officers lack training (Shi et al., 2022). In Indonesia, the few qualified civil registry operators are transferred to affluent urban



areas, leaving rural areas with untrained villagers and high school students as volunteers or part timers (Kusumaningrum et al, 2016).

4.2 Regression Analysis

The study performed simple linear regression analysis to determine whether parents are affected by the four variables that reached the threshold of at least 30% of respondents considering them to be a barrier. This was done by looking at the impact of the four barriers (independent variables) and *whether the children's births are registered* (dependent variable). The independent variables are two first delays (lack of incentives for birth certificates and lack of information on birth registration) and two second delays (parents' geographical location and long distance to registration facilities).

Table 4

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.714 ^a	.510	.486	.318

a. Predictors: (Constant), Lack of incentives for birth certificates, Lack of information on birth registration, Parents' geographical location, Long distance to registration facilities

Results in the model summary in Table 4 above indicate R² and adjusted R² of 0.510 and 0.486, respectively. They both imply a moderate degree of goodness of fit of the regression model. It also means that about 48.6% of the depended variable (Is the child registered?) can be explained by the regression model.

Table 5

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.632	4	2.158	21.351	.000 ^b
	Residual	8.288	82	.101		
	Total	16.920	86			

a. Dependent Variable: Is the child registered

b. Predictors: (Constant), Lack of incentives for birth certificates, Lack of information on birth registration, Parents' geographical location, Long distance to registration facilities

Table 5 above of the ANOVA indicates that the F-test result is 21.351, with significance (Sig.) of 0.000. This means that the probability of these results occurring by chance is 0.000. Therefore, a significant relationship is present between children's birth being registered and the four independent variables.

Table 6

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	2.013	.134		15.034	.000	1.747	2.280
Lack of incentives for birth certificates	-.036	.026	-.111	-1.390	.168	-.015	.087
Lack of information on birth registration	-.177	.025	-.556	-7.087	.000	-.227	-.128
Parents geographical location	-.057	.066	-.111	-.863	.391	-.187	.074
Long distance to registration centres	-.120	.040	-.379	-2.984	.004	-.201	-.040

a. Dependent Variable: Is the child registered?

Table 6 above shows there being a statistically insignificant weak negative relationship between lack of incentives for birth certificates and registration status of children (Coefficient B = -0.036, Sig. = 0.168). Meaning residential area of parents explains only about 3.6% of variance in registration status of children. And that the less the incentives for birth registrations, the less likely a parent is to register their child's birth. However, the relationship is not significant since p>0.05.

Table 6 above also indicates that there is a statistically significant weak negative relationship between lack of information on birth registration and the registration status of children (Coefficient B = -0.177, Sig. = 0.000). Meaning that since p<0.05, lack of information on birth registration explains about 17.7% of variance in the registration status



of children. And that the less information a parent has about birth registration, the less likely they are to register their child's births.

Table 6 above also shows a statistically insignificant weak negative relationship between parents' geographical location and registration status of children (Coefficient B = -0.057, Sig. = 0.391). Meaning parents' geographical location explained only about 5.7% of variance in registration status of children. And that the further away from the urban area a parent resides, the less likely they are to register their child's birth. However, the relationship is not significant since $p > 0.05$.

Table 6 above also indicates that there is a statistically significant weak negative relationship between long distance to registration facilities and registration status of children (Coefficient B = -0.120, Sig. = 0.004). Meaning that since $p < 0.05$, long distance to registration facilities explained about 12% variance in registration status of children. And that the longer the distance to the registration centre, the less likely a parent is to register their child's birth.

This means that only one first delay barrier (lack of information on birth registration) and one second delay barrier (long distance to registration facilities) have an actual impact on the registration status of children. Both have negative but weak impact (less than 20% variance). This contradicts majority of the reviewed literature as well as the Three Delays Model

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusions

The study utilises the Three Delays Model in understanding barriers to accessing birth registration services in Zambia's Kabwe District. It found that Birth registration in the district is low, with only 23% of parents having registered their children and only 7% having acquired birth certificates. However, despite this low birth registration rate, most of the expected barriers do not apply to Kabwe District. The only first delay barriers are lack of incentives for birth certificates and lack of information on birth registration, affecting 51% and 56% of parent, respectively. The only two second delay barriers are: distance to birth registration facilities, affecting 31% of the parents; and geographical location, with rural based parents more likely to not access birth registration services (0%) compared to 37% and 31% of residing in urban and peri-urban areas, respectively. There were no third delay barriers.

However, regression analysis indicates that none of the barriers have a statistically significant strong relationship with the registration status of children. Only one first delay barrier (lack of information on birth registration) and one second delay barrier (long distance to registration facilities) have an actual impact on the registration status of children. However, both have negative but weak impact (less than 20% variance). Therefore, the findings of this study contradicts majority of the reviewed literature as well as the Three Delays Model.

5.2 Recommendations

The study is of the view that the following may be considered as necessary effort to eliminate barriers to and thus improve birth registration Kabwe District, and Zambia in general:

The DNRPC should lobby the government to make birth certificates a mandatory legal requirement when accessing public services, especially school enrolment. This will create an incentive for parents to acquire birth certificates for their children. There is need to strengthen the operations of health facility birth registration desks by providing necessary financial and technical support. There is also need to establish additional desks across the country, especially in rural areas. There is need to improve sensitisation on the process and benefits of civil registration in general and birth registration in particular. This can be done by including civil registration as part of the curriculum for primary and secondary education. There is need to automate birth notification under INRIS. This will improve the speed of birth registration in addition to making it less costly for both Government and parents.

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Indigenous knowledge and happiness in higher education: A systematic review

Boniface Kimwere¹
Jeddy M. Waigwa²
Esther Wakere Mugo³
Kelvin Nyaberi Omoi⁴
Jackson Ndolo⁵

^{1*}boniface.kimwere@gmail.com

²jwaigwa@knec.ac.ke

³mugowakesh@gmail.com

⁴kelvz02@gmail.com

⁵ndolologistics@gmail.com

KCA University, Kenya

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ABSTRACT

From ancient times to the current digital era, the pursuit of happiness has remained the most painstaking human endeavor. This paper presents a systematic review of peer-reviewed studies published between 2015 and 2025 to explore the application of indigenous knowledge within higher education. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework has guided this systematic review. Only 10 studies were selected for this study from various databases, including Scopus, JSTOR, and ERIC. The findings suggest that profound misunderstandings impede the attainment of happiness, particularly from an African perspective. Other studies have indicated that the commercialization and marketization of African universities have led to the replacement of happiness with satisfaction, as these institutions shift towards consumer theory. The review reveals that other societies, particularly in the East, have found happiness in their education systems through the application of indigenous, local knowledge. In conclusion, this paper contends that the African must discard the negative perception of indigenous knowledge and seek new ways of entrenching local traditions and wisdom to improve happiness levels within learning contexts. This paper recommends empirical research to understand how indigenous knowledge can be applied to increase happiness in higher education institutions.

Keywords: Commercialization, Education, Happiness, Indigenous Knowledge, Satisfaction

I. INTRODUCTION

Over 2,000 years ago, Jesus, one of the most outstanding teachers in history, delivered a sermon on divine happiness (Beatitudes). Before him, the Greeks, famously Aristotle, Plato, Socrates, and others, had laboriously attempted to define happiness and how humans can ultimately attain this elusive state of being. Closer home, in Egypt, as Ouf and El-Zafarany (2018) explain, ancient Africans inscribed joy and happiness in hieroglyphs, underlining happiness as an inherent part of daily life and religion. Unlike now, people then pursued happiness in its rawest form by focusing on their indigenous knowledge and understanding of local people, animals, gods, and the environment. Unfortunately, as Wu et al. (2022) have shown, higher education has now been correlated with increasing unhappiness. Besides, post-pandemic, Rahman et al (2024) have revealed that academicians do not have good health and well-being due to a myriad of factors, including psychological distress, burnout, and job insecurity. In a recent study, which focuses on student happiness, Caridade et al. (2025) underline the need for good emotions during learning, concluding that most learners are not happy and there is a need for a change in teaching methods to make these individuals happier.

Having explained that happiness is crucial in education and there is a need to increase its levels, one query is how this lofty goal can be attained, especially in the marketized and commercialized higher education context. Fortunately, in India, Deepa (2025) suggests that indigenous knowledge, including yoga, has been found to improve happiness in teachers. In Indonesia, Daroin and Aprilya (2022) also outline the crucial role that indigenous knowledge is playing in boosting the emotion of learning. In this scenario, one must explore whether the same outcomes have been attained within the African education system. Are African scholars working within their national education curricula to entrench indigenous knowledge as the magic bullet for achieving greater happiness levels for both students and academicians? What benefits can be attained by borrowing local wisdom and knowledge in the pursuit of happiness in



these institutions? Can happiness be achieved in the African higher education system that has been highly marketized and westernized through indigenous knowledge? Indeed, this systematic review delves into this theme.

1.1 Research Objectives

The primary objective was to examine how indigenous knowledge can be applied to improve happiness within higher education, with a major focus on African learning establishments. The review considered research studies conducted in other regions, including from Eastern societies and evaluates the potential of such outcomes being replicated to improve happiness among students and academics in Africa. The minor objectives were to assess how happiness is currently conceptualized and the experiences within higher education, globally and also in Africa. Besides, it was vital to compare the African approaches with societies where indigenous knowledge has been accepted and successful integrated into education. Furthermore, this review sought to highlight gaps in scholarly research on indigenous knowledge and happiness within African higher education. The last objective was to recommend future research directions, especially on the need for empirical and also qualitative studies to entrench indigenous knowledge in national curricula to promote happiness.

II. METHODOLOGY

2.1 Study Design

Pollock and Berge (2018) have explained that systematic reviews seek to answer pre-defined research questions utilizing both reproducible and explicit methods to identify, critically appraise, and combine varying results from primary research studies. Indeed, this is important as the body of research grows in a specific field, necessitating rigorous syntheses of the available best evidence (Aromataris & Pearson, 2014). Based on this, this systematic review explores studies conducted in Africa and beyond, which focus on the issue of happiness, indigenous knowledge, and higher education. The systematic review was registered with Prospera on November 8 and the issued number was CRD420251207217. The primary objective of this synthesis is to answer this central question: Can indigenous knowledge help higher education institutions, especially in Africa, attain happiness for both students and academicians?

2.2 Data Collection

The data collection process used the systematic research method and entailed identifying the steps necessary to conduct in-depth literature review with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach, which researchers have praised for its effectiveness (Page et al., 2021; Mishra & Mishra, 2023). Technically, PRISMA, according to Dwinggo et al. (2023), is the accepted approach for presenting evidence in systematic reviews and also in meta-analyses. Specifically, this systematic review only considered peer-reviewed journal articles. As a result, conference proceedings, reports, books, and other online materials were not considered. The articles for this review were selected based on three criteria: refereed in academic journals (which was to ensure the highest quality of refereeing), published in the last 10 years (2015-2025), and discussion of indigenous knowledge and happiness. The exclusion for this review included relevance, quality, and language. For example, studies not published in English were not included in this review. The databases that were used in searching for relevant research studies included Scopus, Web of Science, ERIC, JSTOR, and PsycINFO. The keywords for the search included 'happiness,' 'indigenous knowledge,' and 'happiness in higher education.' Figure 1 shows the article screening procedure that was adopted for this study.

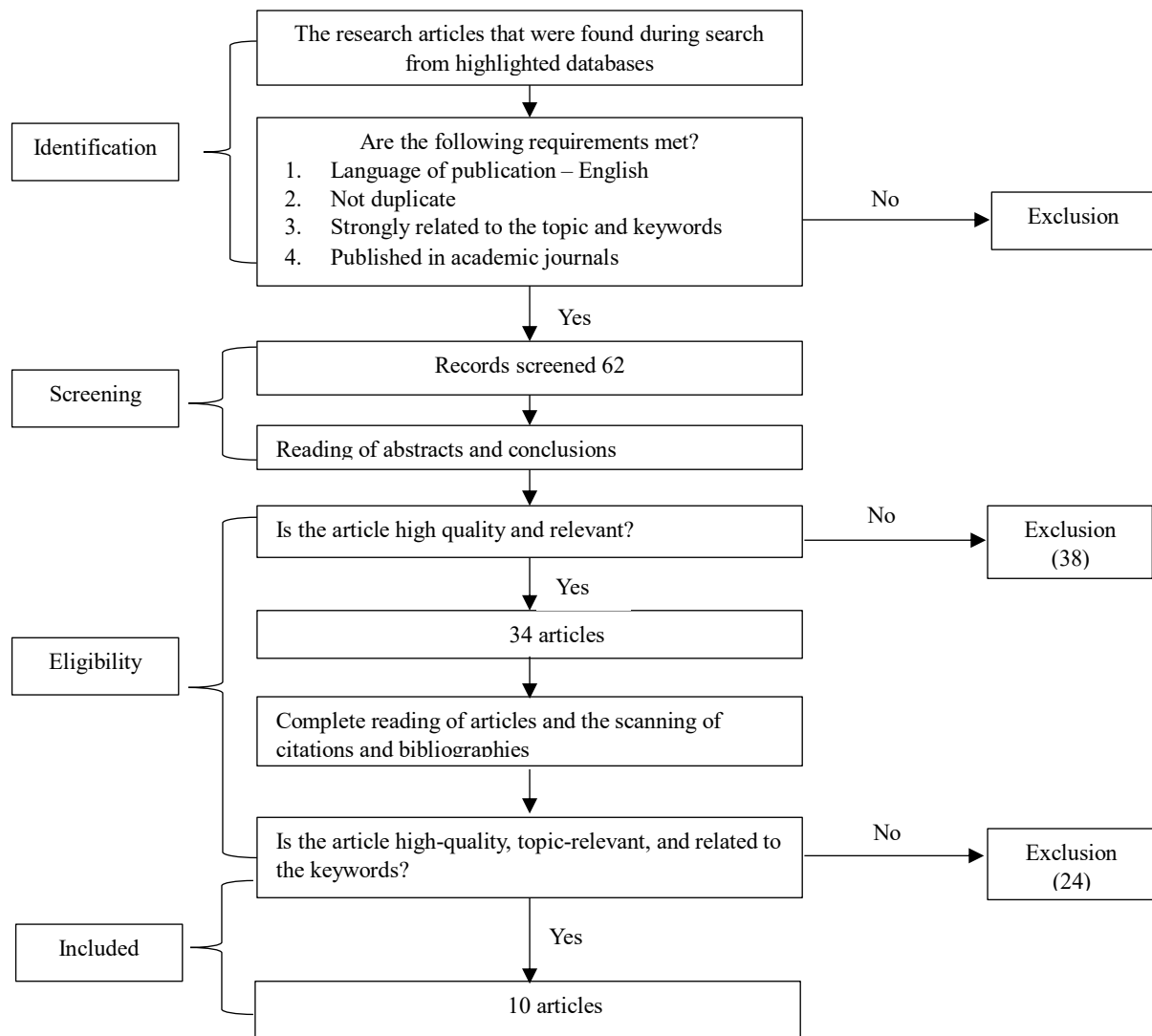


Figure 1
Article Screening Procedure

2.3 Data analysis

Specifically, this review used thematic and descriptive content analysis to address the formulated research questions. The emphasis on descriptive analysis aims to provide readers with an overview or background of the selected research studies by highlighting the outcomes through charts, tabulation, and describing the crucial study’s characteristics. Besides, the focus on thematic content analysis was imperative in conducting data analysis for this research study. The first task was to manually encode the primary issue researchers presented in their papers. Afterward, the study adopted an interpretive methodology to later analyze the key outcomes of the selected studies.

IV. FINDINGS & DISCUSSION

Essentially, the independent variable in this review was the application of indigenous knowledge within higher education. It is on this variable that the review examines the potential influence happiness. Some of the independent variables within this context are traditions, practices, local wisdom, and the culturally grounded pedagogies that are used in teaching and learning. On the other hand, the dependent variable is happiness among academics and studies, given that this is the outcome that changes depending on whether indigenous knowledge is applied successfully. As the following findings show, happiness is reflected through the emotional wellbeing, reduced burnout, positive learning experiences, and the enhanced satisfaction within academic life. The table below highlights the analysis of the 10 studies selected for this systematic review.



Table 1
Summary of Key Findings from the 10 Consulted Publications

Author(s) & Year	Title/Source	Focus/Objective	Methodology	Key Findings	Relevance to My Study	Gaps Identified
Deepa, P. R. (2025)	The impact of Indian knowledge systems on teachers' well-being and the Happiness Index in education	The study explores the effect of India's indigenous knowledge on Happiness index and teacher's well-being.	Systematic review	Indigenous knowledge provides practical tools, such as yoga, which helps nurture physical health, spiritual growth, and emotional balance.	The study offers insights regarding the use of indigenous knowledge and how it can improve happiness in educational contexts.	The study lacks robust analysis of indigenous knowledge and does not have theoretical foundations. The study was also completed in India and might not be applicable to the African system.
Chung, H. F., & Huang, C. J. (2021)	Investigating the relationships between cultural embeddedness, happiness, and knowledge management practices in an inter-organizational virtual team	The study focused on explaining influences of Chinese cultural elements on knowledge management and how they affect employees' happiness.	A qualitative case study	Knowledge-sharing behaviors are an outcome of complicated interplay of a sense of well-being. Employee happiness is a determinant of knowledge-sharing behaviors.	The study evaluates the concept of happiness based on Eastern and Western understanding of knowledge management. <i>Quanxi</i> (Chinese interpersonal relationships) influence corporate creativity and boost employee happiness.	The study is mainly focused on multinational context and does not explain how the concept of <i>Quanxi</i> can be applied to the African context.
Nepal, T. K. (2024)	Aligning gross national happiness, sustainable development goals, and traditional ecological knowledge: A path to holistic well-being	The study examines the connection between Traditional Ecological Knowledge (TEK), Gross National Happiness (GNH), and Sustainable Development Goals (SDGs).	Qualitative methodology	The study concludes that empowering local community promotes indigenous solutions to developmental issues and the application of TEK could help incorporate spiritual, material, and environmental elements to guarantee the building of inclusive, resilient, and sustainable futures.	The study acknowledges the need to promote happiness over wealth accumulation and the need to adopt local knowledge to promote happiness.	The methodology section is not robust and this affects the reproduction of a similar study. The study was conducted in Asia and findings might not be generalizable outside Bhutan.



Reyes-García, V., Gallois, S., Pyhälä, A., Díaz-Reviriego, I., Fernández-Llamazares, Á., Galbraith, E., ... & Napitupulu, L. (2021)	Happy just because. A cross-cultural study on subjective wellbeing in three Indigenous societies.	The study sought to understand the subjective drivers of happiness or personal well-being among indigenous communities in the tropics.	Qualitative case study design	Moderate happiness was the normal among members, with most individuals making reports if something exceptionally good or bad happened to them.	Indigenous communities have unique practices that guarantee happiness over time and these cannot be adequately covered by Western knowledge and its conceptualization of knowledge.	The study fails to explain the correlation between indigenous knowledge management and happiness within indigenous communities.
Uotinen, J., Loivaranta, T., & Seal, A. (2025)	Nonhuman Well-Being is a Part of Happiness and Well-Being Conceptions Among Central Indian Indigenous Communities	The authors sought to capture alternative human realities apart from those well reflected in literature and this involved understanding happiness conception from local indigenous communities.	Qualitative case design, interviews, direct observations	People valued a sense of connection, with the well-being of both human and nonhumans being a crucial source of human happiness.	Indigenous views on happiness have been marginalized, requiring a greater understanding of how indigenous knowledge management can boost institutional happiness.	The study was conducted in India and might not be generalized within the African context. The study failed to provide a direct relationship between indigenous knowledge management practices and happiness.
Misra, G., Pandey, N. M., & Mishra, V. (2024)	Indigenous Perspectives on Happiness: Insights from Indian Traditions	The chapter intended to explain the unique understanding of happiness based on indigenous perspectives.	Literature review	Happiness in the traditional sense incorporates optimism, a sense of wellness, lack of illness, and the securing of the well-being of others.	The conceptualization of happiness in the indigenous context is different from Western thought that tends to prioritize material accumulation and personal well-being at the expense of well-being of others.	The chapter explains the conceptualization of happiness from the Indian culture and the lack of a methods section affects the robustness and replication of these findings.
Trinh, L., & Khanh, H. (2019)	Happy people: Who are they? A pilot indigenous study on conceptualization of happiness in Vietnam.	The study focused on local definition of happiness understanding that this requires specific cultural contexts that are developed systematically.	Mixed methods	The outcome demonstrate that local understanding of happiness involve multiple concepts like health, material, self-actualization, community belonging, and social relationships.	The results confirm that local cultures have a unique definition of happiness and provide pathways for which people can attain happiness within communities and organizations.	The study fails to provide a link between happiness and indigenous knowledge. The study was conducted in Vietnam and lacks measures that could help apply the findings in the African setup.



Arora, R. G. (2020)	Happiness among higher education academicians: a demographic analysis.	The author sought to highlight the factors that could increase happiness among academicians and also the relationship between happiness and their performance.	Quantitative study	The study concludes that higher education institutions must set rules and policies that would promote institutional happiness to boost performance within this sector.	The results underline the essence of happiness within institutions and how it can be attained and also affect other core activities.	The author does not explain how indigenous knowledge management practices can be applied to attain greater happiness within educational contexts.
Raymunde, P. P., & Caballo, J. H. S. (2023)	Happiness level and happiness portrayal among tertiary education institutions educators.	The study explored the level of happiness among educators and the relationship between happiness and its portrayal in this sector.	Quantitative Correlational Research Design	The outcomes underlined the need for educational organizations to provide avenues to increase happiness for educators as a way of enriching their personal and professional lives.	The study shows that happiness is integral in promoting better outcomes in educational contexts and other organizations.	The study was conducted in Philippines and require further analysis to be applicable to the African context.
Nanda, M., Patel, J., Nath, S., & Ravindranath, S. (2025)	Happiness in education from the lens of children: Photovoice of students in government run schools in India.	The study sought to explore happiness in the perspective of children within the Indian education system.	Qualitative	The concept of happiness in this sector rises from multiple dimensions, including connectedness to self, others, and society.	The study acknowledges the need for holistic development and educational practices to promote happiness to align with broader global education standards.	The study fails to apply indigenous knowledge as a means of promoting happiness within the education system. The sample size is inadequate to make the findings generalizable to the African setup.

4.2 Discussion

4.2.1 Western versus African Conceptualization of Happiness

The Western conceptualization of happiness goes back to the 3rd century BCE and was explained by ancient Greek philosophers (Lomas & Lomas, 2018). The two primary perspectives on happiness arising during this period were hedonism and eudaimonia (Fave et al., 2010). From the hedonistic point of view, happiness is derived from the unrestrained pursuit of immediate enjoyment and pleasure, with this happening as people maximize pleasure while simultaneously minimizing pain (Prajapati, 2019). Therefore, based on this approach, happiness is an outcome of pleasurable experiences and their related sensory gratification outweighing painful experiences. The hedonistic explanation of happiness makes it conditional, circumstantial, and unstable, with humans having the daunting task of ensuring that their next set of experiences continues to induce greater happiness than the last.



Aristotle, a Greek philosopher, perceived the entire circus of pleasure-seeking as vulgar, which led him to popularize the second perspective—*eudaimonia* (Prajapati, 2019; Rosen, 2024). The ideas regarding this kind of happiness are rooted in the belief that people need to possess the greatest goods available. In this context, this could entail people living a worthwhile life, realizing their full potential, and adhering to internal virtues and social values, such as friendship, ethics, and knowledge (Prajapati, 2019). The *daimon*—the true self—promotes people to seek excellence, and this gives people the purpose and direction of life (Rosen, 2024). Based on this *eudaimonic* approach, happiness becomes the objective standard and a state that must be pursued and earned through the right action. Scholars have summarized this to suggest that this perspective paints happiness not as a function of feeling but rather as a function of virtue, with this being supported by Plato's claim that the happiest man is one who does not have a trace of malice in their soul.

Chukwuebuka (2024) affirms that the African conceptualization of happiness differs considerably from Western thought, in that happiness is deeply communal and relational. The author contends that the Western understanding of happiness is focused on material wealth and individual fulfillment. However, an African is truly happy when living harmoniously with the environment and in peaceful coexistence with others. Chukwuebuka (2024) adds that happiness is a product of a balanced relationship with forces that are in the hierarchy of being, which stresses the essence of collective well-being and interconnectedness. The explanation is in sharp contrast with the Western explanation of happiness, which promotes a metaphysical view of material accumulation and pushes personal success. African happiness, according to Chukwuebuka (2024), is not limited to this life but extends beyond death, with the desire to have a state of blessedness in the afterlife. An African must abandon all forms of egocentric attitudes and understand that happiness is a product of natural and collective existence.

In their study, Ratele and Rustin (2023) lament that there have been limited attempts to decolonize the concept of happiness to ensure a logical African-centered psychological approach. Ratele and Rustin (2023) fully agree with Chukwuebuka (2024) on the need for a balanced life if an African desires to attain lasting happiness. Ratele and Rustin (2023) argue that culture is a crucial factor in understanding happiness, implying that people perceive happiness or pleasure differently based on their unique sociocultural factors. The major pitfalls of Western thought on happiness, according to Ratele and Rustin (2023), are restricting happiness to subjective well-being. However, the African conceptualization extends beyond an individual and affirms that one might not be truly happy when living in a largely unhappy world or environment. The Eastern perspective on happiness closely mirrors that of Africa, with contrasting the Western thought as linking happiness with virtues, rationality, and individual autonomy, while Eastern traditions emphasize holistic well-being, spiritual enlightenment, and general interconnectedness.

The differences between the Western and African perspectives prompt the African to explore the roots of happiness based on the prevailing culture. Just like the Western and Eastern perspectives, the African understanding of happiness has evolved over many centuries. However, Idemudia and Adedeji (2023) complain that many Africans have increasingly turned to Western thought when focusing on the subject of well-being, and this is reflected in the definitions of happiness and measurement used. The remedy of this problem lies in the application of indigenous knowledge, which, according to Oni & Olalere (2024), could be an integral aspect in realizing the survival of man, with the beliefs that have been institutionalized within their respective culture and community. Africans, therefore, must not look to the West or East to try to define the meaning of happiness and how it can be attained. The African must look within and use the local knowledge and culture as the primary tool with which to measure happiness and understand how to pursue it.

4.2.2 Commercialization and Marketization of Higher Education

The discussion on happiness, especially in higher education, cannot proceed without an understanding of the commercialization and marketization of these establishments. In their discussion on the same topic, Elwick and Cannizzaro (2017) lament about the gradual move towards consumerism within the sector and the growing marketization. The authors, focusing on the United Kingdom, suggest that marketization has changed the primary means through which academicians can pursue happiness and contentment (Elwick & Cannizzaro, 2017). The study also introduces the increasing emphasis on satisfaction and not happiness. For example, multiple measurement methods have been developed to gauge students' satisfaction, and this has occurred at the expense of happiness. To this end, Elwick and Cannizzaro (2017) conclude that the UK lacks the general understanding of happiness, and this is evidently a global and not just a local concern.

In a 2005 study, Chan et al. (2005) committed the error explained by Elwick and Cannizzaro (2017) by equating student happiness with satisfaction. Chan et al. (2005) reveal that Australian students face a myriad of challenges, ranging from increasing fees to failure to attain desired grades. However, the authors avow that students are more likely to be satisfied with their educational experiences if the government and other stakeholders can boost satisfaction by looking at a number of factors, including friendships, improving school facilities, boosting lecture quality, and providing more opportunities to engage in extra-curricular activities (Chan et al., 2005). As Elwick and Cannizzaro (2017) explain, the concept of satisfaction, as evident in this context, is more linked to consumerism, as students are expected to be

satisfied with the services they receive. The focus on satisfaction, therefore, fails to consider the enjoyment and achievement that are linked to learning.

In a study focusing on the United Arab Emirates, Alteneiji et al. (2023) adopt the concept of the eudemonistic perspective of happiness, affirming that happiness originates from the attainment of significant goals. Alteneiji et al. (2023) dive into the issue of satisfaction and happiness, especially exploring how this has been explained in major UK universities. The authors suggest that students who appear happier are content with how they are engaged and with the edifying experiences they encounter when learning. In contrast, those who are highly satisfied are concerned mainly with external loci, which causes them to lose sight of their engagement in this process and instead focus on how things are done to and for them. To this end, Alteneiji et al. (2023) conclude that there is a distinction between satisfaction and happiness in this context. Notably, the emphasis on satisfaction, according to Alteneiji et al. (2023), is aimed at university management and policymakers. Indeed, this is also asserted by Elwick and Cannizzaro (2017), who reveal that satisfaction is mentioned 53 times, for example, in the University Survey National Report, while happiness is not mentioned in the same report. The same issue is evident in surveys conducted in the United States, Canada, and other European nations, where the emphasis is on satisfaction and not happiness.

Munene (2015) reports the commercialization of the university in the global and African context. The author indicates that the university's interaction with the market has resulted in major transformations, which have redefined the role and mission of these institutions. For example, according to Munene (2015), Kenya and Uganda have embraced a more radical approach, with other nations like Tanzania adopting a moderate approach. Gupta (2018) supports Munene (2015) by affirming that the shift from government-supported services compelled universities to enter the marketplace. As a result, universities have become big businesses that are now aggressively marketing their services and turning into iconic brands within their regions. One of the consequences of marketization, according to Munene (2015), is the reduction of academic freedom and autonomy, with universities adopting multiple incentives to sanction the right behavior. However, Munene (2015) argues that the commercialization process is different in various African nations due to local politics and the paths that were adopted after independence. For example, Kenya adopted a capitalistic approach, while Tanzania favored socialism.

Gachie and Govender (2017) affirm that the commercialization of higher education institutions is also evident in South Africa. For example, between 2001 and 2007, South African universities experienced remarkable changes as the government spearheaded the restructuring of these entities and organized the merger of universities to promote efficiency. The process saw the reduction of universities from 36 to 23 through the described mechanisms (Gachie & Govender, 2017). However, as Khumalo and Du Plessis (2024) explain, South African universities have focused on the commercialization of innovation, with more calls for these establishments to be more creative, entrepreneurial, and to focus on producing new knowledge and innovation.

Remarkably, Methula (2017) contends that the commercialization and commodification of universities is an agenda that originated and was driven by the Bretton Woods institutions and is a success of the neoliberal socioeconomic discussions. The same position is maintained by Voutsas et al. (2014), who confirm that some of these institutions, like the International Monetary Fund, intervene in education policy matters, with member states having the role of implementing specified measures. Munene (2015) also traces the gradual commercialization of Kenyan and other African universities to the 1980s, with the IMF and World Bank introducing structural adjustment programs (SAPs) that affected higher education and promoted market-based competition. However, one could contend that, as Bok (2009) explains, commercialization has taken root due to universities' losing sight of their core mission and sprawling institutions focusing entirely on material pursuits. Bok (2009) observes that the gradual reduction in government spending in universities across the US, UK, the Netherlands, Australia, and Scandinavian nations compelled these institutions to become more entrepreneurial.

In the face of this overwhelming focus on the marketplace, it does not come as a surprise that the focus has been on satisfaction as opposed to happiness when focusing on higher education institutions. According to Elwick and Cannizzaro (2017), satisfaction, unlike eudaimonic happiness, is a limited and also limiting concept. The focus is more on consumer expectations and their experiences as defined in consumer theory. Besides, the emphasis has been on student happiness, with limited research on staff happiness within these establishments. At the core of this discussion is the question of whether the university, with its focus on the marketplace and profits, can continue to promote happiness not only to students but also to academic staff.

4.2.3 Indigenous Knowledge and Happiness in Higher Education

Remarkably, having touched on the concept of happiness and the commercialization of higher education, it is imperative to explore how the concept of indigenous knowledge has been applied in the pursuit of happiness in higher education. In a recent study, Deepa (2025) focused on the Indian indigenous knowledge and how it affects teachers' well-being and happiness index. The study, adopting a literature review approach, affirmed that indigenous knowledge helped relieve stress, bridge the gap between knowledge and wisdom, and foster emotional and social connectivity. One



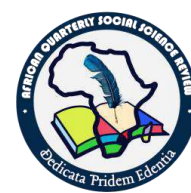
of the key takeaways was on how indigenous knowledge emphasizes the need for people to have a higher purpose and seek meaning in their daily activities, an outcome that leads to selfless service and the ability to align personal values and aspirations. Some of the indigenous knowledge and traditions that Deepa (2025) explored included Yoga, Ayurvedic home remedies, and how education was organized in the traditional Indian system. Remarkably, the study falls short of explaining how indigenous knowledge can be applied in complex education systems, and it also lacks a robust methodology section. Besides, it is not clear how some of these principles can be applied to non-Indian contexts, such as in African nations.

Daroin and Aprilya (2022), focusing on the Indonesian education system, also confirm the essence of happiness in higher education and the role of indigenous knowledge in attaining it. Daroin and Aprilya (2022) contend that education must be offered in the natural context, a position that is enshrined in Ki Hadjar Dewantara's learning concept. In a 1947 guideline, Ki Hadjar Dewantara underlined the need for education to prioritize love and affection. In this setting, teachers acted as parents and students as their children. Not only should teachers encourage students during learning, but they must also act as role models. Daroin and Aprilya (2022) contend that, based on these principles, it might be challenging to separate education from the political, economic, social, and cultural aspects. The holistic approach, which is a major deviation from the commercialized, modern education system, is essential in promoting happiness in this sector. Indeed, as the authors note, educational development needs a cultural system as its root and support. At the core of this system is the role of indigenous knowledge, which underlines the need for Indonesia to have an education system that helps students to be independent, socialize, and learn to regulate themselves. Happiness and freedom, therefore, become a product of such an education system. Generally, it is not evident if these outcomes can be applied beyond Indonesia, especially to African cultures that do not have a similar conceptualization of education and happiness.

In their study, Sherab and Schuelka (2023) explore happiness among Bhutanese students. Despite Bhutan being classified as one of the happiest countries, Sherab and Schuelka (2023) gathered data from 240 teachers and students to understand if they were happy. Indeed, other studies, for example, Ferraris and Cristiano (2024), have cited traditional knowledge and its incorporation into government policies as being one of the key factors for promoting happiness in this country. In collaborating these findings, Chophel et al. (2024) indicate that the combination of indigenous knowledge and spirituality and its integration into the public health and governance system have made Bhutan attain a higher happiness index compared to other nations. Despite all these attainments, Sherab and Schuelka (2023) suggest that happiness in the education system has not been fully attained or guaranteed. In fact, the authors contend that teachers as a source of authority, focus on pure academic attainments, and system rigidity have left the country's education system with less space for happiness. In another study, Schuelka and Sherab (2022) help us understand that the lack of happiness in this system is primarily due to failures in introducing education reforms in Bhutan, focused on the gross national happiness. Hence, schools and teachers tend to perceive happiness as an extra element rather than a construct to be integrated into daily education. It is interesting that a nation christened 'Land of Happiness' is far from attaining this in its education system.

Although the study by Macfarlane et al. (2008) does not explicitly focus on the concept of happiness, it provides crucial lessons on the need to incorporate the indigenous epistemology into the national curriculum. Macfarlane et al. (2008) cite the Māori cultural worldview, which emphasizes the value of human relationships. The perspective demands that education should be holistic, experiential, collective, and dependent on the free exchange of learning and teaching. The failure to adopt this kind of learning leads to major issues, as Rameka (2011) explains in a past study. According to Rameka (2011), the continued underachievement of Māori students has mainly been due to the lack of culturally relevant assessments that do not make any sense to these students. The author concludes on the need to make learning and assessment materials that reflect on what it means to be a member of this community and support the ideals and aspirations of these children. Collectively, Rameka (2011) and Macfarlane et al. (2008) imply that a curriculum that fails to incorporate local or indigenous knowledge might not cater to everyone's needs. Indeed, it is expected that students who do poorly in such educational contexts and teachers who fail to get their desired performance objectives are not likely to be happy.

Remarkably, Lee (2017), in a descriptive position paper, argued for the need for universities to teach happiness and wisdom, particularly from a religious perspective. The author adopted two religious approaches: Buddhism and Christianity. The adoption of spirituality in education is not a new concept, with scholars like Boolaghi and Kiani Moghadam (2016) confirming that religion-based interventions could improve happiness in students. Lee (2017) reveals that happiness is the ultimate human goal, and education has become the primary tool for attaining happiness. Happiness might not be achieved in higher education without direct instruction on how learners can attain and maintain happiness. Indeed, this requires careful ethical guidelines and other parameters to ensure only sage wisdom and moral guidelines are taught in these educational establishments. Despite not focusing entirely on indigenous knowledge, Lee (2017) helps us understand that there is a need to change the academic curriculum to reflect religious knowledge that might not be directly captured within scientific knowledge or technology. Evidently, the author seeks to marry the religious doctrines



of the East and West when he focuses on these two religious beliefs. However, it is evident that even nations like Korea, despite major technological advancements, have not attained desired happiness levels in their higher education, prompting Lee (2017) to recommend this unique approach.

In the African context, there has been limited focus on how indigenous knowledge can foster happiness within the higher education setting. In a recent book, Ezeanya-Esiobu (2019) laments that Western education, which belittles Africa's authentic experiences and repudiates its originality, has failed in promoting the innovation and advancement of African societies as it was expected. Under this education system, Africans lived experiences, belief systems, cultural values, and educational curriculum and structures have long been considered backward, barbaric, and unscientific. Ezeanya-Esiobu (2019) affirms that the colonially established and post-colonially maintained education system continues to promote the European psyche, with indigenous knowledge systems, which are typically expected to form the foundation of this education system, being intentionally and consistently relegated to inferior positions. Consider the fact that mother tongue is banned in most educational establishments in Africa, for example, in Rwanda (Sibomana & Uwambayinema, 2016), Nigeria (Sanusi, 2019), Kenya (Sibomana, 2015), Uganda (Ssentanda & Nakayiza, 2017), and so forth. Ezeanya-Esiobu (2019) concludes that there is a disconnect between the education curriculum in Africa and how it should incorporate its indigenous knowledge systems. Truly, a continent that has been continually informed about the inferiority of its indigenous knowledge systems, as Ezeanya-Esiobu (2019) shows, cannot be expected to use the same approaches to improve research, innovation, and curricula. Remarkably, it is unsurprising that no studies have focused on the concept of indigenous knowledge and how it can enhance happiness within higher education organizations on the continent.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

In the end, happiness is a primary emotion of learning that is crucial in promoting the attainment of educational goals. The systematic review has revealed that happiness is not inherent in African or global education systems. As a result, there is a need to redevelop curricula and improve educational systems to ensure that learners and teachers are happy. Unfortunately, the marketization of higher education has disrupted the traditional running of universities, with the focus being on profitability and other financial metrics. Fortunately, indigenous knowledge proves to be a silver bullet in helping educational establishments to attain higher levels of happiness. Indigenous knowledge has been applied in education systems in India, Indonesia, and elsewhere, with the results showing that students and academicians can become happier when they are in harmony with themselves, others, nature, and in their spiritual states. The African university, therefore, must move with speed to explore the best way of entrenching indigenous knowledge to promote happiness within its ranks and in the classroom.

5.2 Recommendations

Specifically, this review reveals that indigenous knowledge has been applied in different regions like India and Indonesia, with positive outcomes in educational contexts. However, as the Bhutan case scenario reveals, happiness in higher education, even when nations have the highest happiness index, is not automatic. Instead, there is a need to entrench indigenous knowledge and local wisdom into the curriculum and teaching activities to ensure that both learners and teachers are happy. Indeed, the analysis has disclosed that there is a major difference between African and Western conceptualizations of happiness. As a result, Africans must be left to local or indigenous knowledge to formulate the best approaches to attain happiness within the education system. Significantly, this review demonstrates that no studies are focusing on how indigenous knowledge can be used to improve happiness in African education systems. Consequently, there is a need for empirical studies, either qualitative or quantitative, which will focus on the concept of happiness and how it can be attained through localized, indigenous knowledge.

The review discloses that major attempts in evaluating the emotions of learning in most educational institutions have focused on satisfaction. As explained, satisfaction and happiness do not mean the same thing. Hence, there is a need to conduct qualitative and quantitative studies to explore happiness and not simply satisfaction rates within African higher education organizations. The focus on happiness, as this review has shown, will ensure that scholars go beyond the commercialization or marketization aspects, which are confined to the consumer theory. The studies focusing on these variables could either target students or academicians, especially the latter, since they have been adversely affected by the commercialization of these institutions.

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Influence of the legal support system of local authorities towards effective local government: A case of Arusha District Council, Tanzania

Edna Lukuta¹
Faisal Issa²

¹ednalukuta@gmail.com

²faissa@mzumbe.ac.tz

^{1,2}Mzumbe University, Dar es salaam Campus College, Tanzania

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ABSTRACT

The study examines the significance of a good legal support system towards effective governance in local councils, with the Arusha District Council serving as a case study. Institutional theory guided the research, and the target population was 254. A mixed-methods approach with a case study design was used, and emphasis was laid on the Arusha District Council. Information was collected from a sample of 154 respondents consisting of local council officers, legal professionals, and members of the community using simple random and purposeful sampling procedures. Questionnaires and interviews were used as instruments of data collection. Quantitative data from surveys were analyzed using SPSS software to compute descriptive statistics, such as means, percentages, and frequencies, to summarize the community's perceptions and the operational efficiency of the M-Mama system. Qualitative data from interviews were analyzed thematically. Through findings, it was observed that, despite the availability of qualified legal personnel and well-documented practice, there are glaring issues, particularly in the number of staff, resource distribution, and access to legal expertise. Additionally, the findings indicated that legal officers are moderately accessible and legal guidelines are in place but not uniformly available to all departments. On the issue of legal assistance in service delivery, findings from data indicate that legal officers assisted in curbing disputes, procurement monitoring, and compliance with regulations but with slow service delivery because of procedural standards. The study recommends strengthening internal staffing and training and periodically reviewing legal frameworks.

Keywords: Arusha District, Legal Support System, Local Authorities, Local Government, Tanzania

I. INTRODUCTION

Current trends at a global level also indicate that there is a need for effective support frameworks within institutions and for access to specialized legal knowledge in order to ensure effective local governance. In 2025, these may become more standard components of local government processes due to the support of local inquiry by government. As such, it may be prudent for legal staff hired by local authorities to extend and deepen their understanding of processes of inquiry in advance. Requisitions for legal support systems that can quickly conform to changing circumstances are never more urgent than in the present because the growing complexity of governance issues, including urbanization stress, technological innovation, and regulation obligations, have never been so exacting (Kessy & Mushi, 2018). The majority of developed countries have realized that local governments are unable to provide services efficiently, retain public confidence, and meet sustainable development goals without an efficient legal system. Local government must prioritize transparency, communication, and authentic public participation in order to foster optimism within communities (Kavishe et al., 2019).

However, building legislative models that will help local governments properly carry out their mandates is a big problem for most nations. Government legal offices worldwide are said to be confronting the problem of keeping things going as they negotiate complicated regulatory regimes). Local governments must function in highly crafted legislative frameworks addressing various community demands, operating financial obligations, and upholding national and international standards under the realities of contemporary governance (Indahsari & Raharja, 2020). Colonial pasts, scarcity constraints and institutional flaws are some of the reasons behind the African nations' centuries-long frustration with creating effective legal support systems for local governments.

However, problems like poverty, inequality, urbanization, poor infrastructure, and governance hinder the effective application of the fundamental principles of fiscal decentralization. Low levels of citizen participation in local government procedures, weak accountability systems, and low-quality provision of services have all been aggravated by weak legislative frameworks. All the local authorities in Africa lack adequate legal direction, leading to

inefficient implementation of policies and poor readiness to address citizens' needs (Kavishe et al., 2019). The Tanzanian local government reveals that central government policies, laws, and regulations lack adequate physical and financial support, constraining the Local Government Areas (LGAs) from completely exercising their role in service delivery.

This resource constraint also includes legal assistance services, which the majority of district councils lack access to competent legal personnel, adequate legal resources, and organizational frameworks to manage legal problems arising in their operations. This is more pronounced in Arusha District Council, which also has unique issues because of its geographical location, population, and economic activities that demand expert legal input. The necessity for more sophisticated legal support structures in the Tanzanian setting of local government is also consolidated by the ongoing efforts at decentralization and increasing demands for quality service delivery. The local governments are expected to handle complex duties, including land management, revenue collection, planning development, and provision of services, all of which require comprehensive legal advice and support (Kweka, 2023).

Without the right legal support structures, these institutions will not be in a position to effectively discharge their mandates, with the implications being reduced public confidence and limited development dividends. The Arusha District Council case presents a significant opportunity to examine such challenges as well as identifying how legal support structures can be enhanced in Tanzania's local government system.

1.1 Statement of the Problem

Local authorities in Tanzania, including the Arusha District Council, face tremendous challenges in areas of mechanisms of legal support that are crucial for effective governance. Insufficient frameworks of law, incompetent legal personnel, and inadequate access to legal resources have hindered the process of having effective local authorities (Komakech, 2020). An estimated 67% of Tanzanian local councils do not have adequate legal assistance, which contributes to procedural flaws, misapplication of rules, and subsequent inefficiency in governance. The legal support system of the Arusha District Council's is evidently flawed, with an imbalanced number of experts and administrative departments, delays in legal advice, and inconsistent application of bylaws (Danga et al., 2021). A number of programs have been implemented to cushion these challenges, including capacity-building by the Ministry of Regional Administration and Local Government aimed at enhancing legal awareness among local governments (Kavishe et al., 2019).

The Local Government Reform Programme II (2009-2024) also had provisions for the institutionalization of legal departments in district councils, though it has been patchy in various regions of the country. In addition, international development partners such as the United Nations Development Programme have supported technical assistance towards strengthening legal documentation systems and procedural systems in selected districts, including intervention in Arusha (Mollel & Tollenaar, 2013). If these legal aid gaps are left unattended, local councils will continue to experience devastating governance problems with far-reaching implications. Inadequate legal advice has the potential to increase councils' costs through litigation, fraudulent use of public funds, and a dilution of service delivery to society.

Further, poor legal frameworks consolidate corruption and drain public trust in institutions of the local government, threatening, in the long run, the decentralisation process that Tanzania has been seeking for decades. The inability to properly interpret and implement national policies at the local level due to a lack of proper legal support creates disconnect between central government aspirations and their application at the local level. This research hopes to fill an essential gap by only examining the connection between legal aid systems and effective governance in the Arusha District Council, which has been a hitherto under-explored area academically. In contrast to the existing literature that has addressed local government issues generally or specific legal issues in a narrow sense, this study will make an examination of the entire legal support system within the district and will isolate certain operations bottlenecks and their effects on the outcomes of governance.

Furthermore, this study will develop a contextually appropriate framework for strengthening legal support mechanisms that considers the unique administrative, social, and economic characteristics of Arusha District Council, thereby contributing new knowledge to the topic of local governance in Tanzania.

1.2 Research Objective

The study aims to assess the influence of the legal support system of local authorities towards effective local government with reference to Arusha District Council, Tanzania.

II. LITERATURE REVIEW

2.1 Theoretical Review

This study draws on Institutional Theory, which was developed by W. Richard Scott in 1987 and subsequently elaborated in his 1995 publication. According to Scott (1995), institutional theory considered "the deeper and more resilient aspects of social structure" and "the processes by which structures, including schemes, rules, norms, and routines, become established as authoritative guidelines for social behavior". The theory assumes that organizations are located in familiar institutional contexts that shape their action by formal rules, norms, and cognitive frames, with institutional theory perceiving "organizations to work within a given set of values, norms, and assumptions which constitute a reasonable economic behavior".

In this study, Institutional Theory is the main theoretical framework since it provides an understanding of how legal support systems exist as institutional mechanisms that shape the conduct and performance of local government authorities in predetermined regulatory and normative environments. The theory is particularly pertinent to this research as it explains the way in which formal legal arrangements, procedural expectations, and institutional demand's structure local government practice within the Arusha District Council so that examination can be made of the gap between formal legal codes and routine practical implementation. Recent work by Silva et al. (2024) underscores the continued relevance of institutional theory to public administration in light of how "global disruptions are marking our days and calling on individuals, institutions, and the State for institutional change" underscores the requirement of institutional mechanisms in contemporary governance contexts.

The advantages of Institutional Theory are that it can explain organizational behavior beyond economic rationality, the organizational schema for explaining how the interrelationship between formal structures and informal practices occurs, and its capacity to analyze how institutional pressures affect organizational responses to environmental demands. However, the theory does have some important frailties including a tendency to overstate stability and resistance to change, its limited analysis of individual agency and power relations, potential deterministic assumptions that can threaten the value of strategic choice in organizational action, and challenges in empirically quantifying institutional influences that can circumscribe its policy-relevant applicability within research contexts.

2.2 Empirical Review

Mwaseba et al. (2023) aimed at investigating legal support system institutional capacity gaps in municipal governments of developing countries. Their cross-country comparison of 150 municipalities in Asia, Africa, and Latin America found that approximately 73% of the local governments operated with low levels of legal staff, and 68% had poor use of legal resources. The research coincides with that of Komakech (2020), whose aim was to analyze legal framework deficiencies in European local governments and confirmed the same trends of under-staffing and deficits, particularly among small municipalities with fewer than 50,000 residents.

Also, Indahsari and Raharja (2020) conducted a comprehensive study with the aim of analyzing legal support infrastructure deficiencies in North American local governments. They also established rural and semi-urban local governments experienced more severe legal support deficits than cities with 81% reporting inadequate access to specialized legal knowledge. This aligns with the research of Bah and Dossa (2025), who endeavored to determine legal capacity deficits among Australian local councils and found that 67% of regional councils experienced difficulties in legal interpretation of federal legislations by having insufficient legal support mechanisms. International evidence consistently indicates that legal support gaps in structures prevail particularly in less populated jurisdictions with fewer fiscal and administration capacities.

Abdullahi (2024) researched to examine the interlinkage of the availability of legal aid and good governance in Francophone African nations. They determined that governments of municipalities in Mali, Burkina Faso, and Ivory Coast had immense gaps in legal systems, since 78% of the municipalities presented evidence of a lack of adequate legal advice for adoption and application of bylaws. This concurs with a study by Athanace (2019), whose goal was to assess the weaknesses of legal support systems in East Africa's local governments and determined that Kenya, Uganda, and Rwanda had similarities in their weaknesses, with particular struggle in interpreting national policy at the local level and maintaining compliance with constitutional mandates.

Empirical studies in Tanzania have supported certain references of legal support framework inadequacies impacting local government institutions. Legal support system inadequacies in Tanzanian district councils, for instance, Dodoma, Mwanza, Arusha, Mbeya, and Iringa, were examined by Rugeiyamu (2022). Their study showed that 76% of the councils they spoke with had fewer than two qualified legal officers, and 82% reported inadequate legal resource allocation within their yearly budgets. The results are consistent with Mwaseba et al. (2023), which aimed to investigate legal capacity limitation in Tanzanian local government institutions and found that rural district councils experienced higher legal support shortages compared to urban councils, with some districts having no specialized legal staff.

Besides, Kweka (2023) conducted a study to assess the impact of legal aid weaknesses on local government operations in Tanzania's regions of Lake Zone. They discovered that Mwanza, Shinyanga, and Geita district councils had enormous loopholes in the interpretation of land laws, revenue collection regulations, and procurement. Kessy and Mushi (2018) aimed to investigate effective interventions for improving legal aid systems in municipal governments in developed countries. Their 180 municipalities study found that extensive capacity-building programs, technology utilization, and inter-municipal legal resource sharing resulted in a 62% boost in the performance of legal assistance.

The results are consistent with a study by Silva et al. (2024), which attempted to explore new solutions for problems in legal support systems of New Zealand and Australian local governments and identified that partnership models of legal services and online legal resource platforms played significant roles in enhancing legal advisory capacity. Moreover, Aggarwal and Mishra (2024) conducted a study to analyze the effectiveness of different strategies to close legal support gaps in American local governments. In accordance with the results, cooperation between local governments and legal aid organizations, the establishment of regional legal service centers, and the implementation of legal technology solutions resulted in a 54% reduction in legal service gaps and a 47% reduction in response times to legal consultations.

These findings corroborate those of Bah and Dossa (2025), which aimed to evaluate community-based legal aid programs in Zimbabwean and Botswanan local councils and determined that citizen legal education programs and community legal volunteer programs significantly enhanced local legal aid capacity.

III. METHODOLOGY

3.1 Study Area

A study area refers to the specific geographical location, community, or institutional setting where research activities are conducted and from which data is collected to address the research objectives. The study area provides the contextual boundaries that define the scope of investigation and ensure that findings are appropriately situated within their specific environmental and social circumstances.

This study was conducted in the Arusha District Council, located in the Arusha region of Tanzania, which serves as the administrative headquarters for local government operations in the district. The Arusha District Council was selected as the study area because it represents a typical Tanzanian local government authority that faces significant legal support challenges while managing diverse administrative responsibilities in both urban and rural settings.

3.2 Research Design

A case study is a research design that is used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context and specifically involves a qualitative research method that provides an in-depth examination of a single entity (e.g., an organization, program, event, or individual) within its real-world context (Creswell, 2024).

This study employed case study design that focuses specifically on the Arusha District Council as the single case unit to examine the necessity of legal support systems for effective local government operations. The choice of case study design is appropriate for this research because case study design is preferred as a research strategy when "how," "why," and "what" questions are the interest of the researcher and case studies are the preferred strategy when 'how' or 'why' questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon (Bryman, 2015).

3.3 Target Population

A population in research methodology refers to the complete set of individuals, objects, or entities that share specific characteristics and are the main focus of a scientific inquiry from which researchers seek to conclude. A population is a complete set of people with specified characteristics, while a sample is a subset of the population, and defining this population clearly is fundamental to ensuring the validity and generalizability of research findings (Creswell & Creswell 2018).

The population for this study is 250, which comprise all local government officials, legal practitioners, and community stakeholders who are directly involved in or affected by the legal support system operations within the Arusha District Council.

3.4 Sampling Procedure and Sample Size

The sampling procedures for this study combined purposive and random sampling techniques. Purposive sampling is a non-probability sampling technique where researchers deliberately select participants based on specific criteria, characteristics, or expertise that are directly relevant to the research objectives and questions being



investigated. This sampling approach allows researchers to target individuals who possess particular knowledge, experience, or perspectives that can provide rich, detailed information about the phenomenon under study, making it particularly valuable for qualitative research designs (Stratton, 2021).

Simple Random Sampling (SRS) is a fundamental method of probability sampling where every individual in a population has an equal chance of being selected. This technique ensures that the sample is free from bias, making it representative of the wider population. A sample is a subset of individuals from a larger population, and sampling means selecting the group that you will collect data from in your research. Obtained through Yamane (1967) formula, the sample of 154 respondents is statistically sufficient so that the findings are representative of the population but the margin of error is reasonable.

3.5 Data Collection Instruments and Procedures

Neuman (2014) defines data collection instruments as the specific tools or strategies that researchers use to collect data from participants in a study. These instruments help researchers gather information that is relevant to their research questions and objectives. This study used questionnaires and interviews as data collection tools.

3.6 Reliability and Validity

The researcher’s conclusions must therefore be trustworthy and legitimate. Any researcher seeking high-quality research should take validity and reliability into account while planning a study interpreting the findings, and presenting the findings. As recommended by Kothari (2004), this study achieved validity in a number of ways. First, it involved carefully crafting questions and pre-testing questionnaires to ensure that they are understandable and those potential issues are detected early on, allowing for the easy identification of remedies. Second, in order to find and fix mistakes and omissions made during data recording, the gathered data was edited. The goal is to achieve accuracy, consistency, and completeness. A sufficient number of questions were created and formulated by the researcher for this study and questionnaires were used to gather data from a variety of respondents. But the purpose of the reconnaissance was to test the equipment.

3.7 Data Analysis

Data processing and analysis for this study was carried out using both manual and statistical software techniques. Quantitative data from surveys were analyzed using SPSS software to compute descriptive statistics, such as means, percentages, and frequencies, to summarize the community’s perceptions and the operational efficiency of the M-Mama system. Qualitative data from interviews were analyzed thematically, following the steps outlined by Braun and Clarke (2006). This approach helped in identifying key themes and patterns in the data that align with the research objectives. The combination of statistical and thematic analysis allowed for a robust interpretation of both objective and subjective data, offering a comprehensive understanding of the research questions.

IV. FINDINGS & DISCUSSION

4.1 Response Rate

Out of the 154 questionnaires distributed to respondents across different units within the Arusha District Council, 150 were returned fully completed, resulting in a response rate of 97.4%. According to Babbie (2021), a response rate of 70% and above is considered excellent in survey-based research, indicating both the reliability and representativeness of the findings. The high response rate in this study reflects the relevance of the research topic and the willingness of participants to provide informed input on the legal support system within their council.

Table 1

Response Rate of Questionnaire Distribution

Description	Frequency	Percentage (%)
Questionnaires Distributed	154	100%
Questionnaires Returned	150	97.4%
Questionnaires Not Returned	4	2.6%

4.2 Identifying Gaps in the Legal Support Framework within Arusha District Council.

The objective of this study was to identify the gap in the legal support framework available to the local authorities in Arusha District Council. Legal support in this context includes the presence of qualified and adequately staffed legal personnel, sufficient budgetary allocation for legal services, accessibility of legal officers to departments and the public, and the availability of formalized legal procedures to guide governance processes. Identifying existing



gaps in these areas is essential for assessing the council's institutional capacity to provide lawful and efficient governance.

To assess these elements, respondents were asked to indicate their level of agreement with five key statements related to legal staffing adequacy, legal officer accessibility, allocation of resources to the legal department, availability of legal frameworks and procedures, and staff expertise in handling governance-related legal issues. A five-point Likert scale was employed (1 = Strongly Disagree, 5 = Strongly Agree). The summarized results are presented in Table 2.

Table 2
Legal Support Framework in Arusha District Council (N = 150)

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The council has an adequately staffed legal department.	12 (8.0%)	28 (18.7%)	37 (24.7%)	45 (30.0%)	28 (18.7%)
Legal officers in the council are easily accessible when needed.	10 (6.7%)	22 (14.7%)	39 (26.0%)	51 (34.0%)	28 (18.7%)
The council allocates sufficient resources (budget, materials) to legal services.	20 (13.3%)	34 (22.7%)	43 (28.7%)	36 (24.0%)	17 (11.3%)
Legal procedures and frameworks are well documented and available.	9 (6.0%)	19 (12.7%)	40 (26.7%)	52 (34.7%)	30 (20.0%)
Legal staff possesses the expertise to handle diverse local governance issues.	6 (4.0%)	10 (6.7%)	33 (22.0%)	60 (40.0%)	41 (27.3%)

The responses indicate mixed opinions regarding staffing levels being satisfactory in the council's legal department. While 48.7% of respondents answered in agreement that the legal department has satisfactory staffing, and out of that proportion, 30.0% answered in agreement and 18.7% strongly agreed, a considerable percentage of 26.7% disagreed (18.0% strongly disagreed and 8.7% disagreed). In addition, 24.7% of respondents remained neutral. This indicates that while there are individuals who perceive staffing levels as being satisfactory, there are a number who perceive the department as understaffed or are uncertain if staffing levels are satisfactory. Such findings are analogous to remarks indicated by Abdullahi (2024), which indicated that understaffing has been a frequent concern in local authority legal units that compromises timely legal support and responsiveness.

Based on ease of accessibility, over half the respondents (52.7%) agreed that legal officers are accessible (34.0% agreed, 18.7% strongly agreed). However, 21.4% disagreed (6.7% strongly disagreed, 14.7% disagreed), while 26.0% did not express any strong views. This indicates moderate satisfaction but highlights areas of improvement in facilitating regular and reliable access to legal expertise.

In budget allocation to the legal department, only 35.3% of the respondents were satisfied, since 24.0% of the respondents agreed and 11.3% strongly agreed. However, 36.0% believed resources to be inadequate (13.3% strongly disagreed, 22.7% disagreed), and 28.7% remained neutral. This ubiquity of concern over a shortage of funds reflects budgetary constraints that weaken Tanzanian council legal departments, as observed by Kessy and Mushi (2018). Such observations identify unequal distribution of resources, which undermines efficient delivery of legal services.

In making procedures and legal frameworks accessible, most (54.7%) concurred that they are accessible and well documented (34.7% concur, 20.0% strongly concur). Yet, 18.7% disagreed and 26.7% did not know. It indicates general familiarity with formal documentation of law which informs governance, but some level of incongruence between familiarity and accessibility. It supports Mollel and Tollenaar (2013), who observed that legal frameworks are generally established, but diffusion to lower administrative levels patchy.

The highest positive response rate was observed towards staff expertise and professional capacity, on which 67.3% concurred that legal staff are equipped with the necessary expertise to manage issues of a governance kind (40.0% agree, 27.3% strongly agree). Only 10.7% disagreed, while 22.0% remained neutral. This strong agreement reinforces Kweka (2023) statement and concurs with the Legal Positivism Theory, which highlights that professional legal expertise lies at the heart of efficient and lawful local administration.

Notably, the survey indicates Arusha District Council has effective legal staff and relatively well-documented legal procedures, which are crucial to effective administration. However, there are also pressing challenges in staffing levels and resource allocation, as perceived areas of inadequacy have a probability of undermining timely, accessible, and comprehensive provision of legal services. It indicates a moderate level of satisfaction in accessibility, which has a point of requiring strategic deployment and perhaps increasing legal personnel to unlock service bottlenecks. Correcting under-resourcing financially is imperative as budgetary limitations have a direct impact on staffing capacity, levels of resources, and overall operating effectiveness.



When asked to provide feedback on accessibility and potential for legal services throughout the council, a participant observed:

"The legal unit is in operation but it gets overwhelmed. There are not enough officers to administer the number of departments that require legal feedback. It may take days to get responses, particularly when there are several departments that are looking for assistance concurrently. It makes decision-making slow as well as causes delay in implementations. The officers are doing their best, but there is a human resource deficit." (Participant 1, 7th July, 2025)

Another participant focused on issues of labour and accessibility:

"Legal officers are competent and up to date, but there are simply not enough of them. It is difficult to get advice quickly, especially when it comes to unexpected planning or purchases. Their services are severely required within every department, not just the council HQ. Their workload cannot be managed if efficiency is to be maintained. Increasing legal staff has to be taken on to take some of that workload off." (Participant 2, 8th July, 2025)

Another one included;

"The council has been good in ensuring that there are enough resources for legal services. The legal services we have been receiving have been important in supporting our service delivery. I continuously seek help from our legal officers, and they have evident skills, particularly when handling complicated issues of governance." (Participant 3, 8th July, 2025)

4.3 How effective is the local government of Arusha District Council?

This the dependent variable of the study which aim to analyze on how specific variables such as service delivery quality, regulatory compliance, policy implementation, governance accountability and records management have been effective in influencing legal framework in Arusha. Most variables prove to be effective as table 3 illustrates below.

Table 3
Effectiveness of Arusha Local Government on Legal Frameworks

Variable	Key Finding Statement	Mean Score (Likert)	Interpretation	Effectiveness of Legal Influence
Service Delivery Quality (Healthcare, education, infrastructure)	Legal expertise improves the quality of service contracts (e.g., infrastructure).	4.32	Agree	Effective
Regulatory Compliance (Adherence to laws and regulations)	Legal officers ensure timely compliance with procurement and financial regulations.	4.4	Agree	Highly Effective
Policy Implementation (Effective translation of national policies)	Legal advice ensures the council's policies align with national laws.	4.1	Agree	Effective
Governance Accountability (Transparency and public trust)	The presence of legal staff increases public trust in council operations.	4.15	Agree	Effective
Resource Management (Budget execution and development projects)	Legal guidance reduces financial risk in budget execution and development projects.	4.05	Agree	Effective
Administrative Efficiency (Decision-making processes and procedures)	Legal oversight improves the efficiency of administrative decision-making.	3.85	Agree	Moderately Effective (Constrained)

Data findings from the table above indicate Arusha local government has been very effective on improving legal frameworks whereas out of 5 Likert scale 5 variables have a score of 4 with the leading one on regulatory compliance with 4.4 followed by improvement of service quality 4.3, policy Implementation with 4.1, governance accountability with 4.15, resource management with 4.0 and administrative efficiency with 3.8. This shows a positive improvement on legal frameworks at Arusha District Council in attaining public services to citizens.

These data findings are correspondent with Komakech (2020) who revealed 56% improvement in legal compliance and a 41% reduction in administrative legal errors. In addition to that, Athanace (2019) emphasized that resource management and governance accountability was improved to 60% compared to previous years.

4.4 Recommendations to Address Challenges Facing Legal Support Systems within Arusha District Council

Legal support system challenges in this context include human resource limitations, procedural inefficiencies, outdated frameworks, and weak institutional linkages that constrain effective legal service delivery in local government operations. Respondents were asked to indicate their level of agreement with five key statements proposing potential interventions to address these challenges. These statements covered human resource strengthening, response efficiency, legal training, framework reform, and external partnerships. The results are summarized in Table 4 below, based on a five-point Likert scale of responses.

Table 4

Recommendations to Address Legal Support Challenges in Arusha District Council

Recommendation Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The legal department should recruit additional qualified staff to improve service delivery.	2 (1.3%)	4 (2.7%)	15 (10.0%)	68 (45.3%)	61 (40.7%)
Timely access to legal advice should be prioritized to support governance processes.	1 (0.7%)	2 (1.3%)	14 (9.3%)	61 (40.7%)	72 (48.0%)
More legal training programs should be offered to council staff.	1 (0.7%)	5 (3.3%)	13 (8.7%)	67 (44.7%)	64 (42.7%)
The legal framework should be regularly reviewed and updated to reflect governance needs.	3 (2.0%)	6 (4.0%)	18 (12.0%)	65 (43.3%)	58 (38.7%)
The council should collaborate more with external legal institutions to boost legal capacity.	2 (1.3%)	3 (2.0%)	16 (10.7%)	66 (44.0%)	63 (42.0%)

The answers suggest that a vast plurality of respondents strongly agreed or agreed that the Arusha District Council legal department must recruit more qualified employees to enhance service delivery since 45.3% agreed and 40.7% strongly agreed. This adds to a total of 86%, which shows a strong position that there is a serious need to recruit more employees in the legal units to meet shortcomings. Such a finding tends to validate Kavishe et al. (2019), which found that Tanzanian local governments did not have sufficient legal personnel as a crucial challenge, which resulted in slow consultations and overextended legal supervision. Nevertheless, 13.3% of respondents did not indicate a stance or disagreed, which shows that there may be a minority that thinks staffing to be enough or has other challenges.

As for the timely access to legal advice, there was a general agreement that it must be a priority to facilitate governance processes as indicated by 88.7% agreeing or strongly agreeing. Those agreeing and those strongly agreeing totaled 40.7% and 48.0%, respectively. It mirrors a general appreciation that late legal feedback causes inefficiency in proper decision-making and lawfulness. It corresponds to Danga et al. (2021) whose research indicated that late legal interventions are a disruptor of important processes including procurement and disciplinary measures. The fact that a low percentage (2.0%) disagreed highlights general unanimity.

The call to periodically revise and upgrade the legal instrument received a lower level of agreement, as 43.3% and 38.7% strongly agreed and agreed, respectively, giving a percentage of 82.0. The larger percentage that chose to stay neutral (12.0%) and a degree of disagreement (6.0%) may indicate varied experience in legal documentation among departments.

Lastly, there was support for strengthened cooperation with external law institutions by 86% of respondents, as 44.0% of respondents agreed and 42.0% strongly agreed. It shows clear appreciation of value in cooperation with universities, legal assistance centers, and NGOs to enhance legal capacity.

In summary, the examination shows that Arusha District Council's legal support system is generally observed to suffer from important institutional issues ranging from human resource shortages to late legal responses, low legal literacy, outdated laws, and minimal external partnerships. Improving internal staffing and education and building external networks are identified as key remedies to increase governance efficiency, legal adherence, and service delivery. This outcome corresponds to Institutional Theory, which emphasizes that competent infrastructure and processes are crucial to public institutions' legitimacy and performance.

Participants were required to discuss challenges facing the legal assistance system. Respondent five replied:

"There are simply too few legal officers. It is not possible for a person to adequately cover all departments. Time-bound issues are delayed occasionally just due to the fact that the legal officer has already been designated to some other unit. It frustrates departments and disrupts timeliness. Recruitment of additional staff in the legal unit has been long overdue. It is quickly becoming a choke point for efficient administration." ((Participant 4, 9th July, 2025)

Procedures to gain access to legal assistance were too slow:

Sometimes we require legal feedback immediately, particularly when budgeting, at disciplinary hearing or when negotiating a contract, but it may take days. It hinders progress and exposes the force to more danger. On several occasions, we have delayed projects while waiting for a lawyer to give an opinion. It is not that the officers are being slow but due to the workload." (Participant 5, 9th July 2025)

Another respondent identified the benefit of legal literacy amongst staff:

"There is a gap in legal awareness among non-legal officers. Not all of us are clear on legal procedures and thus end up making avoidable errors. Repeated legal sensitization must take place so that we know when and how to refer to legal. It will also reduce the workload of legal officers. Everyone must be made law-informed to some extent." (Participant 6, 9th July, 2025)

Another one joined;

"I don't think the existing legal system strongly underpins local authorities. Gaps remain which need to be filled, especially in areas that are updated continuously. Working together with other external legal centers could certainly enhance effectiveness. They could give meaningful training and information that are missing currently. I would suggest periodic examinations of the legal system and the establishment of liaison between legal schools and ours to build further understanding and application of law. On the whole, I believe there's a lot of potential in the legal support system of the Arusha District Council, but it needs a lot of improvement in terms of resources and training to perform its function to the fullest." (Participant 7, 9th July 2025)

4.4 Discussion

4.4.1 Gaps in the Legal Support Framework in Arusha District Council

The results mirrored contradictory perceptions of the sufficiency of the legal support system in Arusha District Council. Even as respondents acknowledged the existence of well-documented legal procedures and professionalism of legal personnel, they also expressed serious concerns about understaffing, slow response to legal issues, and ineffective resource allocation. For example, respondents indicated that the council requires five legal officers but has employed only 2 legal officers.

These findings are consistent with Abdullahi (2024), who emphasized the role of professional legal capacity in facilitating legal governance. Nevertheless, the weaknesses noted like inadequate human resources and underfunding are consistent with Athanace (2019) who also identified the same structural flaws in other local councils in Tanzania.

This text is corroborated by the theory of legal positivism that believes in the efficient application of laws requiring effective institutions. If the councils are either understaffed or under-resourced, the intended legal outcomes will not be obtained. Institutional Theory also points out those formal arrangements of human and financial resources are necessary for organizational performance and legitimacy.

Further, Tanzania's policy of decentralization vests considerable legal and administrative roles in district councils. Arusha's systemic under-resourcing mirrors a wider problem whereby decentralization is not being adequately followed through with institutional strengthening. Filling those gaps notably staffing and budgetary allocation is essential to capacitate legal departments to execute their mandates effectively.

4.4.2 Recommendations to Address Challenges Facing Legal Support Systems

Notwithstanding Arusha District Council showing strengths like staff experience and procedure guides the research revealed serious challenges. These comprise poor legal staffing, response delay, training deficit, outdated legal frameworks, and poor coordination with external stakeholders.

The gaps in human resources resonate with research by Mollel and Tollenaar (2013) and Kweka (2023), who found that the majority of the councils do not have most of the legal officers, which impacts efficiency in service delivery. In addition, the use of outdated legal instruments was mentioned as an inhibitor to adaptive governance, corroborating Mwaseba et al. (2023). The suggestion for more robust partnerships with institutions of law concurs with Rugeiyamu (2022), who proposed partnership as a measure to build institutional capacity. Both Institutional Theory and Legal Positivism argue that in order for the legal systems to be effective, councils need not just to have laws but also institutional capacity to enforce and apply them. If not well resourced and in sync, the legal support system is weak and ineffective.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The findings depict that although the legal officers within the Arusha District Council are viewed to have necessitated expertise and professional competence, the department is affected by critical deficiencies in staffing as

well as financial resourcing. Legal officer accessibility is moderate, and accessible legal frameworks are present but not necessarily obtainable within all units. Insufficiency of manpower and limited budgetary allocation constrain the legal department to provide timely and full support. The existing legal capacity is, therefore, insufficient to meet the enlarged needs of decentralized governance.

The legal support system of the council is faced with major challenges. These are understaffing, absence of timely access to counsel, inadequate legal know-how among non-legal, antiquated legal institutions, and inadequate integration with external legal institutions. All these weaken the effectiveness, consistency, and timeliness of legal services. Unless the institutional and structural weaknesses are addressed, the ability of the council to enforce laws, resolve conflicts, and encourage accountability remains limited.

5.2 Recommendations

First, the legal department should be provided with a separate and sufficient budget to support operational costs, legal documents, continuous training, and administration software. Legal services being established as an integral governance function during budgeting is imperative to ensure adequate financial resources. Second, the council has to give high priority to recruitment of more capable legal officers. This will relieve pressure on workload and generate uniform legal cover in all departments. A specific staffing benchmark must be established to match the council's administrative requirements. Thirdly, there ought to be routine legal training sessions for non-legal staff members, especially ward officers and planning officers. This will improve legal literacy, reduce procedure lapses, and improve compliance in day-to-day work.

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Educational attainment and the spacing between births among women in Kenya: An economic perspective from the 2022 KDHS dataset

¹Maureen Lusiche Tuvei
²Cyrus Mboleya Muhanga
³Faith Wanja Kilaku
⁴Victor Malimu

¹maurentuvei@gmail.com
²muhanga88@gmail.com
³faithwanja96@gmail.com
⁴vmalimu@mmust.ac.ke

^{1,2,3,4}Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

This study investigates the effect of education on birth spacing among Kenyan women using the 2022 Kenya Demographic and Health Survey (KDHS). The study was anchored on the Human Capital Theory (HCT). A cross-sectional design was adopted, where information was analyzed for 32,156 women aged 15–49 years in 42,022 households. Analytical methods included univariate statistics, bivariate (correlations), and multivariate statistics (generalized ordered logistic regression), controlling for variables such as age, wealth, contraceptive use, residence, employment status, and marital status. Univariate results indicate that the average level of education is 8.7 (SD=4.35) and a broad range of desired waiting times, with 24.37% reporting six or more years. Bivariate findings indicate a slight positive correlation between desired spacing and education ($r=0.147$, $p<.001$), whereas multivariate results confirm education's effect, but only mediated by age and union membership. The generalized ordered logit indicates that higher education levels significantly increase the odds of desiring longer birth intervals, ranging from 1.081 (<12 months, $p<.001$) to 1.011 (5 years, $p=0.09$) in unadjusted models, though they become somewhat less strong after controlling (ORs 1.034 to 0.968). The study stresses economic and health benefits from wider spacing, demanding greater investment in education for women to cater to demographic dividends, child and maternal health, and Vision 2030 for development in Kenya.

Keywords: Birth Spacing, Demographic Dividend, Educational Attainment, KDHS 2022

I. INTRODUCTION

Within the intricate fabric of family and public health, birth spacing is a vital strand that interlaces mothers, infants, and community health. Short birth intervals, or intervals shorter than 24 months between births, have been linked directly to heightened risks of maternal depletion, preterm birth, low birth weight, and excess infant and child mortality. For instance, preceding birth intervals under 18 months increase the chances of infant mortality in comparison to spacings of over 36 months based on data from a longitudinal study in urban Kenya (Fotso et al., 2013). It is not merely a biological concern but also a socioeconomic imperative: small spacings deplete household resources, exacerbate nutritional deficiency, and perpetuate poverty traps in resource-constrained settings. In sub-Saharan Africa, where maternal mortality remains alarmingly high, optimizing birth spacing could avert up to 25% of under-five deaths, underscoring its role as a low-cost, high-impact intervention for sustainable development (World Health Organization, 2005).

Kenya, which is confronted with the double burden of rapidly increasing populations and economic transformation, demonstrates the severity of birth spacing challenges. Although impressive reductions in total fertility rates (TFR) from 4.6 children per woman in 2014 to 3.4 in 2022 have been realized, the country is confronted with institutionalized challenges of reproductive health equity (Kenya National Bureau of Statistics [KNBS] & ICF, 2023). The Kenya Demographic and Health Survey of 2022 report a country median birth interval of 42.1 months, above the least of 33 months required for optimal maternal recovery and child survival (KNBS & ICF, 2023). But inequalities are pervasive: rural women have more frequent birth intervals and higher fertility than in urban areas, with 17% of children born less than two years after a sibling being at higher risk of under-five mortality (KNBS & ICF, 2023). These tendencies not only threaten health outcomes but also hinder Kenya's progress towards Sustainable Development Goal 3, whose target is to decrease maternal and child mortality by the year 2030. From an economic perspective, inadequate

spacing diverts women's time from productive labor, leading to lost income of 10-15% of GDP for low-income environments (United Nations, 2015).

Behind these reproductive channels is educational attainment, an agent of change that rearranges women's fertility aspirations and conduct through more agency, opportunity costs, and knowledge. More schooling provides women with cognitive capacities to set work and career objectives above early or repeated childbearing, often leading to postponed first births and more second-and-above birth spacing. Economically, an additional year of schooling raises the shadow cost of raising children, discounted for earnings foregone and investment in human capital, invoking deliberate family size planning (Becker, 1991). Support for this link comes from Kenya: policy-induced expansions of primary education have delayed timing of fertility by up to 0.67 years and reduced completed fertility by 0.21 children per woman, illustrating the fertility-lowering force of education (Cleland et al., 2020). As Kenya's literacy rates among females hit 85%, it is essential to understand the impact of education on birth spacing to leverage demographic dividends and build economic resilience.

The 2022 KDHS has an empirical depth that enables strong testing of these dynamics, revealing nuanced variation in fertility indicators across socioeconomic levels. Of special interest is the manner in which TFR crashes with rising maternal education, from 5.3 children for women with no education to 2.8 for those with more than secondary education—a severe 47% slope that attests to the strength of education in curbing fertility (KNBS & ICF, 2023). Even as direct data of birth intervals by level of education is yet to be researched in the report, proxy indicators clarify the path: unmet family planning demand, a major barrier to spacing, falls from 23% among uneducated women to 10% among highly educated women, allowing greater control over timing (KNBS & ICF, 2023). Moreover, present examinations of the same dataset underscore the reality that shorter prior intervals enhance threats to child survival, whereby education acts as a safeguard against undesirable outcomes like preterm birth (Onyango et al., 2025). Such findings are congruent with broader African trends whereby educated women have lengthened birth intervals by 6-12 months on average, driven by increased contraceptive practice and health literacy (Timæus & Moultrie, 2024).

This analysis applies an economic perspective to examining mechanisms through which educational achievement influences birth spacing in Kenyan women based on the 2022 KDHS measurement of opportunity costs and change in behavior. In light of Kenya's Vision 2030 strategy for middle-income status, unmasking these mechanisms has the potential to inform strategic investments in girl child education and family planning with a 1-2% annual GDP increment via a healthier, more productive female labor force (World Bank, 2020). By representing spacing as a function of the accumulation of human capital, this analysis connects micro-level choice and macro-economic consequence, filling a key gap in the literature where fertility economics tends to ignore interval-specific dynamics in economies in transition. The objective of the study was to determine the effect of educational attainment on the spacing between births among women in Kenya.

1.1 Research Objectives

The main objective of this study was to determine the educational attainment and the spacing between births among women in Kenya. The study adopted an economic perspective from the 2022 KDHS dataset.

II. LITERATURE REVIEW

2.1 Theoretical Review

This study relied on the Human Capital Theory (HCT) by Gray S. Becker in 1964. The theory assumes that education raises the productivity and income-generating abilities of individuals, influencing many aspects of their lives, including family size and childbearing timing decisions. In Kenya, where educational attainment is extremely heterogeneous and fertility has significant effects on socioeconomic development, the relationship between education and fertility desires must be comprehended.

2.1.1 The Human Capital Theory

According to Human Capital Theory, higher levels of education are associated with deferment of childbearing because individuals invest in their profession and additional human capital as a priority. Bankole and Malarcher's research in 2010 showed that in sub-Saharan African nations, including Kenya, highly educated women delay childbearing and have fewer children compared to those who have lower levels of education. The understanding is that educational level can influence fertility preferences through the change in a person's priorities and life goals.

Education provides empowerment of citizens, particularly women, with information and knowledge regarding reproductive health and family planning. According to Bongaarts (2020), informed individuals have more information on the use of contraceptives and reproductive rights, enabling them to make decisions as to whether or not they want to be fertile. In Kenya, where access to healthcare information and services for family planning also differs across regions, education could be very significant in influencing individuals' attitudes regarding contraception and desired family size.



The Human Capital Theory has an issue of how education can empower women and other groups to be more autonomous in their decision-making and economic opportunities. According to Bongaarts and Casterline (2017), education in women has a positive association with their negotiation skills on the use of contraceptives and free will on family size. Schooling in Kenya in which gender disparities still prevail in access to educational and socioeconomic opportunities, can be one of how women can be empowered, which will determine their reproduction and fertility choices.

2.2 Empirical Review

Family choices regarding birth spacing are a popular topic in demographic and public health research. Empirical studies in this area have examined how various factors influence birth spacing, including socio-economic status, culture, access to healthcare, and education level. Research consistently shows that optimal birth spacing, traditionally believed to be a time interval of 24 months or more, has significant benefits for the well-being of children and mothers. Socioeconomic status is among the most influential factors affecting birth spacing. Families with better resources and easier access to healthcare and contraception tend to space their children farther apart, which allows them to plan their families more effectively (Martin et al., 2019). Conversely, disadvantaged families often have shorter birth intervals due to limited access to family planning services and a lack of awareness about the importance of birth spacing (Casterline & Odden, 2016).

Birth spacing is also greatly determined by social and cultural beliefs. Family planning in most societies is greatly affected by the traditional practices and beliefs. Elsewhere, such as in the case of childbearing, in that order, in succession, to secure family lineage and source of labor (Gebresilassie et al., 2017). Other cultures, however, have cultures that cherish the well-being and lives of the mother and child and cultures that approve of prolonged birthing periods (Bongaarts, 2020). Another determinant is the availability of healthcare. When they receive quality reproductive health care, such families are in a better position to space their births. This type of care offers both useful information and access to the use of contraceptives, which allows the family to make spacing decisions (Cleland et al., 2015). In localities where health infrastructure is weak, no assistance is needed to adopt the best birth spacing between families, hence causing negative health outcomes (Ahmed et al., 2017).

Increased maternal education has been linked to increased health benefits awareness of the benefits of longer birth intervals and increased use of contraception (Shapiro & Gebreselassie, 2018). Women who have received an education will have a later second pregnancy to get an education and earn income, and it will lead to prolonged birth periods (Upadhyay et al., 2016). Government policies and family planning programs have a decisive impact on the trends in birth spacing. Effective family planning programs, which provide education and contraceptive services, can lead to better practices of birth spacing. For example, introducing family planning programs in most developing countries has been shown to increase birth intervals and improve maternal and child health status (Sinding, 2017; Cleland et al., 2020).

Concerns have been raised over the possibility that the actions of family planning programs, which in this area have concentrated on birth spacing rather than birth limitation, could alter the demographic makeup of the area. For two main reasons, positive hypothetical responses to this topic are presented. Firstly, if individuals do wish to space births, and if it is accomplished, mortality and morbidity will ultimately be less because the widely documented deleterious effect of close birth spacing on women's and children's health (Rutstein, 2015; Conde-Agudelo et al., 2016) is well known. Secondly, because postponing births would lower the birth rate, the desire to increase the time between births would initially drive the fertility transition. Longer generation length would result in a slower rate of population growth. The demographic mechanism is similar to an increase in the age of marriage, usually increasing the age at first birth. Moreover, some of these postponed births would never occur (Rafalimanana & Westoff, 2001). Two-year spacing of childbearing for infant and child survival and health was promoted by family planning programs over many years.

These findings can be explained by a number of advantages, such as: a longer time between births gives a mother more time to recuperate from pregnancy and delivery; the subsequent pregnancy and delivery is more likely to occur at full development and gestation; and there is less competition among current children for nursing, nutrition, mother care, and other inputs (Smith et al., 2022). More recently, fresh research has rekindled interest in the effects of spacing and the ideal time between children, indicating that there are additional health benefits between the ages of three and five (Ramarao et al., 2006). To put optimal birth spacing on the global leadership priority agenda, USAID sponsored the creation of the Optimal Birth Spacing Initiative (OBSI). Implementing an ideal birth spacing council of three to five years at the policy, programmatic, and behavioral levels is the aim of the Optimal Birth Spacing Initiative. Advance Africa and the CATALYST Consortium were professional and technical groups involved in this effort; CATALYST served as OBSI's secretariat.



III. METHODOLOGY

The cross-sectional research design was employed in this study because it allows for the gathering of information at a single point in time to study a specific phenomenon (Spector, 2019). The study used the KDHS dataset, which was conducted in 2022, encompassing both urban and rural communities in all 47 counties in Kenya. This study only used data collected from women. A nationally representative sample of 32,156 women aged 15–49 in 42,022 households was interviewed. The age bracket of 15–49 was considered the reproductive age for women. Family planning choices were also included to be controlled.

Questionnaires were used as the main data collection instrument. The pretest included classroom training and field practice for interviewers and biomarker technicians. The questionnaire that was used in the 2022 KDHS was validated using a rigorous methodology that involved pre-tests, expert review, and field tests. The questionnaire was well structured by relying on the existing DHS templates that have, with time, been tested and validated in many countries. Data was analyzed at univariate, bivariate, and multivariate levels. Univariate analysis involved basic descriptives for the study variables, bivariate analysis involved the use of pair-wise correlation, while multivariate analysis involved the use of generalized ordered logistic regression to test the hypothesis.

IV. FINDINGS & DISCUSSION

4.1 Univariate Statistics

Univariate statistics for descriptive variables, assessing the effect of education level (attainment) on birth spacing in 32,156 women aged 15–49 in Kenya, are presented in Table 1. Education level (v133) stands at a mean of 8.70 years (SD=4.35, 0–24 range), which reflects moderate educational levels with high variability that can possibly influence birth spacing preferences. Average age (v012) is 29.14 years (SD=9.55, 15–49 range), assessing a reproductive-age population. The mean of the number of sexual partners in the last 12 months (v766b) is 0.75 (SD=0.51, range 0–3) for 16,900 respondents, showing low variability in partners. The preferable interval of waiting for the next birth (v604) shows a distribution of categories: 13.35% would prefer fewer than 12 months, 12.96% one year, 13.76% two years, 12.21% three years, 6.03% four years, 17.32% five years, and 24.37% six or more years, indicating diverse spacing that may be changed through education. Wealth index (v190) is uniformly distributed among quintiles (18–22%), contraceptive use (v312a) is predominantly none (58.14%), followed by modern (36.83%) and traditional (5.04%), residence (v025a) separates 38.52% urban and 61.48% rural, employment (v714) is roughly even (48.12% employed), and union status (v502) shows 56.95% currently in union, 31.25% never, and 11.8% formerly, reflecting socioeconomic factors which, together with education, could influence birth spacing in Kenya.

Table 1
Univariate Statistics for Variables in the Analysis

Variable	Variable Label	Obs	\bar{x}	σ	Min	Max
v133	education in single years	32 156	8,70	4,35	0	24
v012	respondent's current age	32 156	29,14	9,55	15	49
v766b	number of sex partners, including spouse, in last 12 months	16 900	0,75	0,51	0	3
Variable	Nominal-scale Variable	Freq.	%	Cum.%		
v604	preferred waiting time for birth of a/another child (grouped)					
	<12 months	1 187	13,35	13,35		
	1 year	1 152	12,96	26,31		
	2 years	1 223	13,76	40,07		
	3 years	1 085	12,21	52,28		
	4 years	536	6,03	58,31		
	5 years	1 540	17,32	75,63		
	6+ years	2 166	24,37	100		
v190	wealth index combined					
	1=poorest	7 073	22	22		
	2=poorer	5 742	17,86	39,85		
	3=middle	6 345	19,73	59,58		
	4=richer	7 160	22,27	81,85		
	5=richest	5 836	18,15	100		
v312a	status of contraceptive use					
	1=no contraception	18 694	58	58,14		
	2=traditional contraception methods	1 620	5	63,17		
	3= modern contraception methods	11 842	37	100		
v025a	place of residence					



	0=urban	12 386	39	38,52		
	1=rural	19 770	61	100		
v714	respondent currently working					
	0=currently not working	16 681	51,88	51,88		
	1=currently working	15 475	48,12	100		
v502	1=never in union	10 048	31,25	31,25		
	2=currently in a union/living with a man	18 312	56,95	88,2		
	3=formerly in union/living with a man	3 796	11,8	100		

Note. Obs=Observation; Min=Minimum; Max=Maximum; Freq.=Frequency; Cum=Cumulative

4.2 Bivariate Statistics

Table 2 presents a pair-wise correlation matrix checking for the relationship between the desired waiting time for the next birth (v604), educational level (v133), and control variables for Kenyan women aged 15-49 years: defining the effect of educational level on birth spacing. Education shows weak positive correlation with ideal waiting time ($r = 0.147, p < .001$), i.e., higher education is linked to longer desired spacing. Moderate negative correlation is found with age ($r = -0.562, p < .001$), i.e., younger women want more spacing. Weak correlations with sexual partners ($r = -0.059, p < .001$), use of contraceptives ($r = -0.053, p < .001$), residential status ($r = 0.081, p < .001$), and employment status ($r = -0.231, p < .001$) exist, while a moderate negative correlation with marital status ($r = -0.445, p < .001$) shows that women with unions would prefer shorter intervals. The wealth index is poorly correlated ($r = -0.010, p = 0.330$), indicating minimal direct impact. Results indicate that education contributes little to widening birth spacing, with age and union status being better predictors.

Table 2

Pair-Wise Correlation Matrix: Preferred waiting time for next birth, Education Attainment in Single Years and Control Variables

Variable	Variable		v604	v133	v012	v190	v312a	v025a	v714
v604	preferred waiting time for birth of a/another child (grouped)		1						
v133	education in single years	a	0,147	1					
		b	<.001						
v012	respondent's current age	a	-0,562	-0,125	1				
		b	<.001	<.001					
v190	wealth index combined	a	-0,010	0,542	0,036	1			
		b	0,330	<.001	<.001				
v766b	number of sex partners, including spouse, in the last 12 months	a	-0,059	0,008	0,030	0,029	1		
		b	<.001	0,320	<.001	<.001			
v312a	status of contraceptive use	a	-0,053	0,180	0,207	0,129	0,061	1	
		b	<.001	<.001	<.001	<.001	<.001		
v025a	place of residence	a	0,081	-0,231	0,018	-0,625	-0,021	-0,014	1
		b	<.001	<.001	0,001	<.001	0,007	0,015	
v714	currently/ formerly/ never in union	a	-0,231	0,202	0,391	0,211	0,051	0,271	-0,080
		b	<.001	<.001	<.001	<.001	<.001	<.001	<.001
v502a	respondent currently working	a	-0,445	-0,180	0,569	-0,039	0,035	0,227	-0,003
		b	<.001	<.001	<.001	<.001	<.001	<.001	0,619

Note. Pair-wise correlation: ≤ 0.35 = Weak correlation; $0.36-0.67$ = Moderate correlation; $0.68-0.89$ =Strong correlation; ≥ 0.90 = Very strong correlation; Adapted from "Interpretation of Correlation Coefficient, " by R. Taylor, 1990, Journal of Diagnostic Medical Sonography, 6(1), p. 37

^a Pearson correlation coefficient; ^b p-values ($\alpha=.05$)

4.3 Multivariate Statistics

Table 3 presents generalized ordered logistic regression coefficients assessing the effect of educational level (v133) on ideal waiting time for the second birth (v604) among 8,889 15-49-year-old women in Kenya, addressing Objective Three: determining the role of education in spacing births. In Model 1 (unadjusted), extra years of education significantly increase the probability of desiring longer interbirth intervals in every period category (<12 months to 5 years), with odds ratios (ORs) ranging from 1.081 (<12 months, $p<.001$, 95% CI: 1.069-1.093) to 1.011 (5 years, $p=0.09$, 95% CI: 0.998-1.023), although attenuating for the longest interbirth intervals. In Model 2 (adjusted for education, number of partners, wealth, contraceptive use, residence, employment, and union), the educational impact is still



substantial but decreased, with ORs of 1.034 (<12 months, $p < .001$, 95% CI: 1.016-1.053) to 0.968 (5 years, $p = 0.001$, 95% CI: 0.948-0.987), indicating that higher education weakly favors greater spacing of births, particularly for shorter duration, but its influence is dampened by other factors. The pseudo- R^2 statistics for the models (0.0078 for Model 1, 0.1571 for Model 2) establish that the inclusion of control variables considerably improves explanatory power and illustrates the complex interplay of socioeconomic determinants in the determination of birth spacing desires.

The control variables in Model 2 also demonstrate additional influences on preferred spacing. Younger age always reduces the likelihood of preferring longer intervals (ORs $\approx 0.848-0.901$, $p < .001$), suggesting older women have shorter spacing preferences, the probable cause being time limits on reproduction. Having fewer sexual partners during the past 12 months (v766b) also predict longer intervals (ORs $\approx 0.339-0.446$, $p < .001$), suggesting less sexual frequency or secure partnerships. Wealth effects are heterogeneous: compared to the poorest, richer quintiles favor greater spacing (e.g., OR=1.929 for 4 years, $p < .001$), although the richest have variable results (OR=0.687 for <12 months, $p = 0.022$). Use of contraceptives significantly increases the likelihood of greater spacing (OR=5.654 for <12 months, $p < .001$), with less robust effects on traditional methods. Rural residence (OR $\approx 1.151-1.372$, $p < .001$) and recent work (OR $\approx 0.647-0.876$, $p < .001$) support greater spacing, while union women currently or ever-married would prefer less spacing (ORs $\approx 0.302-0.727$, $p < .001$), possibly due to family or social pressures.

The model diagnostics also support the conclusions. The large Prob > F values (<.001) for both models indicate overall model fit, with Model 2's higher pseudo- R^2 (0.1571 vs. 0.0078) supporting control variables' significance. The constant terms across categories (e.g., 395.60 for <12 months, $p < .001$) show a preference for smaller intervals at baseline in the absence of predictors, particularly in unadjusted models. The confidence intervals for education are fairly narrow, maintaining the accuracy. The conclusions from these results are that education encourages more spacing of births, but its effect is strongest for spacing in the first three years and is highly mediated by age, contraceptive use, and union status. This would imply that educational interventions, alongside exposure to modern contraception and economic empowerment, could most effectively support healthier birth spacing behaviors in Kenya to enhance maternal and child health outcomes.

Table 3
Generalized Ordered Logistic Regression Odds for the Effect of Education Attainment on Preferred Waiting Time for Birth of Another Child (Grouped)

Variable	Variable label	Model 1 (v604)				Model 2 (v604)					
		OR	Std.Err.	<i>p</i>	95% CI	OR	Std.Err.	<i>p</i>	95% CI		
<12_months											
v133	education in single years	1,08	0,01	<.001	1,07	1,09	1,03	0,01	<.001	1,02	1,05
v012	respondent's current age						0,90	0,00	<.001	0,89	0,91
v766b	number of sex partners, including spouse, in last 12 months						0,34	0,03	<.001	0,28	0,41
v190	wealth index combined										
	1=poorest (ref.)										
	2=poorer						1,32	0,17	0,031	1,03	1,70
	3=middle						0,95	0,12	0,712	0,74	1,22
	4=richer						1,03	0,14	0,848	0,79	1,34
	5=richest						0,69	0,11	0,022	0,50	0,95
v312a	status of contraceptive use										
	1=no contraception (ref.)										
	2=traditional contraception						1,76	0,25	<.001	1,33	2,34
	3=modern contraception						5,65	0,54	<.001	4,68	6,83
v025a	place of residence										
	0=urban (ref.)										
	1=rural						1,16	0,11	0,121	0,96	1,40



v714	respondent currently working										
	0=not working(ref.)										
	1=currently working						0,68	0,06	<.001	0,58	0,80
v502a	currently/ formerly/ never in union										
	1=never in union (ref.)										
	2=currently in union with a man						0,30	0,04	<.001	0,24	0,38
	3=formerly in union with a man						0,42	0,07	<.001	0,30	0,59
	Constant	3,36	0,18	<.001	3,01	3,74	395,60	83,60	<.001	261,44	598,60
1_year											
v133	education in single years	1,06	0,01	<.001	1,05	1,07	1,04	0,01	<.001	1,03	1,06
v012	respondent's current age						0,89	0,00	<.001	0,88	0,90
v766b	number of sex partners, including spouse, in last 12 months						0,42	0,03	<.001	0,37	0,49
v190	wealth index combined										
	1=poorest (ref.)										
	2=poorer						1,23	0,12	0,042	1,01	1,49
	3=middle						0,98	0,10	0,825	0,80	1,19
	4=richer						0,91	0,10	0,404	0,74	1,13
	5=richest						0,76	0,10	0,04	0,59	0,98
v312a	status of contraceptive use										
	1=no contraception (ref.)										
	2=traditional contraception						1,27	0,14	0,03	1,02	1,58
	3=modern contraception						2,68	0,18	<.001	2,36	3,05
v025a	place of residence										
	0=urban (ref.)										
	1=rural						1,15	0,09	0,068	0,99	1,34
v714	respondent currently working										
	0=not working(ref.)										
	1=currently working						0,65	0,04	<.001	0,57	0,73
v502a	currently/ formerly/ never in union										
	1=never in union (ref.)										
	2=currently in union with a man						0,49	0,04	<.001	0,42	0,57
	3=formerly in union with a man						0,67	0,09	0,002	0,53	0,87
	Constant	1,61	0,08	<.001	1,47	1,77	113,20	18,07	<.001	82,78	154,79



2_year											
v133	education in single years	1,06	0,00	<.001	1,05	1,07	1,04	0,01	<.001	1,02	1,05
v012	respondent's current age						0,88	0,00	<.001	0,87	0,89
v766b	number of sex partners, including spouse, in last 12 months						0,44	0,03	<.001	0,39	0,50
v190	wealth index combined										
	1=poorest (ref.)										
	2=poorer						1,55	0,14	<.001	1,30	1,84
	3=middle						1,30	0,12	0,004	1,09	1,55
	4=richer						1,27	0,13	0,015	1,05	1,54
	5=richest						1,10	0,13	0,411	0,88	1,38
v312a	status of contraceptive use										
	1=no contraception (ref.)										
	2=traditional contraception						0,90	0,10	0,345	0,73	1,12
	3=modern contraception						1,92	0,11	<.001	1,71	2,15
v025a	place of residence										
	0=urban (ref.)										
	1=rural						1,30	0,09	<.001	1,13	1,49
v714	respondent currently working										
	0=not working(ref.)										
	1=currently working						0,72	0,04	<.001	0,64	0,80
v502a	currently/ formerly/ never in union										
	1=never in union (ref.)										
	2=currently in union with a man						0,61	0,04	<.001	0,53	0,70
	3=formerly in union with a man	0,87	0,04	<.001	0,79	0,95	0,73	0,09	0,007	0,58	0,92
	Constant										
3_year											
v133	education in single years	1,05	0,01	<.001	1,04	1,06	1,02	0,01	0,016	1,00	1,03
v012	respondent's current age						0,88	0,00	<.001	0,87	0,89
v766b	number of sex partners, including spouse, in last 12 months						0,44	0,03	<.001	0,39	0,50
v190	wealth index combined										
	1=poorest (ref.)										
	2=poorer						1,62	0,14	<.001	1,37	1,92



	3=middle						1,56	0,14	<.001	1,31	1,85
	4=richer						1,60	0,15	<.001	1,32	1,93
	5=richest						1,38	0,16	0,005	1,10	1,72
v312a	status of contraceptive use										
	1=no contraception (ref.)										
	2=traditional contraception						0,83	0,10	0,107	0,66	1,04
	3=modern contraception						1,82	0,11	<.001	1,61	2,04
v025a	place of residence										
	0=urban (ref.)										
	1=rural						1,36	0,09	<.001	1,19	1,56
v714	respondent currently working										
	0=not working(ref.)										
	1=currently working						0,73	0,04	<.001	0,66	0,82
v502a	currently/ formerly/ never in union										
	1=never in union (ref.)										
	2=currently in union with a man						0,51	0,04	<.001	0,44	0,58
	3=formerly in union with a man						0,72	0,09	0,01	0,57	0,91
	Constant	0,57	0,03	<.001	0,51	0,62	23,35	3,35	<.001	17,62	30,94
4_year											
v133	education in single years	1,04	0,01	<.001	1,03	1,05	1,01	0,01	0,219	0,99	1,03
v012	respondent's current age						0,88	0,00	<.001	0,88	0,89
v766b	number of sex partners, including spouse, in last 12 months						0,45	0,03	<.001	0,40	0,50
v190	wealth index combined										
	1=poorest (ref.)										
	2=poorer						1,62	0,14	<.001	1,37	1,92
	3=middle						1,56	0,14	<.001	1,31	1,85
	4=richer						1,69	0,16	<.001	1,40	2,05
	5=richest						1,44	0,17	0,002	1,15	1,80
v312a	status of contraceptive use										
	1=no contraception (ref.)										
	2=traditional contraception						0,76	0,09	0,024	0,59	0,96
	3=modern contraception						1,79	0,11	<.001	1,58	2,02
v025a	place of residence										
	0=urban (ref.)										
	1=rural						1,35	0,09	<.001	1,17	1,55



v714	respondent currently working										
	0=not working(ref.)										
	1=currently working						0,77	0,04	<.001	0,68	0,86
v502a	currently/ formerly/ never in union										
	1=never in union (ref.)										
	2=currently in union with a man						0,56	0,04	<.001	0,49	0,65
	3=formerly in union with a man						0,83	0,10	0,139	0,65	1,06
	Constant	0,48	0,03	<.001	0,44	0,53	15,94	2,33	<.001	11,97	21,22
5_year											
v133	education in single years	1,01	0,01	0,09	1,00	1,02	0,97	0,01	0,001	0,95	0,99
v012	respondent's current age						0,85	0,01	<.001	0,83	0,86
v766b	number of sex partners, including spouse, in the last 12 months						0,39	0,03	<.001	0,34	0,45
v190	wealth index combined										
	1=poorest (ref.)										
	2=poorer						1,76	0,17	<.001	1,46	2,13
	3=middle						1,78	0,18	<.001	1,47	2,16
	4=richer						1,93	0,21	<.001	1,55	2,40
	5=richest						2,10	0,27	<.001	1,63	2,71
v312a	status of contraceptive use										
	1=no contraception (ref.)										
	2=traditional contraception						0,72	0,13	0,068	0,51	1,02
	3=modern contraception						1,57	0,13	<.001	1,34	1,86
v025a	place of residence										
	0=urban (ref.)										
	1=rural						1,37	0,11	<.001	1,17	1,61
v714	respondent currently working										
	0=not working(ref.)										
	1=currently working						0,88	0,06	0,065	0,76	1,01
v502a	currently/ formerly/ never in union										
	1=never in union (ref.)										
	2=currently in union with a man						0,46	0,04	<.001	0,38	0,55
	3=formerly in union with a man						0,69	0,12	0,031	0,49	0,97
	Constant	0,29	0,02	<.001	0,26	0,33	19,36	3,62	<.001	13,41	27,94
Model Statistics											



n	8 889	8 889
Prob > F	<.001	<.001
Pseudo R ²	0,0078	0,1571

Note. OR=Odds Ratio; Std.Err.=Standard Error; ref=reference; CI=Convindence Interval

4.4 Postestimation Diagnostics Tests

Table 4 provides model fit statistics for the generalized ordered logistic regression models in Table 4.15 for testing the effects of educational levels on women's desired birth spacing (v604) in Kenya aged 15-49 for Objective Three. The improved model (Model 2) fits better than the saved model (Model 1) because it is smaller in log-likelihood (-14,088.406 compared to -16,584.301), AIC (28,344.811 compared to 33,192.603), and BIC (28,940.587 compared to 33,277.713), indicating enhanced fit. Higher R² values (McFadden: 0.157 vs. 0.008; Cox-Snell: 0.446 vs. 0.029) and a significant likelihood-ratio test (p<.001) confirm that controlling variables like age, wealth, and contraceptive usage enhance explanatory power. A BIC difference of 4,337.127 provides firm support for the controlled model, highlighting that education's influence on birth spacing is better explained in the context of a broader socioeconomic structure.

Table 4

Model Fit Statistics Using Fitstat Test

Table 4: Model Fit Statistics Using Fitstat Test			
	Current	Saved	Difference
Log-likelihood			
Model	-14088,406	-16584,301	2495,896
Intercept-only	-16714,863	-16714,863	<.001
Chi-square			
D(df=8805/8877/-72)	28176,811	33168,603	-4991,792
LR(df=78/6/72)	5252,916	261,124	4991,792
p-value	<.001	<.001	<.001
R2			
McFadden	0,157	0,008	0,149
McFadden(adjusted)	0,152	0,007	0,145
Cox-Snell/ML	0,446	0,029	0,417
Cragg-Uhler/Nagelkerke	0,457	0,03	0,427
Count	0,382	0,279	0,103
Count(adjusted)	0,183	0,047	0,137
IC			
AIC	28344,811	33192,603	-4847,792
AIC divided by N	3,189	3,734	-0,545
BIC(df=84/12/72)	28940,587	33277,713	-4337,127

Note. The likelihood-ratio test assumes the saved model is nested in the current model. The difference of 4337.127 in BIC provides very strong support for the current model. Lower AIC and BIC values, and higher R-squared values generally indicate better model fit.

4.5 Test of Hypothesis

In order to ascertain the statistical significance of the effect of education on desired spacing of births among Kenyan women aged 15-49, Table 5 tests the hypothesis that education (v133) has no effect on the desired waiting time for the next birth (v604) in six-time categories. The table presents a chi-square test statistic ($\chi^2(6) = 60.44$, Prob > $\chi^2 = 0.0000$) with high rejection of the null hypothesis that education's effect is zero for each category (<12 months, 1 year, 2 years, 3 years, 4 years, 5 years). This indicates that education has a significant effect on desired birth spacing, and the higher the level of education, the longer the desired intervals as captured by the generalized ordered logistic regression estimates in Table 5. The extremely low p-value (<0.0001) indicates the strong impact of education and suggests that education interventions can be a strong determinant for promoting more desirable birth spacing in Kenya, particularly when combined with other socioeconomic factors like availability of contraceptive interventions and economic status.



Table 5

Test of the Effect of v133 on v604

(1)	[<12_months]v133 = 0
(2)	[1_year]v133 = 0
(3)	[2_years]v133 = 0
(4)	[3_years]v133 = 0
(5)	[4_years]v133 = 0
(6)	[5_years]v133 = 0

chi2 (6) = 60.44, Prob > chi2 = 0.0000

4.6 Discussion

These findings align with recent studies on education and birth spacing in sub-Saharan Africa (SSA). Martin et al. (2019) found that higher education delays subsequent births, particularly in low-education settings, with odds ratios for longer intervals (2–3 years) similar to the range observed here for shorter thresholds. Their study emphasizes education’s stronger effect in resource-constrained contexts, consistent with the significant but modest effect of v133 in model 1.

Beguy and Muindi (2015) reported that in Kenyan urban slums, women with more education prefer longer birth intervals (e.g., 2–3 years), reducing short intervals (<2 years) that harm maternal and child health, mirroring the second model’s stronger effects for shorter thresholds. However, their focus on urban settings contrasts with our finding that rural residence increases odds of longer spacing, suggesting contextual differences within Kenya. Wekesah et al. (2020) showed that in Kenya, education enhances women’s autonomy in fertility decisions, leading to longer intervals (2–4 years), aligning with the moderate spacing preference (2–3 years) in model 2, though their qualitative approach highlights cultural barriers not captured by our low pseudo-R².

Biney and Nyarko (2019) found that in high-fertility SSA countries, including Kenya, educated women exhibit greater control over birth timing, with odds of longer intervals increasing with education, consistent with our results but stronger due to their focus on empowerment. Fotso et al. (2013) analyzed DHS data across SSA and found that education significantly extends birth intervals, particularly for second and third births, with effects diminishing for higher-order births, similar to the decreasing ORs for longer thresholds in our study.

Bongaarts and Casterline (2017) observed that in SSA, education helps reduce fertility by lengthening intervals, but ongoing stalls in fertility transition, partly caused by unequal access to education, explain the modest pseudo-R² in our models, since unmeasured factors like healthcare access probably affect preferences.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study concludes that educational attainment significantly shapes fertility preferences among women in Kenya. Higher education levels are associated with a tendency toward moderate birth spacing (2–3 years). These effects are mediated by factors such as age, wealth, contraceptive use, residence, and marital status, but education remains a key determinant across all outcomes. The findings suggest that education empowers women with knowledge, autonomy, and access to reproductive health resources, enabling informed fertility decisions.

5.2 Recommendations

Against the backdrop of Kenya’s evolving demographic landscape, data from the 2022 KDHS suggest a statistically significant positive correlation between women’s education and birth spacing, with higher education levels linked to larger birth intervals and thus more deliberate family planning and reduced fertility. This shift towards more widespread birth spacing opens the door to a phenomenon called demographic dividend, converting the population pyramid into one characterized by an increasing working-age population, fueling economic productivity and innovation. By decreasing the proportion of dependents (both youth and old), the nation constructs a firmer and wealthier country, where resources are channeled efficiently towards human capital formation as opposed to subsistence. Thus, the investment in women’s education becomes the most important strategy, not only to expand such spacing benefits but also to unlock long-term prosperity and equitable growth for future generations.

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Barriers to effective integration of ICT in secondary education in Tanzania: Perspectives of students, teachers, administrators, and stakeholders

Wiljames Daniel Mmari

jamesdaniel0755@gmail.com

<https://orcid.org/0009-0003-4813-4868>

Department of Information Systems, Faculty of Informatics, Institute of Accountancy Arusha (IAA), Tanzania

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ABSTRACT

This study explored the obstacles to the successful implementation of Information and Communication Technology (ICT) in Tanzanian secondary schools, with an emphasis on infrastructural, pedagogical, and institutional barriers. The research examined the impact of various obstacles on equitable and sustainable ICT adoption among students, teachers, school administration, and education stakeholders, through the lens of the second-level digital divide theory, the Technological Pedagogical Content Knowledge (TPACK) model, and the capability approach, as articulated by Van Dijk, Sen, and educational stakeholders. The study used a sequential explanatory mixed-methods research design, involving a quantitative survey and qualitative interviews, to provide a holistic analysis of the challenges. The population was 216,468 people in the Tanzanian secondary schools, and the sample consisted of 300 people: 255 students, 30 teachers, 15 administrators, and stakeholders. The study employed purposive and stratified sampling techniques to pick the participants who represent the main subgroups. Descriptive statistics was used to analyze quantitative data, whereas the thematic analysis, based on the methodology of Braun and Clarke, was applied to analyze qualitative data. Results indicated that major infrastructure gaps, like poor internet and electricity connectivity, teacher training, ICT confidence, and institutional support, were significant impediments to educational inequities. It is recommended that the country should invest heavily in infrastructure, continuously develop its teacher capacity, ensure that policy is well enforced, provide technical support, and offer incentives to encourage long-term ICT adoption. These measures are vital towards improving digital equity and improving the quality of secondary education in Tanzania.

Keywords: Digital Divide, Educational Equity, ICT Integration, Tanzania Secondary Education, Teacher Training

I. INTRODUCTION

Information and communication technology (ICT) in education refers to the wide range of digital tools, networks, and resources such as computers, the internet, software, multimedia, and communication platforms that make it easier to create, store, share, process, and manage information in order to improve administrative, instructional, and learning processes. ICT represents a wide scope of digital tools, networks, and resources that are used to create, store, share, and manage information (United Nations Environmental Scientific and Cultural Organization [UNESCO], 2018). Integration of ICT in the educational environment is the implementation of these technologies, including computers, the internet, software packages, and multimedia tools, in pedagogical activities to improve teaching and learning (Voogt et al., 2015). The successful implementation of ICT in education enables the creation of an interactive learning space, enhances student engagement, and acquires necessary digital literacy skills.

South Korea is one of the countries globally that has shown how an effective integration of ICT can revolutionize the educational system and promote innovation and equity in accessing learning opportunities. The examples of South Korea's strategic investment in the digital infrastructure, educator education, and curriculum change demonstrate the potential of ICT to reduce the gap between achievements and prepare students to work in a technology-oriented economy (Lee & Kim, 2021).

In Africa, some nations, such as Kenya, have gone ahead with massive ICT integration projects with an aim of enhancing the quality and accessibility of education. The example of the Digital Literacy Programme in Kenya has been dedicated to the provision of digital tools in primary schools and training of the teachers to utilize ICT in an effective way (Ng'ang'a et al., 2018). However, issues like the poor infrastructure, low internet connectivity, and lack of technical support still persistently diminish the complete potential of ICT in most schools (Mutisya, 2020).

Tanzania also has the same problem but demonstrates good policy intentions since its National ICT Policy on Basic Education and Digital Tanzania Vision 2025 highlight the role of ICT in transforming education (United

Republic of Tanzania [URT], 2016; Mtebe and Raisamo, 2014). In spite of these attempts, ICT penetration in Tanzanian secondary schools has still not been uniform, especially between the urban and rural regions and between government and private schools. The obstacles like insufficient electricity, incompetence of teachers in ICT, and deficient institutional support hamper the successful integration and restrain the successful educational outcomes (Mwila, 2018; Mtebe & Raisamo, 2014).

This study discusses the impediments hindering successful ICT integration in the Tanzanian secondary schools through the lens of the students, teachers, administrators, and stakeholders. The research problem identifies digital inequities that worsen the presence of existing educational inequities and hinder the substantial use of ICT in the classroom. The importance of unraveling these obstacles is to make an informed way of coming up with specific interventions to facilitate the equitable and sustainable use of ICT (Mwila, 2018).

The independent variables being studied are infrastructural factors (e.g., electricity, internet access, access to digital devices), pedagogical factors (e.g., teacher training, attitude, ICT self-efficacy), and institutional factors (e.g., policy implementation, administrative support, funds). The dependent variable is the level and efficiency of integration of ICT in teaching and learning processes, which can be determined in terms of frequency, quality, and pedagogical consistency of ICT application in schools.

In spite of the fact that some of these dimensions have been taken care of in previous studies, many of them concentrate on either individual factors or contexts of primary education, with minimal integration of different stakeholders' views or mixed-methodologies (Ng'ang'a et al., 2018; Mtebe & Raisamo, 2014). This study addresses the most critical gaps by taking an extensive approach to incorporate both qualitative and quantitative evidence to examine the multi-level issues and come up with evidence that can be acted upon to enhance ICT policy and practice in Tanzanian secondary schools.

1.1 Research Objective

- i. To measure infrastructural, pedagogical, and institutional variables affecting ICT integration in Tanzanian secondary schools
- ii. To investigate the experience and attitude of students, teachers, school administrators, and key education stakeholders toward ICT integration in teaching and learning
- iii. To formulate evidence-based proposals on how to increase equitable and sustainable ICT integration in Tanzanian secondary schools

II. LITERATURE REVIEW

2.1 Theoretical Review on ICT Integration Barriers

2.1.1 Digital Inequality Theory (Van Dijk, 2005, 2017)

The Digital Inequality Theory illustrated by Van Dijk, views the concept of digital access as a stratified phenomenon that requires physical access but also motivational access, skills access, and usage access (Van Dijk, 2005; Van Dijk, 2017). This model describes the influence of socio-economic inequalities on the opportunities of individuals to take advantage of ICT in the learning setting. Van Dijk (2017) points out that the unbalanced resource allocation and the unequal digital capabilities are also some of the contributors to the persistent gaps, which are particularly applicable in the realm of situations such as the Tanzanian secondary school, where the infrastructural shortages, insufficiency of ICT skills, and motivational views are more than mere obstacles to fairness in ICT interactions.

2.1.2 Technological Pedagogical Content Knowledge (TPACK) Model

The TPACK model emphasizes the overlap of technological knowledge, pedagogy, and subject content knowledge as critical to the inclusion of ICT into instructional methods by educators. It is essential to its implementation in the Tanzanian secondary education because of the flaws in the technological competencies and the lack of adaptation to ICT tools in pedagogy among teachers, which limit the innovative approaches to the practice (Mtebe & Raisamo, 2014). In turn, this framework informs the comprehension of pedagogical obstacles and teacher skills that determine the results of ICT integration.

2.1.3 Capability Approach (Sen, 1999)

The Capability Approach by Amartya Sen changes the depiction towards the resource provision instead of the actual freedom and ability of people to use technology to generate personal and educational growth (Sen, 1999). It can be used in the context of education in Tanzania to shed some light on how institutional and structural factors limit the capacity of teachers and students to acquire critical ICT skills to have empowered learning experiences (Mwila, 2018). It forms the basis of the wider institutional and policy implications towards sustainable, equitable use of ICT.



2.2 Empirical Review

The research in ICT integration in secondary schools across the world indicates that infrastructural, pedagogical, and institutional challenges continue to undermine the possible advantage of digital technology. Successful ICT integration and innovative approaches towards pedagogy have been supported by well-developed infrastructure, continuous educator training, and facilitating policy conditions in developed countries such as South Korea (Kim & Lee, 2020). On the contrary, a lot of developing nations have systemic issues. Nigeria, as an example, has ICT adoption impeded by infrastructural shortcomings in areas like unreliable electricity and the lack of internet accessibility, especially in rural schools (Makinde et al., 2024). The given obstacles impede fair accessibility and efficient pedagogical application.

In Sub-Saharan Africa, such countries as Kenya and Uganda, the study shows that infrastructural insufficiencies, gaps in teacher capacity, and institutional support are still the leading obstacles (Bariu, 2020; Mutisya, 2020). The lack of ICT literacy among teachers and students, poor technical infrastructure, and inconsistent policy are identified as the recurring challenges to the scaling of ICT initiatives (Joseph, 2021).

In Tanzania, there is empirical research that highlights the same problems. Joseph (2021) reported that poor ICT adoption in secondary schools is mostly caused by unstable electricity supply and poor internet connection and rural and public schools have the least privilege. Also, the readiness of teachers becomes an important issue; Mboya (2019) found that teachers do not effectively use available technologies due to insufficient ICT pedagogy training. These barriers are further augmented by institutional problems, such as poor implementation of policies and prioritization of ICT funds (Mtebe & Raisamo, 2014).

Moreover, the adoption levels are affected by attitudinal elements between the teachers and the students. Mtebe and Raisamo (2014) highlight challenges including instructor resistance and lack of awareness about technology benefits. These mental concepts of refusal are indicators of the wider ideas of acceptance and encouragement that are depicted in the international literature.

These barriers have regional relevance, which is supported by the research in the adjacent East African countries. Bariu (2020) noted that ICT adoption in the secondary schools in Kenya is hampered by infrastructural gaps, lack of capacity building, and inconsistency of the policies. Infrastructural and systemic challenges are widespread; nevertheless, the degree and peculiarities differ greatly, and local contextual studies are needed.

Regardless of the growing body of regional and international literature, there is a large gap in respect of in-depth, multi-faceted studies that would represent the complete range of infrastructural, pedagogical, and institutional obstacles from the perspective of various stakeholders in Tanzanian secondary schools. Most of the available literature relates closely to individual obstacles or cities, but not the rural-urban gap and interaction between various variables. In this paper, I intend to fill this gap by offering a combined analysis of the stakeholder groups with references to the theoretical frameworks identified above.

III. METHODOLOGY

3.1 Research Design and Approach

The study utilized a sequential explanatory mixed methods design and employed a mixed-method approach that combines the quantitative and qualitative methods of data collection and analysis. The method is also highly appropriate to thoroughly study the complex impediments to ICT integration within Tanzanian secondary schools that will enable quantitative evaluation of both infrastructural and pedagogical predictors and qualitative analysis of the experiences and perceptions of stakeholders. The successive explanatory scheme eased the corroboration and enrichment of results of two types of data in order to respond to the study objectives comprehensively.

3.2 Target Population

The target population of the study consisted of secondary school students, teachers, school administrators, and relevant education stakeholders from regional and district levels in Tanzania. According to the Ministry of Education report of 2025, the total population included approximately 211,805 students, 4,263 teachers, and 400 school administrators and other stakeholders, totaling 216,468 individuals.

3.3 Sampling Procedures and Sample Size

The sampling was done to pick the participants who represent the main subgroups identified above through purposive and stratified sampling methods. The study involved 300 cases: 255 students, 30 teachers, and 15 administrators and education stakeholders (Mboya, 2019). Stratification was used to provide equal representation on both school ownership (government/ private) and location (urban/ rural) to increase demographic and contextual diversity.



3.4 Reliability and Validity

Quantitative instruments did not require a pre-test to establish reliability, and in this case, the barrier and attitude scales had acceptable internal consistency (Cronbach's alpha exceeding 0.7). Triangulation of quantitative survey outcomes and data, qualitative interview data, and document analysis enhanced construct validity as the triangulated data offered complete and corroborated information (Creswell & Creswell, 2023). The research adhered to ethical standards by obtaining institutional approvals, seeking informed consent, and maintaining the confidentiality of participants.

3.5 Data Analysis Method

The quantitative data were processed in SPSS, where descriptive statistics were used to summarize the patterns of ICT use and inferential statistics (ANOVA, t-tests) were used to investigate the differences in groups. Transcription of qualitative data was followed by thematic analysis, and the six-stage process was used to discover emergent themes related to infrastructural, pedagogical, and institutional barriers. Findings integration used a side-by-side comparison method to eliminate convergence and divergence, giving a subtle meaning in line with the goals of the research.

3.6 Ethical Consideration

The UTAR Scientific and Ethical Review Committee (Approval Ref: U/SERC/56(A)-494/2024) granted the ethical approval. All subjects signed their informed consent in writing, and students younger than 18 had their informed consent signature taken by their parents or guardians. A permit was obtained through COSTECH (Permit No.: CST00001107-2025-2025-00304) as a nationwide permit of Dar es Salaam, Arusha, and Mwanza. Before data was collected, a permission letter was submitted to the school management and regional authorities. The entire process of handling the personal data was anonymized and handled in accordance with the UTAR Personal Data Protection Notice (PDPA), and confidentiality, safe storage, and limited access were ensured at all times during the study. The participants were also told that they had the right to withdraw at any time without any repercussions attached.

IV. FINDINGS & DISCUSSION

4.1 Barriers to Effective ICT Integration

The study provides the findings on the barriers to ICT integration in Tanzanian secondary education that are consistent with the objectives of the research and segmented by stakeholder groups such as students, teachers, administrators, and education stakeholders. The quantitative findings are provided in terms of descriptive statistics and followed by qualitative insights that contextualize and explain the quantitative data.

4.1.1 Student-Reported Barriers

Table 1 summarizes the reported barriers among the students. Internet connectivity was the greatest obstacle, with over half (50.6%) of students saying that it has a negative effect on learning. Other major obstacles were a lack of teacher support (47.1%) and an unstable power supply (43.9%).

Table 1

Student-Reported Barriers

Barrier	Mean	Std. Deviation	Agree & Strongly Agree (%)	Rank
Internet connectivity	3.29	1.15	50.6	1
Teacher encouragement	3.24	1.16	47.1	2
Electricity limitations	3.21	1.17	43.9	3
Inadequate infrastructure	3.18	1.17	41.9	4
Insufficient training	3.17	1.20	42.3	5

These results emphasize the importance of infrastructural and pedagogical barriers according to the students, which aligns with the Second-Level Digital Divide Theory by Van Dijk, which focuses on unequal access and skills that limit digital inclusion (Van Dijk, 2017).

4.1.2 Teacher-Reported Barriers

The perception of teachers is emphasized in Table 2. The first inhibitor was insufficient ICT training, with 53.3% of them concurring on the importance of this training. It has also highlighted the availability of technical support (56.7%) and self-reported confidence in incorporating ICT (33.3%)



Table 2
Teachers Reported Barriers

Barrier	Mean	Std. Deviation	Agree/Yes (%)	Rank
Adequate ICT training	3.43	1.04	53.3	1
Technical support availability	0.57	0.50	56.7 (Yes)	2
Teacher confidence in integrating ICT	3.03	1.13	33.3	3

Focus on capacity-building is consistent with the theory of TPACK, which highlights the significance of an integrated nature between technological, pedagogical, and content knowledge in an effective integration of ICT (Mboya, 2019).

4.1.3 Teachers’ Challenges

Table 3 shows thematic challenges of teacher interviews. Absence of ICT training and skills, and the insufficient technical support were stated by 20 percent of the respondents. Also, inadequate infrastructure (13.3%), and opposition to ICT (16.7%) became astonishing subthemes.

Table 3
Challenges Faced by Teachers

Sub-theme	Frequency	%	Representative Quote
Lack of ICT training and skills	6	20	"We lack enough practical exposure to ICT tools in class."
No or insufficient technical support	6	20	"When computers break, no one helps fix them quickly."
Poor infrastructure	4	13.3	"Power cuts and slow internet disrupt ICT-based lessons."
Resistance to ICT use	5	16.7	"Some teachers find ICT difficult or unnecessary."
Limited access to ICT equipment	2	6.7	"Few computers mean lessons can’t run smoothly."
Other challenges	7	23.3	"Time constraints and lack of policy enforcement exist."

These informal understandings give some background in justifying the quantitative obstacles, underscoring systemic, structural, and inspirational problems in line with theories that focus on institutional and attitudinal variables (Sen, 1999). Teachers suggested the increased practical ICT training (20%), motivational awareness (26.7%), and specific technical support (16.7%) (Table 4), which supports the results of the earlier studies in East Africa that recommended continuous capacity and institutional support (Rumanyika & Mashenene, 2015).

Table 4
Strategies Suggested by Teachers

Sub-theme	Frequency	%	Representative Quote
More frequent/practical ICT training	6	20	"We need hands-on ICT workshops, not just theory."
Motivational/awareness programs	8	26.7	"Incentives and awareness could motivate reluctant staff."
Dedicated ICT technical support	5	16.7	"Having ICT technicians available would reduce downtime."
Infrastructure improvements	4	13.3	"Better electricity, internet, and computers are needed."
Updated ICT tools	3	10	"New computers and software would ease teaching."
Other strategies	4	13.3	"Clear ICT policies and management encouragement required."

4.1.4 Administrative and Institutional Barriers

According to administrators and other stakeholders, the major problems that negatively affected sustainable ICT integration were financial limitations, a lack of uniform policy, and a lack of technical support. These complex, systemic issues continue to support the value of policy-practice gaps to promote equity in education by enhancing access to ICT (Joseph, 2021).

4.2 Discussion

Findings of the study support the multi-dimensionality of the barriers to ICT integration in Tanzanian secondary schools, which compares well with the theory of Second-Level Digital Divide as well as the TPACK framework. Infrastructural concerns, especially the lack of reliable internet access and unreliable electricity, are some of the basic constraints to the adoption of ICT, especially disadvantaging the rural and marginalized schools. Such infrastructural gaps continue to support educational inequalities, as studies of Tanzanian and broader Sub-Saharan setting contexts have found comparable systemic issues to prevent access to digital education (Ngodu, 2024; Joseph, 2021).

Furthermore, the widespread teacher inability to instill confidence and poor ICT training highlight a very important pedagogical disparity. Recent study on TPACK highlights the integration of technological, pedagogical, and content knowledge as key to the successful use of ICT in teaching (Kafyulilo et al., 2016). The study confirms that ongoing, focused professional development is essential to enable teachers to overcome restricted access and turn it into valuable learning opportunities. This is in line with recent studies indicating that unless teachers receive long-term capacity-building and motivation, they find it difficult to integrate ICT into pedagogy and realize education's potential benefits (Mutisya, 2020; Mtebe & Raisamo, 2014)

These problems are aggravated by institutional factors. These factors are the obvious lack of financial resources, inadequate technical support, and even sporadic policy implementation, which impedes the creation of sustainable ICT ecosystems. The mentioned problems indicate a lack of alignment between the national strategies of digital education and ground-level realities, which is often described as the policy-practice gap that is widespread in the Tanzanian secondary education (URT, 2016; Joseph, 2021). These institutional deficits can be addressed by means of committed financing, long-term technical upkeep, and vigorous policy implementation in order to have a successful ICT integration.

Motivational dynamics are also extended in the discussion. The attitudes and motivation of teachers came out as important predictors of ICT adoption, as they supported the theories that emphasize the influential nature of affective and attitudinal variables in technology integration. Through incentivization of teachers and emphasis on awareness and motivational activities, the resistance could be overcome, and positive engagement with ICT could be encouraged (Rumanyika & Mashenene, 2015)

Concerning the policy, the findings require a detailed and systematic reaction. The areas that need to be invested in should be aimed at improving infrastructure, long-term professional training, technical support, and consistent and implemented policy frameworks to establish fair access and implementation of ICT in Tanzanian secondary schools. This kind of an integrated strategy is necessary to open the potential of digital technologies as driving forces of socio-economic growth and education equity in Tanzania (UNESCO, 2018).

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study has established several interconnected obstacles to successful ICT implementation in secondary schools in Tanzania. The most widespread limitations are infrastructural ones, especially unstable internet access and power supply, which disadvantage marginalized and rural institutions disproportionately and contribute to education inequities. The absence of a long-term teacher training program and the insufficient confidence in the use of ICT have a pedagogical effect, as they do not translate the existing technology to meaningful learning opportunities, which resonates with the significance of the integrated knowledge domains of the TPACK framework.

Barriers such as institutional and administrative factors, such as a lack of sufficient financing, a lack of fragmented policy implementation, and a lack of technical support, also hamper the establishment of sustainable ICT environments. Teacher motivation and attitudes were also identified as important factors in successful adoption, as the requirement to cover affective dimensions, as well as technical skills.

5.2 Recommendations

Following these findings and on the same basis as empirical findings by the same or similar situations, the following strategic recommendations are made:

Infrastructure Development: Focus on proper investment in access to electricity and high-speed internet connectivity, particularly in the underprivileged and rural schools, so as to create the background conditions for the use of ICT. *Teacher Training and Capacity Building:* Have ongoing, hands-on, as well as context-based training of teachers in in-service and pre-service, with emphasis on both technical as well as pedagogical integration as a part of the TPACK framework. *Policy Coherence and Enforcement:* Improve coordination and enforcement of national ICT policies by transparent monitoring systems, to ensure that policymaking is in line with school implementation.

Technical Support Systems: Have dedicated ICT support units based on schools or districts so that technical support can be done in time and troubleshooting can be done, the time wastage is reduced, and teachers are made confident. *Motivational and Awareness Programs:* Come up with rewards and awareness campaigns that would make a positive impact on the attitude of the teachers towards ICT and bring them closer to ICT, and decrease the opposition. *Sustainable Funding Mechanisms:* Ensuring the sustainability of ICT over the long term: Obtaining predictable funding sources, both governmental and donor, to ensure ICT sustainability. Such a multi-faceted approach will be able to resolve the intricate issues of the digital divide in Tanzanian secondary education, leading to equal accessibility, higher teacher performance, and, consequently, better outcomes of education with the help of efficient digital implementation.

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Remote and hybrid work models in post-pandemic organizations: A systematic review

Rose Agneta Khamunde¹
Magdalene Mungai²
Jackson Ndolo³

¹rose.agneta@yahoo.com
²magdalenengendo@gmail.com
³jndolo@kcau.ac.ke

^{1,2,3}KCA University, Kenya

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ABSTRACT

The COVID-19 pandemic has changed the way people work, making remote and hybrid work arrangements in organizations around the world rise. This systematic review examines 17 studies (journals/articles) that were published between the years 2018 and 2025 to understand how such work arrangements have influenced the outcomes and what factors justify their continued use in a post-pandemic environment. We conducted these studies through literature reviews based on scholarly databases, following the guidelines provided by Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). One of the greatest findings in our research is that since 2020, remote and hybrid work arrangements have become increasingly common. This review seeks to address essential questions regarding the design of these work models, their implications for well-being, the challenges they raise, the modifications organizations should undertake, and the gaps requiring additional research. It provides a guide to developing sustainable hybrid work practices.

Keywords: Employee Engagement and Productivity, Hybrid Work, Human Resource Management Practices, Post-Pandemic, Remote Work, Organizational Culture

I. INTRODUCTION

The COVID-19 pandemic has changed the way organizations operate and how people work, leading to a rise in remote and hybrid work arrangements worldwide. What began as an emergency response to lockdowns in early 2020 quickly translated into a transformation of work arrangements. Organizations across different sectors in the world had to abandon traditional office-based models and adopt distributed, technology-enabled systems. This shift has redefined the meaning of work, organizational culture, and employee engagement in the post-pandemic era.

The growth of remote and hybrid work has grown sharply globally. Before the pandemic, less than 5% of jobs in Organisation for Economic Co-operation and Development [OECD] countries offered remote options. By 2023, this figure had risen to over 11% of job postings, with hybrid arrangements emerging as the dominant model. This expansion reflects more than a logistical adjustment; it signals a reconceptualization of work structures, where flexibility, resilience, and digital integration are central. Yet, the adoption of these models has produced uneven outcomes across industries, regions, and demographic groups, raising critical questions about sustainability, equity, and long-term organizational adaptation.

Several key variables shape this discussion. At the employee level, factors such as engagement, productivity, and well-being are some of the outcomes influenced by remote and hybrid arrangements. At the organizational level, leadership approaches, HRM practices, and workplace policies determine how successfully these models are adopted. Technology, in terms of infrastructure and digital inclusion, acts as an enabling factor, shaping both access and fairness. Organizational culture mediates how employees experience distributed work. Together, these variables interact in complex ways, creating both opportunities and challenges.

The existing literature reveals contrasting narratives. On one side, flexible work is praised for boosting productivity, attracting talent, and strengthening organizational resilience. Research points to efficiency gains due to reduced commuting, autonomy, and digital innovation. On the other hand, concerns persist regarding burnout, “Zoom fatigue,” social isolation, and inequities in access to resources. Hybrid models, while promising, risk reinforcing exclusion for minority employees or those in resource-constrained SMEs. Additionally, although technology enables collaboration, it also raises ethical concerns about surveillance, fairness, and privacy, particularly in AI-driven HRM

systems. These debates highlight the need for careful, balanced consideration

Although research on remote and hybrid work continues to grow, several gaps persist. Much of the existing evidence is concentrated in OECD countries, which limits its relevance for Global South contexts where infrastructural and cultural realities differ. Long-term sustainability, particularly the environmental impacts of large-scale remote work, has received limited attention. Questions of equity, including gender, race, and socioeconomic status, are underexplored in hybrid arrangements. Furthermore, the psychological and cultural implications of distributed work, such as risks of exclusion or shifts in work ethic, require deeper investigation. These gaps underscore the need for systematic synthesis to guide organizations toward inclusive and sustainable practices.

This systematic review draws on 17 studies published between 2018 and 2025 to understand how remote and hybrid work models have evolved, what outcomes they produce, and what adaptations organizations have undertaken. By assessing variables such as employee engagement, productivity, well-being, HRM strategies, leadership, and organizational culture, the review seeks to illuminate both the benefits and challenges of these models. Ultimately, the goal is to provide evidence-based insights into how organizations can design sustainable hybrid work practices that balance productivity with equity, resilience, and human-centered values.

1.1 Statement of the Problem

During and after COVID-19, remote and hybrid work models have rapidly increased, yet the available research is still incomplete, not evenly distributed, and focused heavily on the Global North. Although research reports benefits such as improved flexibility, productivity, and organizational resilience, they also reveal chronic challenges, which include technological inequality, leadership gaps, digital fatigue, reduced well-being, and unequal visibility among different employee groups. These issues have not been well synthesized, limiting understanding of their long-term implications.

Current studies focus on the immediate crisis management as opposed to the long-term organizational adjustments post covid-19, resulting in significant knowledge gaps in relation to the development of hybrid work models and the necessary practices to sustain them. Data on the impact of hybrid work on fairness, organizational culture, and employee experience remains limited, especially in regions outside the OECD. As a result, organizations do not have conclusive recommendations for creating sustainable and inclusive hybrid work models. This review therefore compiles research published from 2018 to 2025 to offer a clearer insight into the results of hybrid and remote work and to highlight key priorities for future investigation.

1.2 Research Objectives

- i. To examine HRM practices and technologies that facilitate efficient implementation.
- ii. To explore new and emerging remote/hybrid models that have developed since the pandemic.
- iii. To explore the change in leadership styles, organizational culture, and workplace policies.
- iv. To evaluate the relevance of technology to facilitate successful hybrid working.

1.3 Research Questions

- i. What are the characteristics of the post-pandemic models of work?
- ii. What effects do these models have on employee well-being, engagement, and performance?
- iii. What are the effective human resource strategies to support them?
- iv. What obstacles and best practices have come up as a result of the implementation of the new models?

II. THEORETICAL REVIEW

This study is guided by four interrelated theories that explain the dynamics of hybrid and remote work, employee behavior, technology use, and organizational adaptation in the post-pandemic context.

Work Design Theory (Wang et al., 2021) provides a foundation for understanding how job structure influences employee outcomes in hybrid work environments. The theory emphasizes autonomy, task design, workload, and availability of support systems as key determinants of engagement, performance, and well-being. Within hybrid settings, employees experience different levels of autonomy and task clarity depending on whether they work remotely or on-site. These variations help explain differences in productivity, stress levels, and overall job satisfaction.

The Technology Acceptance Model (TAM) further explains how employees adopt and use digital tools required for hybrid work (Khatatbeh et al., 2023). According to TAM, acceptance depends on perceived usefulness, perceived ease of use, and social influence. This framework aligns with the study's findings that successful hybrid arrangements rely on employees' comfort with digital platforms such as Zoom, Teams, and remote HRM systems. Adequate training, user-friendly tools, and strong technological infrastructure therefore become essential for effective participation and performance.

The study also draws on improvisational theory, particularly the concept of improvisational scaling (Berglund et al., 2024), which describes how organizations respond to crises through rapid and flexible adaptation. During the pandemic, organizations adjusted their structures, processes, and cultures using rule-oriented, goal-oriented, and creative improvisation. This framework helps explain how hybrid models emerged, how HR policies were redesigned quickly, and how digitalization accelerated to support continuity.

Lastly, Social Exchange Theory and Organizational Support Theory help explain relational dynamics in hybrid work environments. These theories emphasize that trust, fairness, and perceived organizational support strongly influence engagement, commitment, and well-being (Blau, 1964; Eisenberger et al., 1986). In hybrid contexts where visibility is lower and interaction is more virtual, supportive leadership, inclusive decision-making, equitable policies, and autonomy become central in reducing feelings of isolation and promoting a sense of belonging.

III. METHODOLOGY

3.1 Study Design

The systematic review was carried out following the guidelines set out in the Preferred Reporting Items of Systematic Reviews and Meta-Analyses (PRISMA) 2020. The PRISMA framework helps in confirming that the review process is transparent and reliable. To further prevent the reproduction of similar work and strengthen our review, the study protocol was officially registered on PROSPERO under registration number PROSPERO 2025 CRD420251229059. Since the range of the included studies was quite broad, as some of them were quantitative surveys and longitudinal designs while others were qualitative interviews, mixed-methods work, and scoping reviews, a narrative synthesis was selected rather than a meta-analysis. It enabled the review to synthesize both qualitative themes and quantitative findings to provide a more comprehensive view of complex problems such as organizational adaptation and the new work models.

The selection was conducted based on clear and strong inclusion criteria: The systematic review involved either the primary or secondary collection of published data between the years 2018 and 2025. The review focused on remote and hybrid work arrangements implemented since March 2020, in the aftermath of the COVID-19 outbreak. The review addressed at least one of the objectives or research questions of the review. To minimize chances of bias, all abstracts were screened by two reviewers. Consensus was achieved in resolving any differences in judgment. The systematic review was conducted by two reviewers, where each reviewer was expected to perform a separate literature search independently on relevant studies.

3.2 Data Collection

The process of data collection was conducted in a series of steps to ascertain that the review was conducted to get relevant evidence. The search strings were of a Boolean type with the following combinations: remote work or hybrid work and post-COVID or post-pandemic, employee engagement, productivity, or HRM practices or organizational change, limited to publications in the years 2018 to 2025. Further customized searches involved more narrow themes such as "emergent hybrid models COVID-19" and technology infrastructure remote work.

Various databases and repositories, such as PubMed Central (PMC), Taylor and Francis Online, Sage Journals, SSRN, ResearchGate, and Eurofound, were searched. Open-access filters were preferred since there was no requirement for institutional access, because the irretrievability was as high as possible. Once the duplicates had been weeded out, with the help of EndNote the search yielded 50 distinct records. This was narrowed to 35 by title and abstract screening, ten of which were later eliminated as irrelevant. A thorough assessment of the remaining 25 articles resulted in 17 studies being accepted and 8 studies being excluded. Out of the 17 studies, five were rejected because they were not empirical, and amongst them, three addressed the topics before 2018, making them irrelevant in our study.

The PRISMA chart flow diagram below represents the process used to identify, screen, and select studies for inclusion in this systematic review. The search cut across multiple databases and retrieved 112 records. After removing 62 duplicates, 50 unique records remained.

These records underwent title and abstract screening, resulting in 15 records being excluded since they did not meet the predefined criteria. The remaining 35 articles were assessed for eligibility. Of these, 18 articles were excluded. Ultimately, 17 studies were deemed eligible and were included in the qualitative synthesis.

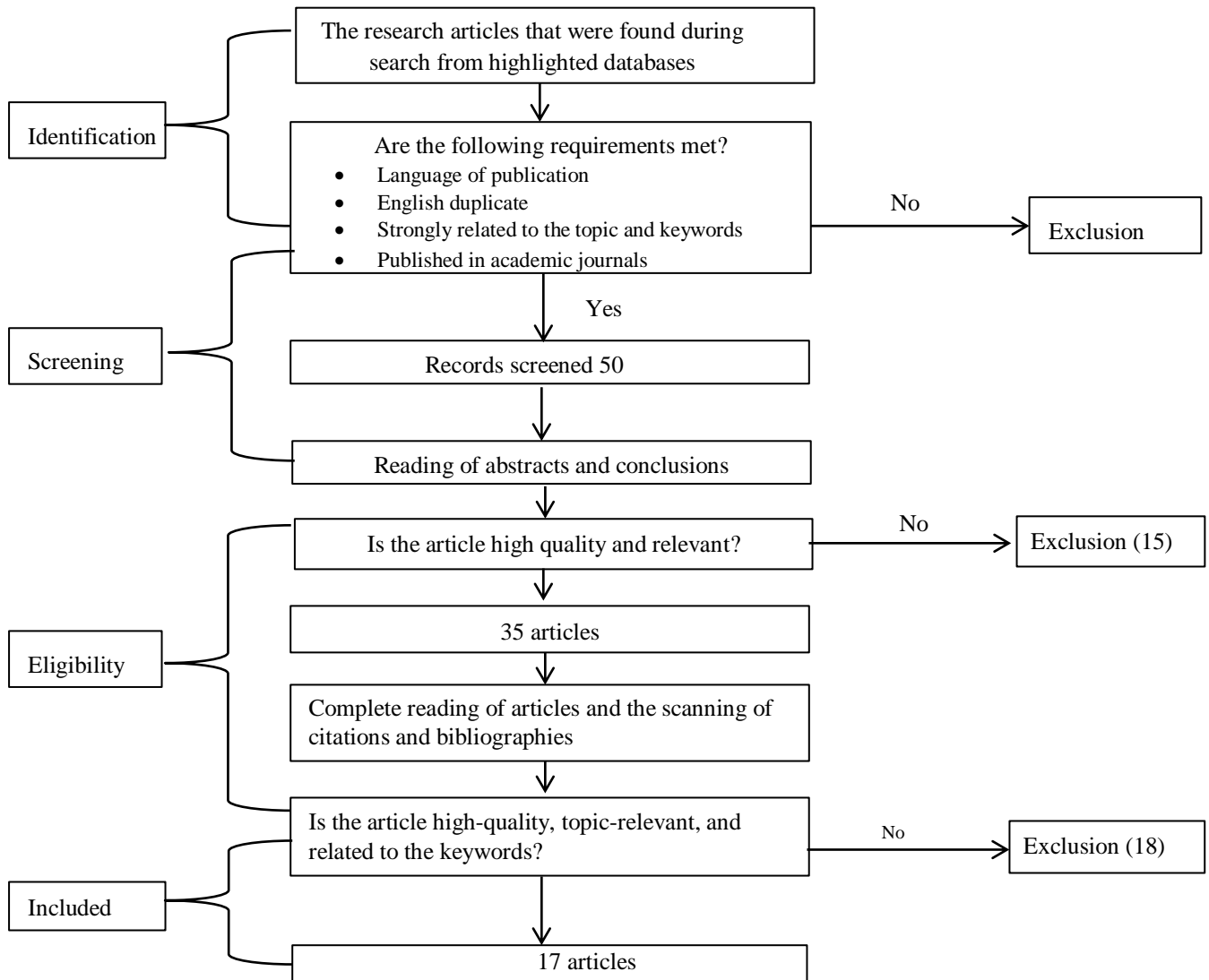


Figure 1
Prisma Flow Chart

3.3 Data Analysis

The analysis of data was performed using the structured and multi-step thematic synthesis methodology as developed by Thomas and Harden (2008), which enabled the review to combine findings of studies of various designs. This process started with the two reviewers reading each complete text several times and deriving the most important information, including quotations, numerical findings, and reported themes in line with the research objectives and research questions.

The next step involved sorting of the individual codes into a set of broader descriptive themes and higher-level analytical themes. Pattern coding was beneficial in determining where the studies agreed, such as 12 out of the 17 studies reporting productivity gains, and where differences existed, e.g., differences in the well-being outcomes of different demographic groups.

Quality evaluation was performed with the help of the Mixed Methods Appraisal Tool (MMAT v.2018). Research was assessed against methodological criteria such as the appropriateness of the research design, with an average score of 4.2 out of 5 (range: 3.5-5.0). In the final synthesis, lower-quality studies had a diminished impact. Due to the high heterogeneity of the research included (estimated I² was greater than 75% through narrative evaluation), a meta-analysis was inappropriate. Sensitivity checks were instead done by temporarily excluding low-quality studies to test the stability of the themes.

Lastly, cross-tabulation of themes was conducted with study characteristics, including sector and geographic region, to help determine contextual influences, such as cultural differences that could influence the findings. This was a systematic and transparent process that helped reduce bias and provide a strong synthesis of the evidence.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Dominant Features and Structures of Post-Pandemic Models

The researchers noted that the main features of remote and hybrid work models after the pandemic are now flexibility, technology integration, and structural adaptation based on the needs of the organization. It is now common for people to work from home two to three days a week and in the office the other days. In a study of over a billion job ads in OECD countries, Adrjan et al. (2024) found that remote and hybrid postings grew from 2.5% to 11% by 2023. It was noted that these patterns show that employees like to be independent and that this hasn't changed much even after the restrictions were lifted.

Organizational structures vary by sector: knowledge-based fields such as IT benefit from remote or asynchronous-first models, while service-oriented industries tend to favor hybrid systems to support collaboration (Maity & Lee, 2025). Berglund et al. (2024) describe emerging post-COVID models as “improvisational scaling up or down,” where organizations rapidly expand or reduce operations in response to uncertainty. For example, Swedish public and private institutions quickly digitalized services such as remote education while suspending non-essential tasks. Different sectors have different types of organizational structures. Technical fields like IT do better with remote or asynchronous-first models, while service-based fields do better with hybrid or remote systems that support collaboration (Maity & Lee, 2025).

Banerjee and Soni (2024) point to tech-based patterns in IT companies, including automated HR systems to support employee well-being, making workplaces joyful with low turnover. In their comparative study of Indian employees, a shift toward hybrid work models has emerged as a way to support both productivity and employee well-being. Alongside this, some organizations are incorporating virtual-reality tools to create more immersive and collaborative working environments. These developments aim to address the uncertainty brought about by the pandemic and promote resilience and fairness in the workplace, although challenges remain in ensuring equal access for all groups.

4.1.2 Effects on Engagement, Well-Being, and Performance

The reviewers pointed out that these models have produced mixed outcomes, which are of benefit to an organization. Dalessandro and Lovell (2024) found no major differences in inclusion across work settings in a survey of 6,497 global workers, which suggests that hybrid and remote work can strengthen engagement. In the U.S, it linked the fatigue that comes with Zoom to depressive symptoms associated with loneliness and frequent video meetings. Nonwhite, married, and food-insecure respondents reported unusually high fatigue, showing mental health implications that could undermine long-term performance. In contrast, Arciniega et al. (2024) found no dramatic shifts in work ethic profiles in a financial sector study (N=692 pre-lockdowns and post-lockdown). However, the post-lockdown period showed fewer “live to work” profiles and more “necessary evil” orientations, suggesting reduced well-being resulting from the abrupt shift to remote work.

Feasible roles are observed to increase productivity, and Wheatley et al. (2024) note 10-30% increases in productive focus groups in the UK because of shortened commutes, but ripple effects such as coordination challenges counterbalance productivity, causing stress. In a survey of 148 in a medical department (Shih et al., 2022), 87% of remote experiences were positive, yet 68% were emotional exhaustion, which demonstrates well-being trade-offs. In general, autonomy increases engagement (Hopkins & Bardoel, 2023), but without support, well-being decreases unevenly among demographics.

4.1.3 Key HR Strategies and Technologies.

On this note, it was reiterated that remote/hybrid success relies heavily on human resource strategies and technologies, which are centered on adaptability and support. In the insurance industry of Jordan, Khatatbeh et al. (2023) discovered that acceptance is motivated by perceived usefulness, ease of use, and social trust and that the TRA, SCT, and TAM models emphasize the importance of HR in creating norms. The case study of Value Creed by Banerjee and Soni (2024) exemplifies that technology-driven efforts, such as automated welfare programs, can minimize turnover by engaging with the technologically enabled direction.

According to Berglund et al. (2024), there are three types of improvisation: rule-oriented, goal-oriented, and creative-oriented, facilitated by HR policies that support learning. Outcome-based measures and virtual training are suggested by Shockley et al. (2024). Such technologies as VR/AR (Parekh & Gohil, 2025) improve teamwork, whereas infrastructure promotes fairness (Eurofound, 2022). Among the processes are joyful workplaces via digital transformation and strategic HR use of tech in resilience.

4.1.4 Challenges and Best Practices

Remote workplaces are affected by issues that affect the experiences of employees and organizational effectiveness. Such problems as the unequal access to resources, burnout, and challenges related to the coordination of distributed teams are rampantly recorded. As an example, Wheatley et al. (2024) demonstrate the so-called “flexibility ripple effect” in the context of UK multinationals, where providing individual employees with more freedom in their schedules can accidentally interfere in the team processes.

These interruptions will most likely create stress, time wastage, and unnecessary inefficiencies that remind organizations that flexibility should not be handled individually. Likewise, Wang et al. (2021) document that the emergence of video conferencing has led to the prevalence of a phenomenon known as Zoom fatigue, and the long-term effect of digital interaction is the development of symptoms of depression, emotional fatigue, and increased feelings of social isolation.

Issues regarding equity also take center stage in the literature. As Dalessandro and Lovell (2024) demonstrate, minority employees tend to feel less belonging and visible in hybrid environments, where informal communication and proximity-based recognition are decreased. The small and medium enterprises (SMEs) that are less resourceful and have less developed systems have their own challenges. Maity and Lee (2025) observe that SMEs tend to lose productive momentum regularly due to the lack of a solid digital infrastructure and a sufficient HR team that larger enterprises have.

To mitigate these challenges, researchers have found a number of best practices to reinforce the remote and hybrid work patterns. Some of the underlying measures proposed by Shockley et al. (2024) include inclusive policy development, routine technology reviews, and explicit hybrid-working policies. Cooke et al. (2023) believe that a wider sustainability viewpoint is required, which implies that organizations should strike a balance between people's needs, productivity, and environmental accountability to achieve long-term resilience. Trust is also one of the main factors. Khatatbeh et al. (2023) indicate that the trust between the employees and the managers should be developed to allow the acceptance of the hybrid models, relieve pressure to micromanage, and promote autonomy.

The future of hybrid work is also starting to be shaped by newer innovations within an organization. Banerjee and Soni (2024) emphasized the rising visibility of the concept of digital welfare. These strategies demonstrate that despite the challenges of hybrid work, it can provide organizations with an opportunity to rethink work and make it more sustainable in the long run.

4.1.5 Organizational Changes: Leadership, Culture, and Policies.

Organizations have turned leadership into compassionate forms, a culture encompassing virtual cultures and policies to elastic structures. According to Wheatley et al. (2024), there are ripple impacts that require an adaptive leadership approach to coordination. According to Berglund et al. (2024), scaling involves cultural changes towards innovation. Arciniega et al. (2024) reveal the effects of policies on ethics, with lockdowns changing profiles to disengagement, which leads to retention-based policies.

Indians (as described by Dey & Kumari, 2024) emphasize cultural focus on balance. Banerjee and Soni (2024) are examples of digital policies that make people feel happier by use of tech welfare. According to Eurofound (2022), there are EU regulations that assist in supporting conditions. Change creates trust, belongingness, and resiliency.

The systematic review pointed out some of the critical gaps that should be filled through research in the future. One of the weaknesses evidenced by the systematic review is the scarcity of studies researching the effects of hybrid work on gender, race, and others in the long-term sustainability of an organization (Sailer et al., 2023).

Another interesting knowledge gap relates to the environmental and sustainability impacts of large-scale remote and hybrid work uptake, a domain that has been subjected to only cursory research in recent literature (Science Direct, 2024). Also, the research is highly concentrated in the OECD nations, with the non-OECD and Global South settings being underrepresented, yet both have different infrastructural, cultural, and economic realities (Cooke et al., 2023). This lack of balance restricts the generalizability of the existing evidence across the globe.

In the future, scholars have identified a number of potential developments in the field. Interest in the implementation of randomized controlled trials to determine the effectiveness of asynchronous work models and their influence on collaboration, performance, and stress is increasing (NAIOP. (N.D.)). With the increased integration of AI tools into distributed work systems, researchers also started demanding further investigation of ethical aspects of AI-driven HRM, such as fairness, privacy, and algorithmic transparency (MDPI, 2023; Frontiers, 2024). General theoretical and psychological issues also exist. There is a need to conduct research concerning not only how employees can cope with but also thrive in hybrid work but also how risks of social ostracism or exclusion can be minimized. In the meantime, Wang et al. (2021) recommends focusing on the studies that can perfect and streamline hybrid work configurations, e.g., the best on-site/off-site ratios or the construction of teams that achieve a balance between autonomy and coordination. The analysis of the studies reviewed demonstrates places of convergence and divergence in the evidence base. An example presented here is that 12 out of 17 studies still report quantifiable

productivity changes, indicating the presence of a high level of consensus over the same. On the same issue, 10 out of 17 of the studies put an emphasis on the importance of the technological infrastructure and HR management assistance in order to accomplish a smooth transition towards hybrid or teleworking. However, a number of specific differences may be observed with respect to the accessible results of the well-being of staff. Some studies have reported high work-life integration and stress management, and others have reported neutral and negative impacts, which usually vary depending on the strategic variables such as managerial support, information technologies, and quality relations in virtual communication. Such contradictory results can be viewed as an indicator of a more profound fact behind them: the improvement of productivity and efficiency has been observed to emerge at a significant level, although a well-being outcome is highly dependent on the situation.

V. CONCLUSION & RECOMMENDATIONS

5.1. Conclusion

This systematic review explains how Covid-19 has changed remote and hybrid work cultures. The pandemic accelerated the immediate shift toward flexible work models. These shifts have been linked to improvements in productivity and employee engagement. When supported with the right tools, policies, and work environment, productivity can rise. These gains from improvement largely depend on whether organizations create a conducive environment that enables employees to perform effectively and enjoy positive work experiences.

However, these benefits are not universal, as a systematic review highlights ongoing challenges to hybrid work. Social isolation and reduced interpersonal interaction remain common problems affecting the overall well-being and teamwork, particularly among those employees with reduced social and work resources. Technological, spatial, and organizational gaps continue to persist, affecting employees with limited access to quality technological infrastructure, home workspaces, and work structure. These findings emphasize that hybrid work is not necessarily egalitarian because, left unplanned; it could perpetuate or widen existing gaps.

Simultaneously, the literature also indicates changes such as the innovative solutions in the framework of a post-pandemic response. Theoretical frameworks, like improvisational scaling, can be used to describe how these organizations were capable of addressing these types of short-notice adaptation requirements, trying out new ways of working as a team, processes, and decision-making. The role and importance of such essential factors as technological infrastructure, HRM innovations, and management studies are left at the center of the manner in which the field of remote/hybrid working settings would stabilize and evolve to become more valuable. These are largely positive steps in organizational resilience, shifting organizations from traditional approaches to more dynamic and person-centered approaches.

Finally, the long-term success of remote and hybrid work depends on how organizations integrate human-centered approaches into their future strategies. The aim must not be merely to keep people productive or maintain operations but to establish work ecosystems in which people and teams can genuinely thrive. Remote and hybrid work will never become as good as they could be unless they are planned considering equity, well-being, and long-term flexibility.

Future research should focus on filling the gaps discovered in this review, especially on long-term equity, cross-cultural differences, and the sustainability of hybrid structures of work. Enhancing this body of evidence is critical towards ensuring that the global workforce forces are not just in a position to meet the challenges that come in the future, but they are also enabled to succeed. With the purpose of turning the lessons of the pandemic into the new stage of development, scholars, practitioners, and policymakers have the same job: they need to develop hybrid working models, which are not only more efficient and flexible but also just, human, and strong.

5.2 Recommendation

Based on the findings of this systematic review, the following recommendations are proposed for organizations, HR practitioners, policymakers, and future researchers who are seeking to strengthen the sustainability and equity of remote and hybrid work models: Advocating for fair access to reliable internet, user-friendly tools, and secure digital systems to prevent widening socioeconomic divides. Organizations should come up with hybrid work policies and embrace mental health measures like reviewing workloads vis-à-vis the number of employees, no meeting days, and offer wellness initiatives, including psychological support for employees to address issues of burnout. Moreover, leaders should be armed with skills for managing distributed teams, practicing inclusive decision-making, and applying outcome-based performance evaluation to maintain trust and unity across remote and on-site workers.

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Impact of social influence on retirees' investment perception in the Zanzibar Urban West region

Juma Omar Juma¹
Adam B. S. Mwakalobo²

¹juoju@hotmail.com (+255777428328)

²adbsmwakalobo@yahoo.com (+255787970066)

¹<https://orcid.org/0009-0009-2682-831X>

²<https://orcid.org/0000-0001-9189-4676>

^{1,2}University of Dodoma, Tanzania

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ABSTRACT

This study examines how social influence affects retirees' investment perception. With the shadow of Prospect theory, the study employed descriptive research design-based quantitative method. The targeted population was retirees from Zanzibar Urban West region. The sample was drawn from the total population of 7,773 residing in urban region. Using the Krejcie and Morgan table of a finite population, the sample size of 365 was obtained. However, the analysis was done on 283 retirees who had completed and returned the questionnaire to the researcher. The study was conducted in the Urban West region in Zanzibar using a survey method. Data were collected using administered questionnaires and analyzed using descriptive quantitative methods by SPSS software. The findings reveal that Social Influence (SOI) significantly affects the retirees' Investment Perception (IPC). The study also found gender differences in impact, with social influence affecting more female retirees than male retirees. The paper concludes that social influence changes retirees' investment perception. The study recommends that financial institutions develop financial training programs to help retirees enhance their investment perceptions, which encourages optimal investment decisions, so as to decide to invest through financial skills rather than social factors.

Keywords: Investment Perception, Prospect Theory, Retirees, Social Influence, Urban West Region, Zanzibar

I. INTRODUCTION

Social influence is a direct persuasion applied to individual from other individual from external factor from environment, persuasion is done through action and words of month, when social influence applied can alter individual perception, attitude, behaviour and motive on decision, including decision on investment (Gass & Seiter 2022; Shah & Asghar, 2023). Social influence, when applied, may lead to failure or success. The failure happens when the persuasion affects the individual perception negatively and causes the individual to deviate from rational decision making, because the social influence dominate the individual power to assess risk and reward on investment (Michelle, 2013; Shiller, 2000). The success is happened when individual persuasion turns to advice that leads to optimal decision making on investment. Previous studies show that external pressure from peer investors affects individual investment decisions (Wang & Wang, 2018), and Hu et al. (2019) examine how social influence on social media platforms and online investment communities affects investment decisions.

Besides, literature shows that social influence can affect individual decisions, but Lusardi and Mitchel (2014) argue that individuals who utilize their cognitive skills and possess financial knowledge in investment decisions are less likely to be influenced by social factors. In that sense, they rely more on personal cognitive factors than on peer-driven influence.

Investment perception refers to an individual's attitudes, beliefs, and expectations about investments, and how they evaluate risks, returns, and the overall attractiveness of different options (Huang & Peace, 2015). Naresh et al. (2019) also describe it as a psychological construct shaped by personal experiences, knowledge, and prevailing economic conditions. By this definition, we can notice how investment perception influences investors' prioritization of financial goals at the early or initial stage of decision making to invest, such as choosing between a low and a high risk asset, and enables them to respond to fluctuating conditions in the market.

For instance, an investor who views stocks as highly risky may avoid investing in equities due to concerns about volatility in market and prefer lower-risk bonds, despite their comparatively lower returns (Herd et al., 2020). Moreover, in other circumstances, media and peer recommendations may lead an individual to follow investment



trends, skew investment judgment, and cause the failure to consider associated investment risk fully. In that sense, social influence can lead investors to misjudge or overlook existing risk. This condition may also affect retirees as investors, influenced by persuasion from family, friends, financial institutions, the media, and other retirees. Conversely, Lusardi and Mitchell (2014) argue that financial literacy can mitigate the effects of social pressure. In this study, we therefore aim to explore how social influence shapes retirees' investment perceptions, drawing on Prospect Theory.

This study examines how retirees in Zanzibar change their investment perceptions through social influence from family, friends, coworkers, financial consultants, and cultural leaders. The question is how they resist social influence and manage their perceptual motives in investment decisions, beyond social cues from co-retirees, friends, family, and financial institutions, rather than from media and digital platforms. The study advances our understanding that external social factors influence retirees and shape their decisions, thereby disrupting their rational behaviour, which contradicts Prospect theory assumptions. Hence, they deviate from the loss aversion theory, which suggests that investors may prefer small gains to safer projects, rather than high profits that are likely to result in higher losses. Nevertheless, under social influence, an investor may engage in suboptimal decisions. The study holds significant value for policymakers and financial institutions by illuminating how retirees change their investment perceptions and decisions. It emphasizes the necessity for policies to incorporate psychological and social factors into the investment landscape.

1.1 Statement of the Problem

The retiree's journey into investing starts with their internal mind perceptions, but is influenced by social factors, such as persuasion and advice about profits from others. When that occurs, their decision is driven by attributional biases rather than objective analysis. Although social influence affects individual decisions, research on its specific impact on retirees in Zanzibar is limited, especially regarding aspects of Prospect theory (Kahneman & Tversky, 1979; Tversky & Kahneman, 2015). When Prospect theory is applied, we can understand how individuals assess risk in terms of perceived gains and losses. This study determines whether retirees follow rational decision-making principles as suggested by Prospect theory or surrender to social influence biases, accepting persuasive messages rather than making optimized investment choices. This knowledge gap prompts us to explore how retirees navigate socially induced biases in their investment perceptions and motives.

1.2 Research Objective

- i. To examine the role of social influence in shaping retirees' investment perception in the Urban West region in Zanzibar.
- ii. To examine gender deviation in the impact of social influence on taking an investment decision

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Prospect Theory

The study applied the Prospect theory, developed by Kahneman and Tversky (1979). The theory describes how individuals evaluate gains and losses in investment decisions. The theory accounts for individual decision-making under different risk alternatives. The theory has the following assumptions. First, the people concerned more with avoiding losses over the concern in achieving gains. Second, people view losses and gains relative to their preference for the current point, so it is more likely for an investor to take risks to avoid losses than to take on gain risk. Third, people have difficulty accurately evaluating probabilities, and in many circumstances they tend to overestimate low-probability events and underestimate high-probability events. According to this theory, an individual is more influenced by the pain of loss than by the pleasure of gain (Kahneman & Tversky, 1979).

The theory determines two phases of the decision-making process. The editing phase is the initial stage, where people receive information for the investment decision to be evaluated. Failure to edit information at this stage leads to suboptimal decision-making by the decision maker (Movarn & Jenkins, 2017). For example, a retiree may receive and trust investment information from family, friends, cultural groups, and social media, yet be unable to evaluate it. In that case, they may make biased decisions, which may change their positive investment perception.

At the evaluation stage, people make their final decision by weighing potential gains or losses. After the completion the evaluation stage, they select the option that is most likely to lead to the best outcomes. The weighing of outcomes is mathematically determined. In case there is no correct mathematical weight, the investor may make the wrong investment choice. In our case, the best approach is to have a qualified financial advisor, not families and friends, guiding retirees on where to invest based on their impressions (Movarn & Jenkins, 2017; Fiedler & vonSydow, 2015).



People are supposed to take actions that minimize losses to avoid losing money in an investment. Due to the effect of social influence on retirees' investment perceptions, retirees may be influenced by social factors from family, friends, coworkers, financial consultants, and others who spot potential profits without making a financial calculation about investing in a particular asset. In general, the theory is relevant to the study because it asserts that people are influenced by their inability to evaluate probabilities correctly (Kahneman & Tversky, 1979). In most cases, they are forced to decide out of fear of loss rather than by an optimal decision based on information assessed and calculated financially.

2.2 Empirical Review

2.2.1 The role of Social Influence in Shaping Retirees' Investment Perception

Social influence impairs an individual's ability to make sound decisions, causing them to rely on social cues and peer pressure rather than using their cognitive abilities and professional advice. Individuals often adopt the preferences and behaviour of those around them (Telzer et al., 2018). In some circumstances, social influence stems from social media networks and investment platforms, not just from peer groups, family, and financial consultancies (Banerjee, 1992; Zhao et al., 2024). So, Social networks create a validation loop, in which one type of investment may gain popularity due to widespread participation by a particular group to which the investor belongs, rather than because of its intrinsic value. As a result, potential investment opportunities might be overlooked by simply observing others and listening to social media. Conversely, a knowledgeable investor may go against group motivations and social influences, and stick to the best investment decision based on financial knowledge and personal experience (Montford & Goldsmith, 2016).

Social influence may lead to cognitive biases, resulting in individual judgment errors and affecting investment decisions (Aigbovo & Ilaboya, 2019). Sometimes, it leads to overconfidence bias, when investors believe they will succeed in investing because others have been successful (Niehaus & Shrider, 2014). In doing so, individuals make risky decisions and misjudge their ability to observe market trends. This leads them to make investments without sufficient knowledge of future investment predictions (Kahneman & Tversky, 1979). Similarly, social influence causes confirmation bias, in which investors focus only on information that supports a specific product and investment they favor, while prejudging alternative products based on contradictory information (Sathya & Gayathiri, 2024). When that happens, retirees and investors strengthen their conviction in potentially risky investments. There is variation in how external cues and social factors influence individuals, due to changes in personality traits and risk tolerance (Hudlicka, 2018; Christie & Huang, 1995). Investors who have a strong understanding of risk trends are less likely to be influenced by external biases (Tversky & Kahneman, 1974; Subedi, 2023). In such cases, we expect retirees' investment perceptions to vary. By examining these factors, this study aims to explore how social influence interacts with individual differences to either amplify or attenuate biases in investment perception, thereby influencing investment decisions.

Investment perception involves how individuals interpret and evaluate the risks and rewards involved in financial decisions. Personal experience, market conditions, and social influence can alter this perception (Almansour et al., 2025). Meanwhile, Barberis and Thaler (2003) argue that perceptions may cause investors to overestimate or underestimate investments, regardless of the actual risk, due to biases and pressure from the media, society, and financial intermediaries. Investment perceptions can influence retirees' investment decisions. Typically, individuals are expected to base their investment decisions on balanced facts and financial knowledge by practicing their understanding and scrutinizing related information. However, under certain circumstances, influenced by external opinions, investors may align their perceptions with outside views and ignore the fundamentals principles of investment, which should be grounded in thorough financial analysis (Ciranka & van den Bos, 2019). Lusardi and Mitchell (2014) argued that financial literacy positively correlates with investment decisions, whereas Jappeli and Padula (2015) and Krische (2019) found that financial literacy alone does not necessarily lead to better investment choices. They also note that social factors can lead to both positive and negative outcomes. Notably, when retirees receive positive guidance from their social group, they tend to develop a favorable perception and invest in profitable ventures. Conversely, without such guidance, they may opt for loss-making investments.

2.2.2 Gender Deviation in the Impact of Social Influence on taking an Investment Decision

Social influence refers to the condition in which an individual influences others' opinions, behaviour, and expectations through persuasion. The close-tie persuasion from friends, family, and peers may redirect and shape an individual's perceptions and decisions, as argued by Viscusi et al. (2011), who note that people discuss riskier financial decisions in groups and that decision-making groups fail to account for informational dynamics and decision-making rules, as suggested in Prospect theory. Moreover, Baloch et al. (2025) found that peer influence mediates the relationship between financial literacy and investment decisions. Positive social approval increased perceived trustworthiness and reduced hesitation among individuals. In that sense, individuals tend to make decisions by following and trusting social cues around them.



Gender differences also contribute to shaping individual responses to social influence. Because people are more influenced by those close to them, social influence may affect them more, shaping their motivation, preferences, and behaviour (Telzer et al, 2018). Experiences show that, in many families, mothers are responsible for caring for and tending to all their children and their husbands. This reflects that many people influence females more than they influence males. As supported by gender role theory, which states that females are more relationship-oriented and communal, making them more sensitive to relational cues, interpersonal approval, and affected by subjective norms (Eagly, 2013). This situation suggests that women are more likely to internalize and act upon social influence. Hung et al. (2022) indicate that males are task-oriented outside of the home and family, so they are less susceptible to social cues. Though in this study, we find that both men and women are affected by social influence, with women’s trust being more strongly shaped by social cues such as recommendations and normative approval, while men’s trust is more strongly influenced by cognitive risk evaluations

III. METHODOLOGY

The study employed a descriptive research design, based on a quantitative method. Using this method, the study employed a survey approach via an administered questionnaire distributed to selected respondents. The design is suitable for this research because it demonstrates relationships and explains the world as it is because it allows to examine the naturally occurring behaviour, attitudes, and characteristics of the population in relation to phenomena (Creswell & Creswell, 2018). The study was conducted to examine how retirees maintain their investment perceptions amid influences from family, friends, and social cues.

The unit of analysis is individuals, focused on the population of retirees. The population was retirees in the Urban West Region, and the sample size was determined using the Krejcie and Morgan (1970) table for finite populations, based on a population of 7,773 retirees. Thirty-three shehias (wards) were selected from three districts of Urban, West A, and West B. We distributed 364 questionnaires, but the analysis was conducted on data collected from 283 retirees after data management. Where each respondent analyzed the individual, and later on, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Communalities were applied to assess data suitability. The study measured the KMO and revealed that it exceeded 0.8, while the communalities for all items exceeded 0.5. Moreover, to assess the validity and reliability of the data, the factor loadings and Cronbach's Alpha of the variables were measured, all measures exceeded the required threshold of 0.7 as presented in Table 1. Subsequently, we performed regression analysis to determine significance by examining the linear relationships between social influence (SOI) and Investment Perception (IPC), equations presented as $SOI = \beta_0 + \beta_1SOI1 + \beta_2SOI2 + \beta_3SOI3 + \beta_4SOI4 + \beta_5SOI5 + \epsilon$ and $IPC = \beta_0 + \beta_1IPC1 + \beta_2IPC2 + \beta_3IPC3 + \beta_4IPC4 + \beta_5IPC5 + \epsilon$. The analysis was conducted using regression by SPSS version 23 as presented in Table 1.

Table 1
Component Matrix for Social influence and Investment Perception

Component Matrix of Social influence	Component	Cronbach's Alpha
Item	value	
SOC1 I follow the opinions of financial consultancy	0.871	0.89
SOC2 I follow my fellow retiree opinion	0.769	
SOC3 I was influenced by creativity and decision of others in investment	0.736	
SOC4 My friends and family Influence me to invest	0.739	
SOC5 Other investors performance influences me to invest	0.725	
Extraction Method: Principal Component Analysis.		
Component Matrix for Investment Perception		
IPC1 I liked to invest	0.713	0.846
IPC2, I fear the investment risk	0.906	
IPC3, I doubt my investment in the future	0.756	
IPC4 I accept getting small profits when investing	0.838	
IPC5 I fear to lose money in the investment	0.72	

Extraction Method: Principal Component Analysis.
a 1 components extracted.



IV. FINDINGS & DISCUSSION

4.1 Descriptive Analysis

The demographic information of respondents is presented in Table 2. A total of 283 respondents completed the questionnaire, of whom 175 were male and 108 were female. In addition, most respondents were over 60 years old, accounting for 85 percent of the total. This statistical distribution gives validity due to the fact that most of the respondents are retirees above 60 years. The nature of the respondents is more clearly shown in Table 2.

Table 2
Demographic Information of Respondents

Item		Frequency	Percentage
Gender	Male	175	61.8
	female	108	38.2
	Total	283	100
Age	50-60	44	15.55
	60 and above	239	84.45
Marital status	Married	220	77.7
	Divorced	49	17.4
	Single	14	4.9
Education	Primary	7	2.5
	Secondary	28	9.9
	Tertiary certificate	40	14.1
	Tertiary diploma	139	49.1
	Tertiary university	69	24.3

4.2 Descriptive Statistics of Independent Variables and Dependent Variables

The study presents the descriptive analysis to know how retirees has responded to the questions presented in the survey; their answers were analyzed together to measure central tendency of their responses, the mean, standard deviation and cumulative mean were analyzed.

4.2.1 Descriptive Statistics of Social Influence

Retirees verified their response on a five-point Likert scale from 1 to 5, where Strongly Disagree (SD) is represented by (1), Disagree (D) is represented by (2), Neutral (N) is represented by (3), Agree (A) is presented by (4), and Strongly Agree (SA) is represented by (5). The descriptive analysis was done to measure the average frequency, composite (mean), and standard deviation of each scale

In the Table (3), the study presents social influence factors, retiree is influenced by financial consultancy, (SOI1), retiree agree to follow opinions of fellow retirees (SOI2), retiree agree to be influenced by investment of other investors (SOI3), retiree agree to follow family and friends' opinion to invest (SOI4), and retiree agree to be influenced by cultural leaders (SOI5). The findings show that in SOI1, 137 (48.4%) accept the opinion of financial consultancy, 74 (26.1%) are against it, and 72 (25.4%) neither agree nor disagree. In SOI2, retirees 125 (44.1%) on average agree to follow the opinion of other retirees in the selection of investment, 77(37.1%) disagree with the opinion to follow other retirees' opinion to decide on investment, and 81(28.6%) neither agree nor disagree with the statement. In SOI3, the findings show that 129 (45.6%) retirees agreed that other investors influenced them in selecting investments, 81 (28.6%) were opposed, and 73 (25.8%) were neutral. In SOI 4, the findings show that 128 (45.2%) agreed that friends and family influenced them, while 79 (27.9%) rejected this, and 76 (26.9%) remained neutral. In SOI 5, 128 (45.2%) retirees, on average, agree that they are influenced by cultural leaders, 71 (25.1%) reject that statement, and 92 (32.5%) neither agree nor disagree on that.

The mean ranges from 3.17 to 3.25, and the composite mean is 3.20. That is, SOI 1, SOI 3, and SOI 5 were above average and supported the statements. There is a deviation in retirees' opinions, with a standard deviation ranging from 1.01 (the lowest) to 1.08 (the highest), indicating a slight difference between those who accept and those who reject. The group of retirees who remain neutral can shift the deviation range if they respond positively or negatively to either side. Key note: n=Respondents: Strongly Disagree (SD=1), Disagree (D=2), (Non decided N =3), Agree (A=4), Strongly Agree (SA=5), Standard deviation (STD), Mean (M), Composite Mean (CM)

**Table 3***Social Influence Descriptive Statistics*

SOI	SD(%)	D(%)	N(%)	A(%)	SA(%)	Mean	C. Mean	STD
SOI1	19(6.7)	55(19.4)	72(25.4)	111(39.2)	26(9.2)	3.25	3.202	1.08
SOI2	20(7.1)	57(20.1)	81(28.6)	104(36.7)	21(7.4)	3.17	3.202	1.059
SOI3	14(4.9)	67(23.7)	73(25.8)	105(37.1)	24(8.5)	3.20	3.202	1.052
SOI4	17(6.0)	62(21.9)	76(26.9)	111(39.2)	17(6.0)	3.17	3.202	1.032
SOI5	15 (5.3)	56(19.8)	84(29.7)	107(37.8)	21(7.4)	3.22	3.202	1.019

n=283

4.2.2 Descriptive of Investment Perception (Dependent variable)

Table 4 presents Investment Perception (INVPC), a dependent variable that captures how retirees respond to investment perceptions. Five factors were presented as variable items. Retiree liked to invest (INVPC1), Retiree knew the risk associated with the investment (INVPC2), Retiree felt they would benefit from the investment (INVPC3), Retiree's fear of losing money in an investment (INVPC4). Moreover, the Retiree likes to get small profits when investing (INVPC5).

The study results show that 103 (36.4%) respondents agreed with the statement that they liked to invest (INVPC1), 76 (26.8%) disagreed, and 104 (36.7%) neither agreed nor disagreed. Similarly, in INVPC2, the retirees fear the risk associated with the investment (INVPC2). The results show that 98.6 (34.7%) accept the to fear the risk associated with the investment (INVPC2), 81 (28.6%) disagree, and 104 (36.4%) neither agree nor disagree. In (INVPC3), the study seeks to determine retirees' perceptions of benefits from investment. The findings show that 102 (36.01%) reported a positive perception of the investment's benefits, 83 (29.3%) reported a negative perception, and 98 (34.6%) reported a neutral perception. Furthermore, in INVPC4, the study determines the retiree's perception of retirees in losing money in investment. The findings show that 96 (34.09%) agree they do not fear losing money in an investment, 82 (29%) fear losing money in an investment, and 105 (37.1%) remain neutral; they didn't indicate their perception. Furthermore, the study examined retirees' perception on accepting small profits when investing (INVPC5). The findings indicate that 89 (35%) accept getting small profits when investing, 81 (28.6%) rejected being influenced by small profit, and 103 (36.4%) remained neutral.

The findings show that the mean of the (INVPC) indicators ranges from 3.02 to 3.14, with the highest, and the composite mean is 3.06. That is, INVPC2, INVPC3, INVPC4, and INVPC5 were below the Cumulative Mean, and the deviation is very slight, indicating there is no significant deviation in the retirees' opinions, as the standard deviation across all indicators ranges from 1.040 to 1.07, with the highest at 1.07. The findings revealed mixed opinions between those who accept and reject. However, the group of retirees who remain neutral would shift the deviation range if they responded either positively or negatively. In that sense, we can say there is a mixed attitude toward retirees' investment perceptions. They might change their investment perception decisions due to social influence.

Table 4*Investment Perception Descriptive*

	SD(%)	D(%)	N(%)	A(%)	SA(%)	Mean	C M	STD
INVPC1	12(4.2)	64(22.6)	104(36.7)	78(27.6)	25.(8.8)	3.14	3.06	1.004
INVPC2	22(7.8)	59(20.8)	104(36.4)	78(27.6)	20(7.10)	3.05	3.06	1.039
INVPC3	29(10.2)	54(19.1)	98(34.6)	79(27.9)	23.(8.10)	3.05	3.06	1.099
INVPC4	24(8.5)	58(20.5)	105(37.1)	76(26.99)	20(7.10)	3.04	3.06	1.048
INVPC5	30(10.6)	51(18.0)	103(36.4)	80(28.3)	19(6.70)	3.02	3.06	1.077

n=283

4.3 Discussion

Objective one aims to examine the impact of social influence on retiree investment perceptions in the Zanzibar Urban West Region. The result from Table 5 below shows that $\beta = 0.36$, $t = 6.961$, and $p = 0.000$. The findings show there is a significant positive relationship between social influence and retirees' investment perceptions. These results align with the study by Baloch et al. (2025), which found that peer influence mediates the relationship between financial literacy and investment decisions, suggesting that individuals often rely on friends' recommendations, preferences, and behavior when considering investment options. Also Telzer et al. (2018), who comment that positive social approval increased perceived trustworthiness and reduced hesitation among individuals. While Khawar and Sarwar (2021) found that interpersonal interaction significantly shapes investment decisions through risk tolerance, suggesting that personal relationships with family, friends, and society exert a more substantial influence. Similarly, the finding is consistent with the studies by Khawar and Sawar (2021), which show that



individuals seek professional guidance when making decisions. Possibly, they do so to manage risk during long-term investment planning. The positive association of findings suggests that consultative interaction may strengthen retirees' confidence in their investment preferences and shape their investment perceptions. Overall, the results support the idea that social influence remains a key determinant of investment perception, with social interaction among families and friends, and consultation with financial institutions, as found in this study involving retirees. In contrast, Lusardi and Mitchell (2014) argue that investment advice without financial knowledge leads to suboptimal decisions. This implies that social influence shapes individual investment perceptions, and retirees' perceptions can shift through persuasion from family, friends, co-retirees, and financial consultants. Therefore, an individual's initial perception to invest is influenced by social pressure, which in turn shapes the decision to change investments. Hence, their ability to assess risk and analyze market conditions is controlled by external influences and persuasion, which sometimes associated with high risk and suboptimal decision.

Table 5
Regression Analysis

Model	Coefficients ^a												
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	1.907	.172		11.107	.000	1.569	2.246					
	SOC	.360	.052	.384	6.961	.000	.258	.461	.384	.384	.384	1.000	1.000

a. Dependent Variable: IPC

In the second objective, the study examines gender differences in the impact of social influence on investment decisions. The findings show that social factors influence women retirees more than they do men, at 45.4% compared to 41.2%. These results align with previous research showing that women are more responsive to social cues than men (Herd et al., 2020), while Hung et al. (2022) highlighted gender-biased differences in susceptibility to social influence. In the context of this result, it implies that women retirees in Zanzibar often rely more on family, friends, community advice, when making investment choices and in sometimes they are not guided by financial knowledge, because are most affected by relational factors from families, friends, and social factors.

This finding is contrary to Hu et al. (2019), who suggest that males face greater social influence problems, especially when they seek to meet social expectations, leading them to rely on social factors and accept unprofessional financial advice; a situation that pushes for risky decisions and options.

Table 6
SOC and Gender Discrepancies

		Column N %	Gender		
			Male	Female	Total
SOC	1	Column N %	2.3	.0	1.4
	2	Column N %	24.0	25.9	24.7
	3	Column N %	32.6	28.7	31.1
	4	Column N %	38.9	43.5	40.6
	5	Column N %	2.3	1.9	2.1
	Total	Column N %	100.0	100.0	100.0

4.4 Findings and Implications of Prospect Theory

The study used the Prospect theory developed by Kahneman and Tvesky (1979), the theory emphasizes the way individuals assess potential gains and losses, according to this theory, individuals are more interested in small profit and not ready to associate gain with loss, hence retirees who evaluate risk before investment can wisely apply their investment perception, and those influenced and take into account the opinions of family, friends, coworkers, and others may go astray at their positive investment perception, because are influenced by social influence factors rather than financial principles in making investment decisions. In that situation, retirees are supposed to know how to evaluate investment risk. The findings of our study confirmed Prospect theory, indicating the need to evaluate investment risks, understand potential gains and losses, and avoid relying on social factors.



V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The findings show that retirees are influenced by social influence, especially from family, friends, co-retirees, and financial consultants. In a normal situation, consultancy firms offer financial advisors to customers, including retirees, but it is not normal for non-financial professionals to advise investors where and how to invest. However, family, friends, and society do that to retirees. The research finds that persuasion from social influence motives affects retirees and shapes their investment decisions. Also the finding show women are more affected with social influence than men.

5.2 Recommendations

In the context of objective one, the study recommends that policymakers should introduce new financial training that incorporates social influence behavior to help retirees understand the impact of social influence on their intention to invest. On the retiree's part, they should engage a professional financial advisor. Regarding the second objective, the research recommends that financial and investment institutions acknowledge that female retirees face greater social influence pressures. Therefore, financial firms should propose new strategies for investment campaigns that address the obstacles women face in the market due to social influence.

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Gender transformative approach to foster male participation in domestic work: A case study of the Bandebereho project in Burera District, Rwanda

Benjamin Ifashabayo^{1*}

Wahyudi Winaryo²

Joko Susilo³

^{1*}ifabenjamin@gmail.com

¹<https://orcid.org/0009-0002-0512-446X>

²<https://orcid.org/0000-0002-4689-3858>

^{1,2,3}University of Muhammadiyah Malang, Indonesia

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ABSTRACT

This study explores the impact of the Bandebereho Program in Burera District, Rwanda, using the Gender Transformative Approach (GTA) and Judith Butler's gender performativity as its theoretical underpinnings. The program seeks to overturn deeply embedded gender norms by having men do household and caregiving work. The research subjects were the direct beneficiaries of the program (the couples who attended the educational groups of the Bandebereho program employing qualitative research instruments, including interviews, focus group discussions, and observation). The research subjects included couples, focus group discussions, and community health workers, and the informants were staff members of the Bandebereho project, a local government leader, and a gender activist. Before the intervention, women handled domestic work alone, thereby reinforcing gender inequality and household power relations, according to the study. The results are characteristic of drastic changes with the introduction of Bandebereho: men began contributing to childcare, cooking, and joint decision-making, and women reported reduced workloads, improved marital relationships, and improved responses. The intervention also encouraged greater community acceptance of men's involvement in domestic work, although there are still challenges such as stigma, cultural resistance, and issues around sustainability. The discussion situates these findings within broader GTA literature, and it shows that guided reflection, role modeling, and community sanctioning are crucial in changing gendered practices. The study concludes that Bandebereho offers an expandable model for driving gender equity, improving family well-being, and informing policy interventions in similar contexts. The study recommends that expanding Bandebereho or analogous programs need to be integrated with established community structures, including health centers, schools, and local governance systems.

Keywords: Burera District, Bandebereho Program, Domestic Work, Gender Transformative Approach, Masculinity

I. INTRODUCTION

“Gender equality and women’s empowerment hold the keys to an inclusive, just, and sustainable future for humanity; yet, the progress in advancing women’s rights, as outlined by the Beijing Declaration and Platform for Action” lags behind projected goals (Goryunova & Madsen, 2024). Gender equality is regarded as a cross-cutting issue in the implementation of the Sustainable Development Goals (SDGs); however, it is unclear how they are considered when making a plan (Leal Filho et al., 2023). This means that achieving gender equality is an important step in achieving other indicators of Sustainable Development Goals. Sustainable Development Goal 5 is gender equality and empowerment of all women and girls (McCullough et al., 2022). SDG 5 was launched as a response to various issues affecting women and families, including poverty, food insecurity, water shortages, limited access to education, unemployment, and issues related to economic growth. SDG 5 also draws attention to the burden of domestic chores carried by women in its fourth target, and claims the sharing of domestic chores and the value of unpaid care work.

Domestic work is often conceptualized as unpaid household chores aimed at maintaining the home and meeting various family or extended family needs (Staland-Nyman et al., 2021). Domestic work is undervalued, “as these workers also perform traditional care and household tasks (unpaid work) within households” (Oelz & Rani, 2015). Research from several countries suggests that women often perform the majority of domestic work in addition to their paid labor (Staland-Nyman et al., 2021). In Rwanda, women perform most of the household activities; moreover, women in Rwanda spend a higher average number of hours per week on domestic activities compared to



the time men spend per week (Nsabimana, 2022). The disparity in housework participation tends to be greater among adolescents and young adults compared to children. While both boys and girls are more likely to take part in domestic tasks when their fathers are involved, the influence of paternal participation is noticeably stronger on sons than on daughters. This indicates that the transmission of household responsibilities is shaped by gender, with significant consequences for the perpetuation of gender inequality.

In Rwanda, as in many rural societies of the Global South, women have traditionally been assigned subordinate roles to men. For instance, it was often considered inappropriate for women to speak in public, as doing so risked labeling them as “loud” or “immoral.” “Nor were women allowed holding or inheriting property in the same way as men, and their business activities, if they had any, could be appropriated by their spouses or fathers”. It is unclear “to what extent this was a product of the colonial encounter or whether it reflected a longer tradition in Rwandan society; however, it was well established by the latter half of the twentieth century” (Wallace et al., 2008).

The Gender Transformative Approach (GTA) seeks to critically interrogate and shift rigid gender norms and power inequalities in pursuit of both Sexual and Reproductive Health and Rights (SRHR) and broader gender equality goals, operating across all levels of the socio-ecological model. GTA-based programs and policies aim to raise critical awareness of gender roles, norms, and power dynamics, highlighting the financial, social, and psychological costs of harmful practices while also demonstrating the benefits of adopting equitable alternatives. In practice, this approach empowers women, girls, and individuals of diverse sexual orientations, gender identities, expressions, and sex characteristics (SOGIESC); engages men and boys in advancing SRHR and gender equity; and involves duty bearers in rethinking gender and power relations. (Van Schendelstraat, 2018).

Bandebereho scale-up is a program that employs gender transformative approach to engages men in promoting maternal, newborn, and child health (MNCH), violence prevention, and caregiving, which RWAMREC is implementing in collaboration with the Ministry of Health (MOH)/Rwanda Biomedical Center (RBC)/Maternal Child, and Community Health Division (MCCH), Ministry of Gender and Family Promotion (MIGEPROF), National Child Development Agency (NCDA), and Burera District with financial support from Global Innovation Fund (GIF) and Grand Challenge Canada (GCC). By fostering an environment where men feel empowered to engage in domestic work, this approach can lead to a more equitable distribution of responsibilities and enhance the overall quality of family life. Such initiatives often include educational programs, community workshops, and campaigns that highlight the value of shared responsibilities, aiming to reshape societal perceptions about masculinity and caregiving roles. These efforts can also foster open dialogue among family members, enabling a deeper understanding of each person's needs and preferences, which in turn strengthens familial bonds and promotes mutual respect.

1.1 Statement of the Problem

The Sustainable Development Goal 5 aims to achieve gender equality and empower all women and girls. Realizing gender equality would mean promoting women's literacy level, strengthening and facilitating women's access to health services, and ensuring access to employment (Hirsu et al., 2019). One of the indicators of Goal 05 is to value unpaid care and promote shared domestic responsibilities (Küfeoğlu, 2022). Gender equality holds the keys to an inclusive, fair, and sustainable future for humanity, yet the progress in advancing women's rights and men's engagement in domestic work, as outlined by the Beijing Declaration and Platform for Action, lags behind projected goals (Goryunova & Madsen, 2024).

According to a 2018 report on equality in the EU, home and family are largely considered the female domain: “More than four in ten Europeans (44%) believe the most important role of a woman is to take care of her home and family. Women's increase in labor force participation was expected to lead to a revolution in the gendered division of labor under which men are breadwinners and women spend their time in unpaid domestic activities, depending on their husbands for economic support. The revolution in the gendered division of labor, however, stalled at the door of most households, while women's labor force participation continues to rise across countries, the increase in men's share of domestic work and childcare has been modest, remaining about one-third of the time contribution of women (Breen & Cooke, 2005).

The Government of Rwanda has discovered that gender equality is one of the key steps to accelerating sustainable development; the recent Gender Gap Report 2020 of the World Economic Forum ranked Rwanda as the first country in Africa and the 09th country globally in promoting gender parity between men and women. The current situation of gender parity and men's participation in domestic work in Rwanda needs more efforts and contributions from all stakeholders, starting from government bodies, international organizations, and local non-government organizations. This study explored how the gender-transformative approach of the Bandebereho project leads to the realization of shared domestic responsibilities between men and women.



1.2 Research Objectives

- i. To assess the effectiveness of the Bandebereho Project at encouraging men's active and sustained participation in domestic work and identify the activities that have successfully altered male attitudes and behaviors towards housework and childcare.
- ii. To provide practical recommendations for upscaling or adapting GTA-based interventions to other rural communities across Rwanda.
- iii. To identify barriers and facilitators that influence men's participation in domestic work, to inform policy and program design.
- iv. To enhance community-level advocacy and sensitization for promoting equitable sharing of labor within the household.

II. LITERATURE REVIEW

2.1 Theoretical Review

This study's research framework explores the influence of gender transformative approaches on changing the social and gender norms, and the institutionalization of gender roles towards male participation in domestic work and gender equality outcomes in Rwanda.

2.1.1 Gender Transformative Approach (Judith Butler's Framework)

Judith Butler's gender theory positions gender not as an immutable self but as a performative, social construction of identity that is produced and reproduced in the repeated acts, practices, and norms attributed to men and women (Butler, 1990). In terms of this conception, the Gender Transformative Approach (GTA) attempts to actively disrupt and re-signify these repetitive acts to challenge patriarchal norms and enable more equitable gender relations (Butler, 2004).

In Butler's view, change occurs when individuals and groups: Deconstruct dominant norms, fundamentally challenge how "being a man" or "being a woman" is tied to socially scripted practices, i.e., assigning domestic labor only to women (Jejeebhoy, 2024). Re-signifying practices replace constraining norms with alternative ways of "doing" gender, i.e., men engaging openly and proudly in caregiving and housework (Butler, 2004). Institutionalize new performances – embed new behaviors in everyday life and community culture so they become normalized and enduring (Hillenbrand et al., 2015). In this study, Butler's theoretical framework can be applied to comprehend how the Bandebereho Project promotes male involvement in domestic work by disclosing the performative nature of gender and creating space for men to enact new, equal forms of masculinity (RWAMREC, 2021).

2.1.2 Why Gender Transformative Approaches (GTA) Theories

Interest in and thinking on GTAs stems from a number of critiques of gender integration practice. First is the common framing of gender analysis on "gaps" that focuses on visible manifestations of gender inequality while ignoring and subsequently not addressing underlying factors. Second impetus for GTAs is a related common exclusive focus on the different roles of women and men and the differences between women and men, particularly women's and men's differential access to resources, which ignores other intersecting social dimensions such as age, social status, race, ethnicity, etc. As part of this process, they become understood as binary opposites, with the dominant category (men) becoming the norm against which its opposite (women) is explicitly and implicitly assessed. The third reason for interest in GTAs is an acknowledgement of the limits of an exclusive focus on women's empowerment. This is particularly troublesome when women are understood as an undifferentiated category, as described above, and the focus is only on women's agency, with no account taken of the gender relations that women and men experience (Wong et al., 2019).

According to Judith Butler's Gender Transformative Approach, this study does not observe male participation in domestic chores as a simple shift in behavior, but rather as a consideration of gender performances. Through interventions like Bandebereho, rigid gender scripts can be re-scripted, making more equitable and sustainable household relations in Burera District attainable.

2.2 Empirical Review

Rutgers (2018) studied about Adopting the Gender Transformative Approach in sexual and reproductive health and rights, and gender-based violence programs, and this study highlighted that gender-transformative approaches can reshape gender relations to be more gender equitable, largely through approaches that free both women and men from the impact of destructive gender and sexual norms. According to Hillenbrand et al. (2015) in their study about measuring gender-transformative change, they concluded that transformative approaches aim to move beyond individual self-improvement among women and toward transforming the power dynamics and structures

that serve to reinforce gendered inequalities. Gender transformative programs directly work to change the social order or the underlying factors that give rise to disparities among men and women (Morgan, 2014). McDougall et al. (2021) bring the idea of the Gender Integration Continuum that positions policies or programs along a continuum ranging from “gender blind” (ignoring gender considerations) to “gender aware” (examining and addressing a range of gender issues, relations, and dynamics). Within the “gender aware” area, the spectrum moves from gender exploitative: reinforcing or using unequal gender dynamics to achieve project goals which should be avoided; gender accommodating: recognizing but working around the gender barriers and inequalities, for example engaging women within the homestead; and; and gender transformative: fostering examination of gender dynamics and norms and intentionally strengthening, creating, or shifting structures, practices, relations, and dynamics toward equality.

This approach entails engaging groups in critically examining, challenging, and questioning gender norms and power relations (Hillenbrand et al., 2015). A gender-transformative approach to development goes beyond the “symptoms” of gender inequality to address “the social norms, attitudes, behaviors, and social systems that underlie them (Hillenbrand et al., 2015). According to Nsabimana (2022), in his study about the analysis of the Sugira Muryango project in community behavior changes: case of male engagement in household responsibility in Ngoma district of Rwanda, he concluded that although men play a vital role in family and community development, they still play a low proportion in household responsibilities or unpaid care work.

III. METHODOLOGY

3.1 Paradigm, Approaches, and Types of Research

This research explored the existing gender patterns between men and women in the Burera district, the presence of the Bandebereho program in the district, and the relationships between the Bandebereho program and the engaged men. It explores how the approach of engaging men contributes to achieving gender equality. A paradigm is a disciplinary matrix that presents the theories, methods, exemplars, and images of a subject. This study uses an inclusive approach rather than traditional gender programs focused on women's empowerment and it shows how changing men's mindset towards gender is critical to achieving gender equality. This study used an innovative approach that is under-researched in gender studies. It advocates for an inclusive approach to achieving gender equality. This study is worth sociological and gender studies as it contributes to the knowledge in the field. It shows the benefits of a men-engaged approach and inclusivity in achieving gender equality.

This study employed a qualitative case study to explore how the Bandebereho project promotes male participation in the domestic sphere, thereby enhancing the realization of gender equality and increasing male engagement in domestic chores. Qualitative methodology refers, in the broadest sense, to research that produces descriptive data, including people's own written or spoken words, and observable behavior. Qualitative methods, like quantitative methodology, are more than a set of data-gathering techniques. It is a way of approaching the empirical world (Tenny et al., 2022). Case studies are generally strong precisely where quantitative studies are weaker; case studies have the potential to achieve high conceptual validity, strong procedures for fostering new hypotheses, usefulness for closely exploring the hypothesized role of causal mechanisms in the context of individual cases, and capacity for addressing causal complexity (Rebolj & Possibilities, 2014). A case study enabled the researcher to explore the strategies, opportunities, challenges, and impacts of the Bandebereho project within the local context of Burera District, Rwanda.

3.2 Focus and Location

This study explored the existing gender patterns between men and women in the Burera district, the existence of the Bandebereho program in the Burera district, and the relations between the Bandebereho program and the engaged men. It explores how the approach of engaging men plays a role in achieving gender equality. Rationale of the Study Site

Burera District in Rwanda's Northern Province provided an appropriate and pertinent venue in which to research the Gender Transformative Approach (GTA) targeting male engagement in domestic work. This is one of the locations for active implementation of the Bandebereho Project, which is a gender-transformative intervention that is being implemented by the Rwanda Men's Resource Centre (RWAMREC) in collaboration with the Ministry of Health, the Ministry of Gender and Family Promotion, and other stakeholders. In 2023, Bandebereho ran the 1st cycle in Burera in 10 health centers. The Bandebereho scale-up program enrolled 3,564 parents (1,782 males and 1,782 females) with a total of 2,951 children under five years old for the first cycle in 10 out of 17 health centers (Rwamrec, 2023). The project engages men in supporting maternal and child health, prevention of gender-based violence, and male engagement in care and household chores (Doyle et al., 2018). Conducting research in Burera, therefore, allows for direct observation and assessment of a program that is already well-established in GTA principles.



Socio-culturally, Burera District is rural and patriarchal with deeply established norms where domestic work and care are perceived primarily as women's work. In such settings, interventions like Bandebereho can generate intense norm change, and therefore, the district is a good case study to assess the ability of GTA to transform gender attitudes and behaviors (Jewkes et al., 2015). Economically, Burera is characterized by subsistence agriculture and little exposure to paid domestic work. This background finds expression in the redistribution of domestic responsibility among women and men, having a direct positive effect on household welfare, from time use, quality of care for children, and economic opportunities for women (Kabeer, 2016).

Finally, the research contributed to the limited body of literature on implementing GTA in rural African contexts. There is a preponderance of existing evidence relating to urban or peri-urban populations (Dworkin et al., 2015). Through its focus on Burera District, the study helped to provide results that can inform rural gender-transformative programming in Rwanda and beyond.

3.3 Subjects and Informants

Sampling method: Qualitative research approaches justify minimal attention to sample size estimation principles and largely depend on subjective judgments and arbitrariness. However, an adequate sample size is essential for a study to address the core elements of validity and credibility in qualitative research. The recommended sample sizes for single-case studies range from 4 to 30 (Sharma et al., 2024). The study employed a purposive sampling method to select participants who have information about the Bandebereho program and its activities, including program beneficiaries, Bandebereho staff, other NGOs in the same scope, and local authorities. Researchers suggest different sample sizes for qualitative research based on the research design. 5 to 25 interviews are required for phenomenology and 20 to 30 for grounded theory (Sharma et al., 2024).

Subjects: The subjects were the direct beneficiaries of the program (the couples who attended the educational groups of the Bandebereho program. The list of subjects is as follows: The research sample involved subjects to reflect household, community, and institutional perspectives of the Bandebereho program in Burera District. It included six couples from Butaro Sector couples who had directly participated in the program and provided testimonies on household-level effects; a focus group discussion in Kinyababa Sector to capture group community information; and two community health workers, who described how male participation in domestic chores had influenced maternal and child health.

Informants: the informants were a staff member of the Bandebereho project was interviewed to describe the program design and its implementation, a local government leader to provide insight into the impacts and community perception of the program, and a gender activist from a different organization, who was interviewed to assess the overall image of gender transformative implementation in the Burera district and Rwanda in general. The interviews continued until the findings reached a sufficient sample size or saturation point. Subjects and informants were selected based on their involvement with and knowledge of the Bandebereho project.

3.4 Data Collection Method

Semi-structured interviews: the interview is the “favored digging tool” of social researchers (Kvale, 1996). Semi-structured interviews were organized with the beneficiaries of the project (the couples in group education), Bandebereho project staff, and local government leaders. **Data collection tool:** an interview guide was available containing questions covering the domestic work status, the barriers and motivation from the community, and the impact of the program, challenges, and opportunities.

Focus group discussion: Focus groups are designed to use group dynamics to yield insights that might not be accessible without the kind of interaction found in a group (Basnet, 2018). Two focus group discussions were organized with the program beneficiaries to discuss their experience, challenges, and opportunities they gained from program activities. **Data collection tool:** A Focus group guide was used to explore the program satisfaction and the program's impact on the beneficiaries

Observation: This method was used to watch and record the participants' events, behaviors, and physical appearances during the Bandebereho program and their natural settings. Participant observation helped to understand the flow of activity in a setting of interest (Kawulich, 2005). **Data collection tool:** Note-taking and video-audio recordings were employed to record the participants' behaviors and physical characteristics.

3.5 Data Analysis

Thematic Analysis: The data from interviews and focus groups were transcribed and analyzed using a thematic analysis approach. This approach enabled the identification, analysis, and reporting of themes within the data, facilitating an understanding of patterns related to male engagement, community dynamics, challenges, and impacts. **Coding Process:** Transcripts were coded in three phases: open, axial, and selective coding to organize data into themes relevant to the research questions. **Ensuring data validity:** Well-defined concepts were used, such as



gender-transformative approaches and male participation in domestic work. The theory of performativity was used to illustrate how the Bandebereho project fosters male involvement in domestic work through a structured change process.

Triangulation: To enhance both validity and reliability, data were collected from multiple sources, including interviews, focus groups, and document analysis. By cross-verifying findings from these different methods, the study ensured a comprehensive and accurate assessment of the Bandebereho program's impact on male participation in domestic chores and gender equality. This approach helped minimize biases, strengthen the credibility of the results, and provide a more holistic understanding of the program's effectiveness. **Context-specific design:** Socio-cultural and economic context considered in analyzing data. **Expert validation:** Pretest surveys are conducted, and the gender equality experts' inputs are considered.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Division of Domestic Work before Bandebereho

The division of household tasks before the Bandebereho program was introduced in Burera District was characterized by an unequal distribution of domestic labor, deeply rooted in traditional gender roles and patriarchal modes of society organization that regulated everyday life. Household operations took place within a close social order, where men were predominantly perceived as breadwinners, engaging in activities outside the home to earn a living. At the same time, women carried the heaviest reproductive and domestic load. As one of the male subjects from Butaro sector described, "I grew up watching my dad never do any chores, and I thought that is what a man is supposed to be outside working, providing food, but not to prepare it."

Before Bandebereho, the division of domestic work was highly unequal: women bore the lion's share of cooking, cleaning, childcare, and water/firewood collection—often in addition to engaging in agricultural work. Male non-participation was culturally normalized and socially enforced: men who attempted housework risked mockery, stigma, or accusations of being "controlled" by their wives. Decision-making power reflected this further imbalance, wherein men made financial and household decisions, while the often essential labor of women remained undervalued. Women recounted experiences of exhaustion, emotional distress, and lack of recognition, while men disclosed emotional distances from their own children. These dynamics indicated that inequalities in domestic work were located not only in labor distribution but in the broader systems of male dominance and gender identity.

4.1.2 Observed Changes in Male Participation After Bandebereho

The Bandebereho program created concrete and meaningful shifts in family relationships among participating families within Burera District. Highly entrenched gender norms shift slowly, yet evidence and testimony collected indicate considerable improvements in men's attitudes, routines, and interactions with their families. For most families, the unthinkable, previously having men help with caregiving and domestic chores, became a new, valued standard.

The structured discussions, couple-based sessions, and reflection exercises of the Bandebereho program catalyzed meaningful change. Participants moved through identifiable "stages of change," beginning with awareness that gender roles are socially constructed rather than biologically fixed. It was this realization that freed men to experiment with new behaviors—peeling potatoes, fetching water, preparing porridge, holding babies—despite initial fear of ridicule. As wives encouraged and community role models emerged, positive behaviors were reinforced and gradually diffused across households. Eventually, some men internalized these new roles, redefining fatherhood and masculinity in more nurturing and cooperative terms.

Significant improvements in domestic work sharing were observed: Men increasingly contributed to basic chores and childcare, accompanied wives to antenatal care, and took responsibility for newborn care. Such changes reduced women's workload and improved their well-being. Women reported improved communication and emotional intimacy, and marital harmony. Several families also reported economic benefits, as shared responsibilities enabled women to pursue small income-generating activities while men reduced expenditures on alcohol. Children benefited from increased paternal involvement, characterized by stronger emotional bonds and more engaged caregiving.

Women's perspectives confirmed both progress and complexity. Whereas most expressed appreciation for their husbands' involvement, some felt embarrassed when community members mocked their husbands for performing tasks considered feminine. Similarly, a few men limited their participation to "less stigmatized" chores, unwilling to challenge deeper community norms. These findings illustrate that though attitudinal change is happening, transformation is uneven and influenced by household dynamics and external social pressures alike.



4.1.3 The Role of Gender Transformative Approaches (GTA)

Bandebereho relied on three interconnected strategies: facilitated conversations, couple-based sessions, and structured reflection exercises. Facilitated conversations created safe and supportive spaces for men and women to discuss sensitive issues, power dynamics, gender roles, and family welfare, often for the very first time. As a subject from Butaro explained, “We had never talked about these things. At home, you keep quiet. In these meetings, we spoke openly, and I heard other men say what I was afraid to say.” These dialogues allowed participants to compare experiences, learn from others who had already made small changes, and critically question the norms they had long taken for granted.

Couples’ sessions proved especially effective in promoting joint decision-making. They encouraged spouses to plan together, share duties, and resolve disagreements constructively. A father from Kinyababa reported, “*Before, I decided everything. If there was a problem, we quarreled. Now, we sit together, talk, and solve it without shouting. We work like a team.*” This approach helped move families away from hierarchical patterns toward more collaborative partnerships. “*Beyond childcare, I now actively plan family matters together with my wife. We sit down to make decisions jointly and have built trust through shared responsibilities.*” A man said

GTA strategies, therefore, played a central role in enabling these shifts. Facilitated discussions allowed couples to challenge harmful norms and consider the emotional, social, and financial consequences of unequal labor. Exercises in joint decision-making helped families to replace conflict with dialogue. Reflection tools, such as mapping a typical day's workload, proved pivotal in helping men understand the level of domestic burden their partner was under. Being witness to other respected men publicly engaging in domestic work also contributed to normative change, rendering such practices respectable rather than shameful.

4.1.4 Obstacles and the Remaining Challenges

Patriarchal values are strong, especially in public settings where community judgments affect behavior. Some women internalize these norms and discourage husbands from helping due to the fear of gossip about their intimate relations. Not every family experienced a dramatic transformation. In most cases, men's participation was either symbolic or limited to less stigmatized activities, such as peeling potatoes or fetching water. As one wife commented, “*He helps with some domestic activities, but he still finds others shameful, like washing clothes, holding a newborn baby, and bathing them.*”

Deep-rooted opposition still exists in communities and families where traditional masculine norms remain strong. Some women also restrain themselves from embracing men's domestic involvement, out of fear of judgment. “*I love when he helps, but some neighbors say I am lazy or controlling him,*” one participant explained.

Sustainability is a concern. With no continuing reinforcement, participants are vulnerable to reverting to old behaviors, especially if broader community norms do not support new behaviors. As a facilitator of the group education (GE) from Kinyababa put it, “*If the community does not change, the man who tries will feel alone, and he may stop.*”

Overall, the findings show that Bandebereho has been associated with more equitable domestic practices, improved couple relations, better childcare, and broader norm shifts at the community level. While resistance persists, this study demonstrates that gender-transformative programming can drive profound social change when embedded in dialogue, local context, emotional reflection, and visible role modeling. The program has built solid foundations for lasting gender equality and provides a model that could be scaled up for Rwanda and other contexts where patriarchal norms are deeply entrenched.

4.2 Discussion

The impact of the Bandebereho program in Burera District is best appreciated from the perspective of Gender Transformative Approaches (GTA). Gender-transformative interventions and programs interrogate critically the gender expectations and norms that underpin power relations, and they seek consciously to promote attitudes and behaviors that further gender equity, usually by working through the social construction of masculinity (Stewart et al., 2021). The practices used in Bandebereho align closely with these principles and provide compelling evidence of how structured interaction, reflection, and peer support can drive sustainable change in both households and communities.

4.2.1 Bandebereho and the Evidence Base on GTA Interventions

Its findings concur with other international reviews of Gender Transformative Approaches in indicating that reflective programming over several months can shift masculine identities and improve equity between household responsibilities. According to (Casey et al., 2018) “programs can be categorized as gender transformative if they explicitly focus at least in part on a critical examination of gender-related norms and expectations (particularly those related to masculinity), and on increasing gender equitable attitudes and behaviors”. Bandebereho's randomized controlled trial showed reductions in intimate partner violence, increased male accompaniment to antenatal visits,

improved joint decision-making, and improved sharing of household work (Doyle et al., 2018). The results have shown that the Bandebereho program has successfully challenged traditional and social norms that prevented male participation in domestic chores. Similar results have been reported in other applications of GTA, such as Program H, a peer-group-based curriculum that was first introduced by Promundo. Program H has proven there is increased couple communication, higher men's openness to performing caregiving, and reductions in gender violence in various countries (Dunson, 2024).

Evidence is increasingly emerging that healthy relationship skills and healthy communication can contribute to men's respectful behavior. Community-based programmes like SASA! in Uganda have also proven that norms change can foster increased male participation in domestic work, joint decision-making, and reduce IPV (Kyegombe et al., 2014). SASA! Men, for example, were significantly more likely than their control counterparts to report participating in domestic work and valuing women's work (Kyegombe et al., 2014). This aligns with the findings from the Bandebereho program, where men who participated in group education sessions reported higher participation in domestic work after changing their behavior about the domestic tasks rooted in gender and social norms.

Moreover, the program's emphasis on relational practice working with couples rather than individuals alone facilitated the renegotiation of roles and expectations within the home's domestic space concurrently. This dual emphasis on self-reflection and collective action is consistent with GTA's underlying principles, which recognize that sustainable change requires both internal attitudinal change and external social support. to facilitate a process that creates a supportive environment for implementing GTAs that address the underlying barriers to both project success and to achieving gender equality (Larson et al., 2024).

4.2.2 Mechanisms of Change in GTA

The results illustrate that gender transformation is a progressive process, not a single event. Butler's theory of gender performativity explains how repeated acts (e.g., cooking, caregiving) reconstitute masculinity. GTA literature (Doyle et al., 2018; Hazra et al., 2023; Hillenbrand et al., 2015) confirms that interventions are most effective when they combine personal reflection, relational reinforcement, and community-level validation. The evidence from Burera District shows that Bandebereho successfully guided participants through each stage, though challenges remain in sustaining and normalizing these practices under economic and cultural pressures.

The drivers of change observed in the study facilitated group discussion, couples therapy sessions, peer modeling, and reflection mirror the core strategies of successful GTA programs globally. GTA Instead of burdening women with the responsibility for equality, engage men and women together as agents of change, promoting critical awareness about gender norms, transforming social norms and policies, and respecting the conceptualized, designed, and implemented flexibility and adaptability to varied contexts (Mendes, 2025). Bandebereho program employs peer-facilitated group discussion, critical reflection, and role-play to promote new behavior in emotionally safe environments, which align with the GTA strategies.

Likewise, the SASA program in Kampala, Uganda, activates communities in progressive stages of start, awareness, support, and action, emphasizing conversation about power relations and normative expectations to alter social network behaviors (Kyegombe et al., 2014). All these illustrations confirm that modifying gender norms requires internal motivation (through reflection and skill-building) as well as external support (through visibility, peer encouragement, and spreading norms).

4.2.3 Contribution of Theoretical Frameworks

The Burera District findings highlight the possibility of integrating two GTA theoretical orientations: Judith Butler's performativity, wherein gender is performed by reiterating behavior such as caregiving, and Social norms theory, wherein behavior change depends on others' perceived beliefs and actions within one's social network. According to Kritsonis (2005), behavior change is affected by environmental influences, personal factors, and attributes of the behavior itself. Bandebereho permitted participants to "do" new forms of masculinity (e.g., carrying babies, cooking), whereas peer and community validation shifted the risks of extending beyond traditional roles, effectively restructuring the normative environment.

4.2.4 Special Strengths and Long-Term Challenges

Compared with broader community interventions like the SASA program from Uganda, Bandebereho's advantage is that it works with couples to bring about direct household change. Long-term, population-level change can be helped, though, by combining community-level mobilization with couple-based approaches to shift larger norms. Consistent with Bandebereho RCT findings, although male involvement in domestic work increased, the overall workload of women didn't decrease, perhaps because women created new activities or allocated tasks at the same time. This aligns with a study conducted in Nigeria revealed that a greater number of women engaged in



adequate physical activity in spite of their heavy domestic workload (Bolarinde et al., 2018). This emphasizes the importance of tracking both women's time-use and intra-household task re-allocation in future evaluations.

Directions for Future Research

Future research could trace men's engagement and women's time use over time to see whether activities are being reallocated accordingly. Testing paired models that pair GTA with livelihood or community-based campaigns can also shed light on the most effective ways of scaling.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The current study investigated how the Bandebereho program, rooted in the Gender Transformative Approach, has changed men's involvement in domestic and caregiving tasks in Burera District, a region characterized by strong patriarchal norms and significant, unequal gendered division of labor. Before the intervention, domestic work was distinctly regarded as a woman's domain. Women were solely responsible for most of the household chores and childcare, often in addition to agricultural work, which resulted in extreme time poverty and emotional distress for them. Men's engagement in domestic work was minimal and culturally condemned; those who tried to help faced ridicule or loss of respect or were accused of being "controlled" by their wives. Decision-making power also rested with the men, further reflecting gendered inequalities at the household and community levels.

The Bandebereho program catalyzed change with facilitated discussion groups, couples' sessions, and reflective exercises. These helped participants question long-held assumptions about gender roles. The men moved through identifiable stages of change: at first, recognizing that domestic roles are socially constructed; then experimenting with new behaviors; gradually receiving positive reinforcement from their partners; and eventually normalizing new practices. Peer influence and role models played a critical part in helping men overcome the fear of stigma, especially as respected community members adopted caregiving roles publicly. After participation in Bandebereho, men reported significant changes in attitudes and behaviors. Many men started peeling potatoes, fetching water, preparing simple meals, accompanying wives to antenatal care, and taking care of infants—all acts previously perceived as inappropriate for men. Such changes decreased the workload for women, improved communication, and increased emotional closeness among spouses. Women reported feelings of respect and appreciation, not feeling overwhelmed. Several couples reported fewer conflicts, greater cooperation, and improved household harmony. There were also benefits for children: men became more emotionally engaged and present in caregiving.

At the household economic level, shared responsibilities have enabled women to participate in small income-generating activities, while men report a reduction in spending on alcohol. Families reported improved planning and jointly budgeting for better use of resources. Appreciation by men of the valuable contribution of women's domestic work was more common, both economically and emotionally, even when chore distribution was not equal. This transformation was neither universal nor uniform, with some men continuing to limit their contribution to tasks they perceived to be less stigmatizing and avoiding domestic work in public due to ongoing community pressure. Others may resist men's increased participation out of fear of gossip or accusations of laziness.

5.2 Recommendations

Deep-rooted gender norms, community expectations, and economic constraints remain significant barriers. Sustainability remains a challenge insofar as long-term behavioral change requires ongoing reinforcement from community leaders, institutions, and broader structural support. It reiterates the appropriateness of GTA as a robust theoretical framework that reshapes and challenges entrenched gender roles. From the practical perspective, findings indicate the need for scaling up Bandebereho-like programs through community structures, such as health centers, local leaders, and schools, to ensure sustained reinforcement of new behaviors. Government and NGOs have to integrate principles of GTA into policies and social programs; they also have to invest in training facilitators and promoting male role models to reduce stigma. Sustained community dialogue and public support are essential to prevent backsliding and to expand equitable domestic practices across households.

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The influence of tense, aspect, and mood on tone in the Nambya language of Hwange District in Zimbabwe

Vincent Nyoni^{1*}
Geoffrey Kazembe Tambulukani²

^{1*}vincenambya@gmail.com (+263779549961)

^{1,2}University of Zambia, Zambia

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ABSTRACT

This paper explores the interaction between Tense, Aspect, and Mood (TAM) and tonal realisation in Nambya, a Bantu language spoken predominantly in Hwange District in western Zimbabwe and, to a lesser extent, in parts of Botswana. Drawing from the broader framework of Bantu phonology, it aims to contribute to understanding how TAM categories influence tonal patterns and prosodic structure. Qualitative descriptive research design was employed, and data were gathered through semi-structured interviews and archival materials. The participant group comprised ten purposively selected native speakers, both formally trained and natural language users, who provided a rich linguistic corpus for analysis. The descriptive framework facilitated systematic identification and analysis of tonal variation as conditioned by TAM morphology. The findings reveal that, as in many Bantu languages, TAM exerts a considerable influence on tonal behavior in Nambya verbs. The language exhibits predictable penultimate lengthening across various verbal extensions, including the intensive, applicative, reciprocal, causative, passive and stative (potential) forms. This study enhances understanding of Nambya's phonological system and supports ongoing efforts to document and revitalise marginalised Zimbabwean languages through detailed linguistic analysis.

Key words: Applicative, Aspect, Causative, Mood, Tense, Verbal Extension

I. INTRODUCTION

In Bantu languages, the primary determinants of a verb's tone are its *Tense-Aspect-Mood* and the *Clause Type* in which the verb appears. Tone in Bantu languages is a crucial grammatical and lexical feature, often signaling distinctions in meaning as well as verbal categories such as tense, aspect and mood (TAM) (Yip; 2009). In Bantu languages generally, tonal patterns frequently reflect grammatical distinctions, with specific tonal melodies associated with TAM values (Marlo & Odden, 2019). This paper investigates how tense, aspect and mood influence tone in Nambya, aiming to identify systematic interactions between tonal variation and verbal morphology. By analysing tonal patterns across different TAM forms, the research contributes to understanding the phonology-morphosyntax interface in Nambya. The findings will not only enhance documentation of an underrepresented language but also provide insights relevant to comparative Bantu studies, language preservation, and the broader understanding of tonal grammar in African languages.

The Tense-Aspect Morphemes in Nambya: Distinguishing between tense and aspect in Bantu languages, including Nambya, presents significant morphological challenges. As Robinson (2023, p. 274) observes, this difficulty arises largely because the two grammatical categories are frequently expressed through the same morpheme. In linguistic terms, *tense* refers to the inflectional category that situates an event in time, typically in relation to the moment of speech. In many Bantu languages, tense distinctions extend beyond the basic past, present and future categories to include more temporal divisions such as the *recent past* (events occurring earlier today) and the *remote past* (events occurring before today).

Aspect, on the other hand, concerns the internal temporal structure of an event rather than its temporal location. According to Al Maaytah and Ayobami (2025, p. 34–35), aspect indicates whether the situation denoted by a verb is complete (*perfective*) or ongoing (*imperfective, progressive, or habitual*). Bostoen, et al (2022, p. 154) further clarify that aspect is a verbal category expressing the status or duration of an event in relation to specific time frames. Analysis of Nambya data reveals that, except for future tense markers, all tense markers simultaneously encode aspectual information. This overlap provides the rationale for analysing the markers of these two grammatical categories in tandem within this study. Faitaki and Murphy (2020) defines mood as a grammatical category of verb inflection distinguishing



modality such as indicative and subjunctive. All Bantu languages have at least the three moods (indicative, subjunctive and imperative).

1.2 Research objective

The objective of the study was:

To identify the influence of tense, aspect and mood on tone in the Nambya language.

1.3 Questions

The above objective was operationalised by the following research question:

What is the effect of tense, aspect and mood on tone realisation in Nambya language?

II. LITERATURE REVIEW

2.1 Theoretical Review

The application of Autosegmental Phonology to the analysis of Nambya provides a rigorous framework for examining how tonal variation interacts with grammatical categories such as Tense, Aspect, and Mood (TAM). By treating tone as an autonomous yet systematically linked feature, this model enables a more accurate mapping of tonal behaviour across verb stems and morphological constructions. This theoretical orientation is particularly suited to Nambya, a tonal Bantu language in which tone plays both lexical and grammatical roles.

2.1.1 Autosegmental Phonology

Using autosegmental representations, especially the concepts of tonal tiers and association lines the study systematically accounts for tonal alternations triggered by TAM distinctions and clause types. Consequently, this framework not only illuminates the structural organisation of tone in Nambya but also aligns the analysis with broader comparative research in Bantu phonology, enhancing the explanatory depth and cross-linguistic relevance of the findings. In Bantu, the primary determinants of a verb's tone are its *Tense-Aspect-Mood*, and the *Clause Type* in which the verb appears

Numerous phonologists and morphologists have studied verb extensions. Kari (2017) examined verbs in Central Delta languages and found that, beyond inflectional affixes, these verbs can also take one or more extensional suffixes also known as verbal extensions. The range of meanings these suffixes convey include causative, reflexive/ reciprocal, iterative, benefactive, associative, initiative, instrumental, accompaniment and directive function. Fernando and Kittila (2019) conducted an in-depth investigation into verbal affixes in Kikongo, focusing on their forms and functions. The study identified several morphemes: *-il-* and *-el-* as applicative morphemes, *-is-* and *-es-* as causative morphemes, *-ki-* as the reflexive morpheme, *-w-*, *-iw-*, and *-ew-* as passive morphemes, *-an-* and *-azyan-* as reciprocal morphemes, and *-ik-* and *-ek-* as stative morphemes. Fernando's analysis provided valuable insights into how verb extensions operate and are manifested in the Kikongo language.

III. METHODOLOGY

3.1 Research design

This study utilised qualitative research method through examining verbs with respect to tense, aspect and mood and identified tonal contrasts.

3.2 Study area

Participants for this study were selected from both rural and urban areas of Hwange district, specifically St Mary's, Lukosi, Hwange urban, Jambezi and Dete, which fall under the chiefdoms of Hwange, Shana and Nekatambe-regions where Nambya is actively spoken.

3.3. Target Population

Neuman (2014) states that the target population includes all individuals, events or objects belonging to a clearly defined group, to which a researcher intends to apply the study's findings. In this study the population included approximately 117,000 Nambya speakers (Joshua Project, retrieved June 16, 2022).



3.4 Sampling Procedures and Sample Size.

Purposive sampling also known as “judgmental sampling” or expert was used. (Neuman, 2014) asserts that the procedure involves building a sample based on cases, individuals or communities judged as being appropriate for the study that is underway. Ten mother tongue speakers of Nambya were sampled.

3.5 Data Collection Instrument and Procedures

The data collection steps included setting the boundaries for the study, collecting information through unstructured or semi-structured observations and interviews, documents and visual materials as well as establishing the protocol for recording information. Elicitation as a method, was used to extract data on tone from the participants. Faitaki and Murphy (2020:360) define language elicitation as a task that requires a participant to produce some form of language, in either oral (speaking) or written form. Verbs were grouped according to tone patterns and syllable profile-monosyllabic, disyllabic, trisyllabic, quadrisyllabic or poly syllabic.

3.6 Data Analysis

The verbs were further analysed to determine whether their tonal patterns were influenced by specific consonants such as the effect of voiced vs. voiceless consonants or depressor vs. non-depressor consonants. Participants were given tasks such as adding extensions to verb forms.

Verbs were examined with respect to tense, aspect and mood (TAM) to identify tonal contrasts.

For example:

(1a) /labuka/	[laβuka]	‘run’		
Word	Applicative		Reciprocal	Causative
(a)lab-u ‘k-a	(b)lab-u ‘k-i ‘l-a		(c)lab-uk-i ‘l-a ‘na;	(d)lab-u ‘k-i ‘s-a
run- FV-a	run-APPL-FV-a		run-RECIP-FV-a	run-CAUS-FV-a
V.Root + FV	V.Root + EXT-APPL		VRoot- EXT-RECIP	VRoot- EXT-CAUS.

IV. FINDINGS & DISCUSSION

4.1 Data Gathering

For the purposes of TAM, a list of words was shared with the 10 mother tongue speakers, who were practicing teachers, cultural association members and graduates from the university who had studied Nambya. A group discussion was also held where students studying a Diploma in bible Translation (DBT) were involved in designing the Alphabet for the language during an Alphabet Design workshop. (ADW). Participants read the words in isolation and then with extensions and were recorded. The recorded data were analysed using AZT to display F0 contours, allowing identification and annotation of high, low, and contour tones for systematic comparison across lexical and phrasal contexts. FLEx was used to organise words into morphological and syntactic frames, ensuring consistency in the tonal analysis.

4.2 Verbal Derivation/Verbal Extensions

Verbal derivation in Nambya is accomplished by use of derivational suffixes. Bernander (2017:98) states that the extensions are various kinds of verb-to-verb derivational suffixes, common throughout the Bantu languages. These are common in the postulated Niger-Congo phylum (Hyman, 2007). They are found in the next to last slot of the verbal word and are various morphemes used for semantic and/or functional derivations of the verbal root. The canonical verbal extension has the shape-VC, except for the passive and causative extensions with -V and -VCV.

4.3 The Agglutinative Nature of the Nambya Verb

Bernander (2017:130) and Van Der Wal (2022:158) concur that, generally Bantu languages have a Subject-Verb-Object word order and importantly are agglutinative. Nurse and Devos (2019:21) in Bernander (2017:130) says agglutinative languages are “characterised as verb-centred, having a rich set of grammatical information encoded as affixes on the main verb.” Agglutinative languages have been described as those that use affixes that denote single grammatical categories and are concatenated with relatively little phonological alteration (Croft 2003:46). Meeussen (1967) describes a typical structure for Bantu verb forms, which generally follows this pattern: *Initial – Negative – Subject – Tense/Aspect – Object ≠ Root – Extension – Final Suffix*.



4.4 Subject and Object Marker

(1b)-seka'

βa'ka'se'k-a

-β-a'ka'-se'k-a

CL2-RM.PST.PERF-laugh-FV

SC-TAM-Root-TAM

'Those who laughed'

The above example shows the occurrences of the various elements of the verb. As can be seen from the illustrative example, the obligatory elements of the verb are the verb root and a final vowel, which have to occur in every construction. In other words, all the other elements are optional, implying that they may or may not occur in the verbal structure.

Another feature is the multiple occurrences of some of the constituent parts of the verb. As shown in examples that follow, verbal extensions can occur in multiple after the verb root. An important point to note is the change in the final vowel from *-a* to *-e* / *-i* when there is the applicative formative as one of the verbal suffixes. For example:

a) [βa'ka]	'build'	[βak-i'l-a]	(applicative)
b) [seka']	'laugh'	[sek-e'l-a']	(applicative)
c) [baja']	'pierce'	[baji'si'sa]	(intensified causative)
		[baja'na']	(reciprocal)

4.5 Verb Roots

Koroma (2021) says, "a root is a morpheme that carries basic meaning of a word." Of the morphemes in the stem, typically only the root has underlyingly contrastive tonal properties.

(2)Verb	IPA	gloss	verb	IPA	gloss
/bulay-a/	βu'lay-a']	'kill'	/lay-a/	[laj-a']	'teach,'
Root-FV			Root-FV		
/bhik-a'/	[bik-a']	'cook'	/tek-a/	[te'k-a']	'fetch'
Root-FV			Root-FV		

The Nambya verb root as a bound morpheme allows one or more affixes to be attached. These affixes can either be prefixes or suffixes. The Nambya verb root also has the CVC structure that is typical of most Bantu languages (see Mkochi 2021).

4.6 The Tense Inflection

Nambya verbs are often inflected for tense. Comrie (1976) in Robinson (2023:275) defines tense as the grammaticalised expression of location in time. The crucial characteristic of tense is that it relates the time of the action, event or state of affairs referred to in a sentence, to the time of utterance. Tense has to do with the relationship of time denoting events or situations that move from past, present and future. In this study, time is conceived as linear and as stretching backwards to refer to the past and forwards to refer to the future, that is in relationship to the present. In this case, the present is the 'now', which refers to the moment of speaking or writing. Time can be represented in a straight line as follows:

Before

After

Now

There are two types of past tenses in Nambya, the recent past and remote past. The recent past tense is used to refer to situations or activities that took place before the time of speaking, but on the day of speech. The remote past tense is used for situations and activities that took place before the day of speaking, that is, before the morning of the day of speech or the day being referred to.

4.7 The Future Tense Markers

Al Maaytah, and Ayobami. (2025: 33) state that the future tense describes an event that has not yet happened, a future event or state of being and is expected to happen. It is a situation, action or process that takes place subsequent to the moment of speaking. It indicates an action or process that takes place after 'now'.

4.7.1-Cha- Future

This morpheme indicates that a situation, action or process will take place subsequent to the moment of speaking. This is illustrated with the examples:

3

Table 1

Future Tense Marker

Word	IPA	Tone pattern	gloss
(a)kanga	-ka'ŋga'	HH	'fry'
tichakanga mangwana.	ti-tʃa'-kang-a ma'ŋwana'		
	CL1-FUT-fry-FV tomorrow		
	SC-TAM-Root-TAM NP		
	'We will fry tomorrow'		
(b) ku'ma'	ku'ma'	HH	'praise'
ndichakuma mangwana	ndi-tʃa'-kum-a ma'ŋwana'.		
	CL1-FUT-praise -FV evening.		
	SC-TAM-Root-TAM NP		
	'I will praise tomorrow'		

Verbs that have an HH tone realise the H shift from the prefixal H tone to the tense marker -cha-[tʃa]. This phenomenon blocks the H tone on the verb root to be realised as L tone in order to observe the OCP.

4.7.2 -Noo- Future

Another future tense marker in Nambya is -noo-. The *noo-* marker merges with the preceding SC. Below are illustrative examples:

(4)

Table 2

Future Tense Marker

Word	IPA	Tone pattern	gloss
to'l-a	to'l-a	HL	'take'
(a)ti-noo'-tol-a ma'ŋwana'	(a)ti- noo' -tol-a ma'ŋwana'		'We will take tomorrow'
	CL1-FUT-take-FV tomorrow		
	SC-TAM-Root-TAM NP		
(b) ku'nga	ku'nga	HL	'flow'
ndi-noo'-kung-a ma'deko'	ndi- noo' -kung-a ma'deko'		'I will flow in the evening'
	CL1-FUT-flow-FV evening		
	SC-TAM-Root-TAM NP		
(c)li'nga	li'nga	HL	'look'
ndi-noo'-ling-a ma'ŋwana'	ndi- noo' -ling-a ma'ŋwana'		'I will look tomorrow'
	CL1-FUT-look-FV tomorrow		
	SC-TAM-Root-TAM NP		

The rhythm rule lowers a prefixal H which is both preceded and followed by H on the tense marker -noo-. The H tone shift from the SC shifts to the tense marker -cha-[tʃa] and delete the H on the verb root to be realised as L tone.



4.7.3 The Present Tense-Aspect Markers

-no- Present Habitual marker

In Nambya the present tense is marked by **-no-**. This marker indicates an action, situation or process that is happening ‘now’. It merges with the SC. It is imperfective because it denotes something that one has been doing and is still doing. Below are examples:

(5)

Table 3

Present Habitual Marker-no-

Word	IPA	Tone pattern	gloss
(a) gusa'			'shave'
a) ndi-no'-gus-a ma'susu.	ndi- no' -gus-a ma'susu.	LH	'I shave hair'
	CL1-PRES.HAB-shave-FV hair		
	SC-TAM-Root-TAM NP		
(b) vwimpa'	vwimpa'	LH	'drink'
ti'-no-vwimp-a i'-su'kwalugo	ti'- no' -vwimp-a i'-su'kwalugo		
	CL1-PRES.HAB-drink-FV fermented drink		'We sip fermented drink'
	SC-TAM-Root-TAM NP		
(c) vuma'	vuma'	LH	'accept'
	ndi- no' -vuma u'-nda'ndu		'I accept the blame'
	CL1-PRES.HAB-accept-FV 'blame'		
	SC-TAM-Root-TAM NP		

In this analysis, the SC is underlyingly H tone (5b) (because of non-depressor initial consonant) and the tense marker- **no-** is underlyingly Low. There is deletion of the H in the verb root being caused by the H of the OP which is H tone. This happens to observe the OCP rule. In 5a and 5c the SC begins with a depressor consonant that blocks realisation of H and only on the aspect marker- **no-** which is H toned.

The present habitual can also be marked by **-o-** as shown in the alternative realisation of the above examples recast below:

(6)

Table 4

Present Habitual Marker -o-

Word	IPA	Tone pattern	gloss
(a) gusa'	gusa'	LH	'shave'
	nd o' -gus-a ma'susu.		'I shave hair'
	CL1-PRES.HAB-shave-FV hair		
	SC-TAM-Root-TAM NP		
(b) vwimpa'	-vwimpa'	LH	'drink'
	to'-vwimp-a i'-su'kwalugo.		'We sip fermented drink'
	CL1-PRES.HAB-drink-FV fermented drink.		
	SC-TAM-Root-TAM NP		
(c) vuma'	vuma'		'accept'
	nd- o' -vuma u'-nda'ndu		'I accept the blame'
	CL1-PRES.HAB-accept-FV 'blame'		
	SC-TAM-Root-TAM NP		

The examples, (5 a-c) show that the **-o-** is used to express the same meaning expressed by **-no-** in (6 a-c) above. The -no- and -o- seem to occur in free variation. The vowel in the SC **-nd-i-** and the vowel in the TM **n-o-** coalesce to create **-o-**. The coalesced vowel carries the H tone from the first vowel. Thus, the H on the SC deletes the H on the FV -a- of the verb stem.

4.7.4 The Recent Past Tense-Aspect Marker

Nambya has no past recent marker. However, the presence of **-a-** in the SC behaves like the marker for recent past perfective. It indicates a situation, action or process that took place before the time of speaking, but on the day of speech, and has been completed. The following are illustrative examples:

(7)a

Table 5

Recent Past Tense Marker - The Immediate Past Tense has Ø Zero Marker

Word	IPA	Tone pattern	gloss
(a) mi'nya'	mi'ŋa'	HH	'stingy'v
	nd-a-miŋ-a' m'wana		'I stinged the child'
	CL1-RC.PAST.PERF-stinged -FV child		
	SC-TAM-Root-TAM NP		
(b)cheka	tʃe'ka'	HH	'cut'
	nd-a-tʃek-a' tʃiŋk'wa		
	CL1-RC.PST.PRF-cheka -FV bread		'I cut bread'
	SC-TAM-Root-TAM NP		
(c)cheka	tʃe'ka'	HH	'cut'
	zw-a-tʃek-a' tʃiŋk'wa		'They cut bread' (aug)
	CL2-RC.PST.PRF-cheka -FV bread		
	SC-TAM-Root-TAM NP		
(d)-benga	(d)-βe'ŋga'	HH	'hate'
	β-a-βe'ŋg-a' mwana.		'They have hated the child'
	CL2-RC.PST.PRF-hate-FV		
	SC-TAM-Root-TAM		
(e)mi'nya'	(e)mi'ŋa'	HH	'stingy'v.
	k-a-mi'ŋ-a' m'wana (dim)		'It stinged the child'
	CL12-RC.PAST.PERF-stinged -FV child		
	SC-TAM-Root-TAM NP		
(f)fu'ka'	fu'ka'	HH	'cover'
	β-a-fu'k-a'		'They have covered'
	CL2-RC.PAST.PERF-cover-FV		
	SC-TAM-Root-TAM		

The SC does not determine the tone of the root verb. If the SC marker is a non-depressor consonant, (7d-f) the root maintains its tone status as in βafu'ka'. However, if the SC is nasal or depressor consonant, (7a-c) the H tone in the root is blocked.

4.7.5 The Remote Past Tense-Aspect Markers

-aka- Remote Past Perfective

The remote past tense is marked by **-aka-**This marker indicates an action, situation or process that took place before the day of speaking, that is, before the morning of the day of speech or the day being referred to. It also indicates that the action, situation or process has been completed (Al Maaytah & Ayobami (2025:34).

(8)

Table 6

Remote Past Tense Marker- aka-

Word	IPA	Tone pattern	gloss
a) -βu'ya'	b) -βu'ya'	HH	'come'
- ndakabuya	nd-aka'-βu-j-a		'I came'
	CL1-RM.PST.PRF-come -FV		
	SC-TAM-Root-TAM		
(b) ku'ma'	(b) ku'ma'	HH	'praise'
	β-aka'-ku'm-a' bashe		'They praised the chief'
	CL2-RM.PST.PRF-come-FV		
	SC-TAM-Root-TAM NP		

If the SC has a depressor consonant, the H tone in the root is blocked. However, where the SC is not depressor consonant, the verb root maintains its tone status.

4.8 The Modal Inflection

Like tense and aspect, mood is also an inherent verbal category. All Bantu languages have at least the three moods as illustrated in Nambya below. In Nambya the category mood comprises five members which are morphologically marked namely the hortative, the imperative, the indicative, the potential and the subjunctive. Katamba (1993:222) notes that the function of mood is “to describe an event in terms of whether it is necessary, possible, permissible or desirable.” Whilst languages like English indicate mood syntactically by using auxiliary modal verbs such as ‘must’, ‘can’ and others, in Nambya and most Bantu languages, mood is indicated by a verbal inflection. Koroma (2021:30) says the category of mood answers the question ‘is it real?’ ‘is it imagined?’ as it expresses the speaker’s attitude about the reality of events.

4.8.1 The Imperative Mood

The imperative mood expresses an order or a command in both the affirmative and negative forms (Nwokoji 2024, p.140; Ngowa and Ngonyani, 2020, p.101). The imperative can be defined as a finite form ending in **-a**, and lacking tense-aspect marking. In the negative form the finite form ends in **-e**. Below are some examples:

(9)

Table 7

The Imperative Affirmative

Word	IPA	Tone pattern	gloss
-baj-a´	-baj-a´	LH	‘pierce’
baja pasi	baj-a´ pa´si		‘pierce down’
	pierce-FV down		
	Root-TAM LOC		
^m b ^w ela´	^m b ^w ela´	LH	‘fall!’
	^m b ^w -el-a´		‘fall’ (imperative)
	fall-FV		
	Root-TAM		
wan-a´	wan-a´	LH	‘find!’
	wan-a´		‘find’ (imperative)
	‘find’-FV		
	Root-TAM		
dila	dila´	LH	‘pour!’
	dil-a´		‘pour’ (imperative)
	pour-FV		
	Root-TAM		

Verbs with depressor consonant initial, predictably trigger L tone on the vowel of the first syllable.

4.8.2 The Imperative negative

In the negative imperative the negator **-si-** with a low tone on the following verb and a mid-on any object suffix. The negator has an emphatic sense: ‘do not’. For a negative command usually, the subjunctive is used.

(10)

Table 8

The Imperative Negative

Word	IPA	Tone pattern	gloss
-nda´	-nda´	H	‘go’
usinde kungumba	u-si´-nd-e´ ku-ŋu´mba		‘Do not go home’
	CL1-NEG-go-FV-Home		
	SC-POL-Root-TAM LOC		
-gala´	-gala´		‘sit’
c) usigale pasi	u-si´-gal-e´ pasi		‘Do not sit down’
	CL1-NEG-sit-FV- down		
	SC-POL-Root-TAM LOC		

4.8.3 The Indicative Mood

The indicative mood expresses or asserts a fact (Ngowa & Ngonyani, 2020:111). The affirmative indicative form of the verb is made up of a verbal stem and a combination of different prefixes such as subject, tense and object markers. Below are some examples:

(11a)**Table 9***Indicative Mood*

Word	Indicative mood	Tone pattern	gloss
-seka'	- ndino'seka	LH	'I laugh' seka
- lima'	-ndino'lima		'I cultivate'
- lima'	-ndino'lima		'I cultivate'
-bika'	- ndimu'bika		'I am cooking'
-la'βu'ka	- ndino'laβuka		'I run'
-ndimu'seka	-ndimu'seka		'I am laughing'
-ndimu'laβuka	-ndimu'laβuka		'I am running'

In this analysis it can be observed that the verb root has a H on the FV. Thus in this indicative mood, - the SC-ndi-has L tone, while the tense marker **-no-** has a H tone. Consequently, the FV is realised with a L tone to obey finality effects, where phrase-final syllables tend to have lowered tone.

(11b)**Table 10***Indicative Mood*

Word	IPA	Tone pattern	gloss
(i)-to'la 'take'	-to'la	HL	'take'
ndinotola	ndi- no' -tol-a		'I take'
	CL1-PRES.HAB-take-FV		
	SC-TAM-Root-TAM		
(ii)-lo'βa	-lo'βa	HL	'beat'
ndichondoba	ndi- tfo' - ⁿ d-oβ-a		'I will beat him/her'
	CL1-FUT-CL1-beat-FV		
	SC-TAM-OC-Root-TAM		
(iii)HL -li'ŋga	-li'ŋga	HL	-li'ŋga
ndichondinga	ndi- tfo' -nd-ing-a		'I will look at him/her'
	CL1-FUT-CL1-look-FV		
	SC-TAM-OC-Root-TAM		

The SC which is underlyingly L- (i) because of its depressor qualities deny the realisation of H on the verb root to maintain the L-tone progressively. The H tone on the tense marker- no- deletes the H on the verb root. In (ii and iii) the SC which is underlyingly H deletes the H of the verb initial **-l-** which deverbally becomes nasal **nd-** which consequently is anticipated L- tone.

Below is the indicative negative.

Table 11*Indicative Negative*

Word	IPA	Tone pattern	gloss
(iv) to'l-a	to'l-a	HL	'take'
a-ndi-to't-ol-a	a-ndi-to't-ol-a		'I do not take'
	NEG-CL1-take-FV		
	POL-SC-Root-TAM		
-loba	-lo'βa	HL	'beat'
(v)anditondoba	a- ⁿ di-to'- ⁿ d-oβ-a		'I will not beat him/her'
	NEG-CL1-NEG-CL1-beat-FV		
	POL-SC-POL-OC-Root-TAM		

4.8.4 The Potential Mood



The potential mood indicates a possibility. It can be used in both declarative and interrogative senses. When used in a declarative manner, it expresses a possibility, for example, that someone can do something. When used in interrogative manner, it is either asking for permission to do something or is soliciting advice on doing something. Below are some examples.

(12)

Table 12*The potential Mood'*

Word	IPA	Tone pattern	gloss
(a)-gus-a'	-gus-a'	LH	'shave'
ndi-nga'-gus-a	ndi- nga' -gus-a		'I can cut hair/Can I cut hair?'
	CL1-POT-cut hair-FV		
	SC-Mood-Root-TAM		
(b) -guta'	-guta'	LH	'be satisfied'
ndi-nga'-gut-a	ⁿ di- nga' -gut-a		'I can/Can I be satisfied?'
	CL1-POT-go-FV		
	SC-Mood-Root-TAM		
(c)vwimpa'	vwimpa'	LH	'sip'
ndi-nga'-vw-i-mp-a	ⁿ di- nga' -vw-i-mp-a		'I can sip/ Can I sip?'
	CL1-POT-sip-FV		
	SC-Mood-Root-TAM		
(d)dyunka'	dyunka'	LH	'pierce'
ⁿ di-nga'-dj-u-nk-a	ⁿ di- nga' -dj-u-nk-a'		I can pierce/Can I pierce?'
	CL1-POT-go-FV		
	SC-Mood-Root-TAM		

Some prefixes are H in all contexts (subject to regular lowering between Hs), for example object prefixes like /-mú-/ 'cl. 1' or the tense prefixes /-chá-/ 'future', /-ngá-/ 'potential', combined with the H root /-tól-/ . The SC is underlyingly L/H. There is a H shift from the SC onto the tense marker -nga-. Because of its depressor qualities, the H on the FV is deleted.

4.8.5 The Subjunctive Mood

In a wide range of Bantu languages, the presence of an object marker triggers morphological and tonal changes on the verb in imperative and subjunctive forms (see Nurse & Devos, 2019; Lodhi, 2002, Marlo to appear). Even without an OM, imperative and subjunctive forms commonly have tonal patterns that are unique within the inflectional tone system of many languages. The phonological shape of subject markers is: CV- vs. V- vs. N- The phonological shape of the subject markers also sometimes interacts with tone patterns.

4.8.6 Present Subjunctive, Affirmative

-monosyllabic stem

(13a)(i)-pa' 'give'

C11-give -FV

C11-ROOT-TAM

'give'

1per.sg.	ndi'[-p-e]	'that I should give'
1 st per.pl.	ti'[-p-e]	'that we should give'
2 nd per.sg.	u'[p-e]	'that you should give'
2 nd per.pl.	mu'[p-e]	'that you should give'

(14)(ii)LH-sek-a'

C11-laugh -FV

C11-ROOT-TAM

'laugh'

1 st per.sg.	ndi'-se'ke	'that I should laugh'
1 st per.pl.	ti'-se'k-e	'that we should laugh'
2 nd per.sg.	u'-se'k-e	'that you should laugh'



2 nd per.pl.	mu'-se'k-e	'that you should laugh'
3 rd per. sg.	e'-se'k-e	'that he/she should laugh'
3 rd per pl.	be'-se'k-e	'that they should laugh'

Subjunctives with the final vowel -e where the subject prefix immediately precedes the stem have what could be seen as another variant of the basic non-melodic pattern. L verbs roots have an initial H due to Doubling from the subject prefix, as expected and H verbs spread the root H as far as the third stem vowel. (see 14a (ii)). However, unlike the base pattern, the final vowel is always L-toned, which can lead to deletion of the lexical H in monosyllabic stems. (13a (i)). Ngowa and Ngonyani (2020) note that as in other Bantu languages, the subjunctive is a morphological feature characterised by a verbal suffix -e, an obligatory subject marker, and the absence of tense.

4.8.7 Present Subjunctive, Negative

The negative command of the subjunctive is similar with the imperative negative.

-seka'
-si-sek-e
C11-NEG-laugh-FV
C11-Root-TAM
'do not laugh'

(15)1 st per.sg.	ndi'-si-seke	'that I should not laugh'
1 st per.pl.	ti'-si-sek-e	'that we should not laugh'
2 nd per.sg.	u'-si-sek-e	'that you should not laugh'
2 nd per.pl.	mu'-si-sek-e	'that you should not laugh'
3 rd per sg.	e'-si-sek-e	'that he/she shouldnot laugh'
3 rd per.pl.	be'-si-sek-e	'that they should not laugh'

Tone interacts with the SC which has a H tone. The negation -si- is underlying low. The verb stem with a L tone deletes and loses the H on the final syllable to become progressively L. Analysis of the subjunctive pattern would seem to be that a L tone is superimposed on the final vowel, overriding stem-internal tone-tripling.

4.9 The Verb Intensive Extension

Lodhi (2002) states that this form indicates intensity or quickness of action. The intensive extension is realised as -is- or -es-. The intensifying element is generally the same as the causative one but it does not contract as the latter does, e.g. Shona -naka (be good) > causative -nakisa/-natsa, but intensive -nakisa only. Below are comparative examples of the causative and applicative extensions in Nambya.

Causative extension		Applicative extension	
(16).HL'tola'	'take'	tola	'take'
(a)tola	tolesa	tola	tolela
-to'l-a	tole's-a	to'l-a	tol-e'l-a
-tola-FV	tola-CAUS-FV	tola-FV tola	APPL- FV
Root-TAM	Root-EXT-TAM	Root-TAM	Root EXT-TAM
'take'	'take very much'	'take'	'take for/on behalf of'

Nambya like any Bantu languages, forms its verb causatives by affixing the suffix -is- or -es-onto the preceding verb root. Taji (2025:13) states that the function of the causative extension is that "it induces the meaning 'be able to be caused to do something'." Fortune (1984) says the general significance of the causative is 'to cause to act', 'to make to act'. In other words, the causatively extended verb stem indicates that the action in question is being caused or brought about by one agent on another.

For example:

(17) LH Verb root	+Causative extension	gloss
(a)gut-a'	gu-ti's-a'	'cause to be satisfied'
satisfied-FV	be satisfied-CAUS-FV	
Root-TAM	Root-EXT-TAM	
'satisfied'	'make someone to be satisfied'	



(b)mbal-a' dress-FV Root-TAM 'dress'	mba-li's-a' dress-CAUS-FV Root-EXT-TAM 'make someone to dress'	'cause to dress'
(c)mbul-a' undress-FV Root-TAM 'undress'	mbu-li's-a' undress-CAUS-FV Root-EXT-TAM 'make someone to undress'	'cause to undress'
(d)mbwel-a' -fall-FV Root-TAM 'fall'	mbwe-li's-a' fall-CAUS-FV Root-EXT-TAM 'make someone to fall'	'cause to fall'
HH(a)fu'k-a' -cover-FV Root-TAM 'cover'	fu-ki's-a' cover-CAUS-FV Root-EXT-TAM 'cause someone to cover'	'cause someonecover'
(b)ka'm-a' -milk-FV Root-TAM 'milk'	ka-mi's-a' milk-CAUS-FV Root-EXT-TAM 'cause someone to milk. v.'	'cause someone to milk'v.
(c)ku'β-a' -be finished-FV Root-TAM 'be finished'	ku-βi's-a' finish-CAUS-FV Root-EXT-TAM 'cause to be finished'	'cause to be finished'
(a)HL.-βa'ka build-FV Root-TAM 'build'	-βa-k-i's-a build-CAUS-FV Root-EXT-TAM 'make someone to build;	'cause someone to build'
(b)-te'ŋg-a buy-FV Root-TAM 'buy'	-te-ŋg-e's-a buy-CAUS-FV Root-EXT-TAM 'cause to buy'	'cause someone to buy'
(c)li'm-a -plough-FV Root-TAM 'plough'	lim-i's-a plough-CAUS-FV Root-EXT-TAM 'cause to plough'	'plough for'
(d)ko'm-a -dry-FV Root-TAM 'dry'	kom-i's-a dry-CAUS-FV Root-EXT-TAM 'cause something to dry'	'cause to dry'
(e)-su'ŋg-a arrest-FV Root-TAM 'arrest'	su-ŋg-i's-a arrest-CAUS-FV Root-EXT-TAM 'cause someone to arrest'	'cause someone to arrest'

The analysis on the above H tone verbs show that in a disyllabic verb, a High tone spreads twice postlexically onto the following two vowels in the causative extension to dock on the penultimate as a result of high tone spreading (17a-c; 17a-e). The verb stem with H tone on the initial syllable shifts to the penultimate.

4.9.1 The Applicative Verb Extension

Bernander (2017:100) states that the applicative verb extension contains a valence-increasing function as it introduces an extra (object) argument. In Nambya its post-radical element or the applicative suffixes are realised as **-il-** or **-el-**.

For example:

(18a) LH Verb root	+Applicative extension	Gloss
(i) baja´		‘pierce’
-baj-a´	ba-ji´l-a´	‘pierce for’
-pierce-FV	pierce-APPL-FV	
Root-TAM	Root-EXT-TAM	
‘pierce’	‘pierce for’	
(ii) kwedza´		‘try’
kwedz-a´	kwe-dze´l-a´	‘try for’
-try-FV	try-APPL-FV	
Root-TAM	Root-EXT-TAMP	
‘try’	‘try for’	
(iii) - vija´		‘skin,’v.
-vij-a´	vij-i´l-a´	‘skin on behalf of’
-skin-FV	skin-APPL-FV	
Root-TAM	Root-EXT.TAM	
‘skin’	‘skin on behalf of’	
(iv) buza´		‘ask’
-buz-a´	buz-i´l-a´	‘ask on behalf of’
-ask-FV	ask-APPL-FV	
Root-TAM	root-EXT-TAM	
‘ask’	‘ask on behalf of’	

In the LH we realise the H shift two postlexical to dock on the FV. This phenomenon is unlike in the other Tone patterns- HL, L.L or HH.

(18b) (i)(a) HL-li´l-a		‘cry’-
-li´l-a	li-l-i´la	‘cry for’
-cry-FV	cry-APPL.FV	
Root-TAM	Root-EXT-TAM	
‘cry’	‘cry for’	
(ii)-ba´t-a		‘hold’
-ba´t-a	bat-i´l-a	‘hold for’
hold-FV	hold-APPL-FV	
Root-TAM	Root-EXT-TAM	
‘hold’	‘hold for’	
(iii)-βa´k-a		‘build’
-βa´k-a	βak-i´l-a	‘build for’
-build-FV	build-APPL-FV	
Root-FV	Root-EXT-TAM.	
‘build’	‘build for’	
(iv)-du´bw-a		‘swim’
-du´bw-a	dubw-i´l-a	‘swim for’



-swim-FV	swim-APP-FV
Root-TAM	Root-EXT-TAM
‘swim’	‘swim for’

The suffixes are underlyingly toneless, thus the High tone on these suffixes when they are attached to H tone verb roots is a result of high tone spreading rules to the penultimate in the applicative extension. The H in the first syllable of the disyllabic verb shifts to the penultimate.

(18c)(i)L.L – mbwedz-a		‘drop’
-mbwedz-a	mbwedz-e’l-a	‘drop for’
-drop-FV	drop-APPL-FV	
Root-TAM	Root-EXT-TAM	
‘drop’	‘drop for’	
(ii)-medz-a		‘plant’
-medz-a	medz-e’l-a	‘plant for’
-plant-FV	plant-APPL-FV	
Root-TAM	Root-EXT-TAM	
‘plant’	‘plant for’	
(iii)-kwedz-a		‘try’
-kwedz-a	kwedz-e’l-a	‘try for’
-try-FV	try-APPL-FV	
Root-FV	Root-EXT-TAM	
‘try’	‘try for’	
(iv)-pedz-a		‘finish’
-pedz-a	pedz-e’l-a	‘finish for’
-finish-FV	finish-APPL-FV	
Root-TAM	Root-EXT-TAM	
‘finish’	‘finish for’	

In the L.L. verb root, (18c (i-iv)) the H tone is realised in the penultimate. The verb root is L toned however there is the realisation of the H tone of the extension in the penultimate. It fails to explain why there is a realisation of H on these verb roots. This is a phenomenon that needs further research as the realisation of H on L verb roots has no explanation in place.

4.9.2 Passive Suffix Extension

This form indicates that the subject is acted upon by an agent. It has been observed in many Bantu languages that monosyllabic stems almost always occur with the longer form **-iw-**. Examples of monosyllabic and disyllabic stems and their passive forms follow below. The passive in Nambya is indicated by the post-radical/pre-final element (suffix) **-w-**, **-iw-**, **-ew-** and **-uw-**. The selection of which form to use depends on the verb stem being extended. Below are illustrative examples:

(19a) H Verb root	+Passive extension	gloss
(i)-ta’		‘do’
-t-a’	-ti-w-a’	‘be done’
-do-FV	be done-PASS-FV	
Root-TAM	root-EXT-TAM	
‘do’	‘be done’	
(ii) tja’-		‘fear’
-tj-a’	tji-w-a’	‘be feared’
fear-FV	fear-PASS-FV	
Root-TAM	root-EXT-TAM	
‘fear’	‘be feared’	



(iii) -pa´		‘give’
-p-a´	pi-w-a´/pu-w-a´	‘be given’
-give-FV	root-PASS-FV	
Root-TAM	root-EXT-TAM	
‘give’	‘be given’	
(iv) -da´		‘love’
-d-a´	di-w-a´	‘be loved’
-love-FV	love-PASS-FV	
-root-TAM	root-EXT-TAM	
‘love’	‘be loved’	
(b).HH- tone		
(19b)(i) -ka´ng-a´		‘fry’
-ka´ng-a´	ka´ng-w-a´/kaᅅg-i´w-a´	‘be fried’
-fry-FV	fry-PASS-FV	
Root -TAM	root-EXT-TAM	
‘fry’	‘be fried’	
(ii) -ku´m-a´		‘praise’
-ku´m-a´	ku´m-w-a´/kum-i´w-a´	‘be praised’
-praise-FV	praise-PASS-FV	
Root-FV	root-EXT-TAM.	
‘praise’	‘be praised’	
(iii) -tʃe´k-a´		‘cut’
-tʃe´k-a´	tʃe´k-w-a´/tʃek-i´w-a´ / tʃek-e´w-a´	‘be cut’
-cut-FV	cut-PASS.FV	
Root-TAM	cut-EXT-TAM	
‘cut’	‘be cut’	
(iv) -fu´k-a´		‘cover’
-fu´k-a´	fu´k-w-a´/fuk-i´w-a´	‘be covered’
-cover-FV	cover-PASS.FV	
-root-TAM	root-EXT-TAM	
‘cover’	‘be covered’	

Analysis of the above indicates that monosyllabic and bisyllabic verbs (19bi-iv) take the **-w-**, **-ew** or **-iw-** for the passive TAM. In monosyllabic verbs, the H in the FV shifts to the FV of the extension. In disyllabic verbs, the H tone in the first syllable is deleted or shifted to observe the OCP principle and docked on the penultimate syllable. In principle, the rules of vowel harmony apply to all verbal extensions in question. Extensions containing /i/ or /a/, such as the passive or the reciprocal, do not change their vowel quality.

4.9.3 The Reciprocal (also called Associative) Extension

Moreno (1988) states that reciprocal constructions encode events in which two or more participants are in a symmetrical relation to one another. Each participant is both an agent and a patient of the event. Kari (2017) describes reciprocal extension as a suffix which has morphological structure –a. Many Bantu languages employ the reciprocal form to denote association. The usual post-radical element is **-na** or **-ana** and the extension often takes a conjunctive construction with **-na** or **-no**. The reciprocal extension in Nambya is realised as **-an-**. Unlike all the other suffixes that have so far been discussed, it has no allomorphic variation. Because of that, this is the form that occurs with all the verb roots that can be extended by this suffixal morpheme. The following are some examples.



(20)(a)LH Verb root	+Reciprocal extension	Gloss
(i) -baj-a´ -baj-a´ pierce-FV Root-TAM ‘pierce’	-baj-a´n-a´ pierce-RECIP-FV Root-EXT-TAM ‘pierce each other’	‘pierce’ ‘pierce each other’
(ii) -daβ-a´ -daβ-a´ -answer-FV Root-TAM ‘answer’	daβ-a´n-a´ answer-RECIP-FV Root EXT-TAM. ‘answer each other’	‘answer’ ‘answer each other’
(iii) -vij-a´ -vij-a´ -skin-FV Root-TAM ‘skin’	vij-a´n-a´ skin-RECIP-FV Root-EXT-TAM. ‘skin each other’	‘skin’v. ‘skin each other’
(iv) -la ^m b-a´ -la ^m b-a´ refuse-FV Root-TAM ‘refuse’	-la ^m b-a´n-a´ refuse-RECIP-FV Root-EXT-TAM ‘refuse each other’	‘refuse’ ‘refuse each other’
(i) HH -fuka -fu´k-a´ -cover-FV Root-TAM ‘cover’	fu-ka´n-a´ cover-RECIP-FV Root-EXT-TAM. ‘cover each other’	‘cover’ ‘cover each other’
(ii)tʃeka -tʃe´k-a´ -cut-FV Root-TAM ‘cut’	tʃe-ka´n-a´ cut-RECIP-FV Root-EXT-TAM. ‘cut each other’	‘cut’ ‘cut each other’
(iii)-kanga -ka´ŋg-a´ -fry-FV Root-TAM ‘fry’	ka-ŋga´n-a´ fry-RECIP-FV Root-EXT-TAM. ‘fry each other’	‘fry’ ‘fry each other’
(20b)(iv)L.L -kuj-a -kuj-a -grind-FV Root-TAM ‘grind’	kuj-an-a grind-RECIP-FV Root-EXT-TAM. ‘grind each other’	‘grind’ ‘grind each other’
(v) -laβ-a -laβ-a -read-FV Root-TAM ‘read’	laβ-an-a read-RECIP-FV Root-EXT-TAM. ‘read each other’	‘count’ ‘count each other’

In the HH verb roots there is H shift to the penultimate. In the LH verb roots the realisation of H tone to the penultimate of the verb stem and FV is accountable to the H shift two places post lexically (20a) (i-iv) and (20) (i-iii). LL verbs (20b) (iv-v) maintain their tone pattern. We also notice that there is a predictable FV to L.

4.10 The Stative (Potential, Neuter) Extension

Bernander (2017) indicates that the potential marker expresses the coming into being of a situation, when operating on a stative verb like ‘be taken’, ‘be looked at’, ‘be flowable.’Lodhi (2002) says this extension indicates position or posture. In some Bantu literature (For example, Fortune 1984; Moreno 1988), this suffix is also referred to as the potential or neuter extension. Taji (2025:13) says “the stative extension yields stative and potentiality readings with some slightly additional meanings. It has further been shown that the stative suffix can co-occur with several other extensions, including the reciprocal (to show that the subject is entering a state of being acted upon); the applicative extension (to show that the subject is passively entering a state of being acted upon for the benefit of someone or at a certain location and the causative extension where it induces the meaning ‘be able to be caused to do something’. The stative suffixes are -ik- and -ek-. The following are some illustrative examples showing its occurrence:

(21a).HL Verb root	+Stative extension	Gloss	stative reciprocal
(i) -to'ɫ-a -to'ɫ-a -take-FV Root-TAM 'take'	tol-e'k-a take-STAT.FV Root-EXT-TAM. 'be taken'	'take' 'be taken'	tol-e'k-a'n-a
(ii) -li'ŋg-a -li'ŋg-a -look-FV Root-TAM 'look'	'look' liŋg-i'k-a look-STAT.FV Root-EXT.TAM 'be looked at'	'be looked at'	stative+causative liŋg-i's-a'n-a
(iii) -ku'ŋg-a -ku'ŋg-a -flow-FV Root-TAM 'flow'	'flow' kuŋg-i'k-a flow-STAT-FV Root-EXT-TAMP. 'be flowable'	'be flowable'	stative + applicative kuŋg-i'k-a'n-a

Analysis of the stative TAM, the H tone of the verb stem shifts two places or syllables to the right to dock on the penultimate of the inflected verb base. In the stative + appl-causative-reciprocal, H shifts two vowels to the right to realise LHL tone melody.

(21b)HH (i) -ka'ŋg-a' -ka'ŋg-a' -fry-FV Root-TAM 'fry'	kaŋg-i'k-a' fry-STAT.FV Root-EXT-TAM 'be friable'	'fry' 'be friable'	
(ii) -ku'm-a' -ku'm-a' -praise-FV Root-TAM 'praise'	kumi'ka' praise-STAT.FV Root-EXT-TAM 'be praisable'	'praise' 'be praisable'	
(iii) -be'ŋg-a' -be'ŋg-a' -hate-FV Root-TAM -'hate'	beŋg-e'k-a' hate-STAT.FV Root-EXT-TAM 'be hateable'	'hate' 'be hateable'	



(iv) -tʃe'k-a'		'cut'
-tʃe'k-a'	tʃek-e'k-a'	'be cuttable'
-cut-FV	cut-STAT-FV	
Root-TAM	Root-EXT-TAM	
'cut'	'be cuttable'	

What is noticed in the analysis and the role of the stative TAM, is that disyllabic verbs with either HH or HL realise the shift of H tone to the right and dock on the penultimate. The study found that tone in Nambya functions as both a phonological and grammatical feature that systematically interacts with tense, aspect, and mood. Tonal variations correspond to specific TAM categories high tones marking perfective actions, and low or contour tones signaling imperfective or progressive aspects. Mood distinctions also show predictable tonal shifts, confirming tone's morphosyntactic role. Overall, Nambya aligns with Southern Bantu languages where tone is central to verbal morphology and meaning expression.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The verbal extensions in Nambya can occur in multiple after the verb root. In the applicative formative of the verbal suffix there is a notable change in the final vowel from *-a* to *-e /i* such as in

a)[βa'ka]	'build'	[βak-i'l-a]	(applicative)
b[seka']	'laugh'	[sek-e'l-a']	(applicative)

There is an observable phenomenon of H tone shift. For example, in disyllabic verbs with either HH or HL realise the shift of H tone to the right and dock on the penultimate.

5.2 Recommendations

Comprehensive documentation of Nambya phonology and tone is needed, including analyses of tonal behavior across grammatical categories such as negation and question formation. Comparative studies with related Bantu languages like Kalanga, Shona, and Ndebele should be pursued to trace historical and structural influences. The findings should also inform language revitalisation and education efforts by integrating tonal awareness into teaching materials. Additionally, future research should apply acoustic and computational methods to refine tonal analysis and develop digital linguistic resources for Nambya.

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The role of debate in enhancing students' English-speaking skills in lower secondary schools of Nyabihu District, Rwanda

Alphonse Nteziyaremye¹

Sana Nibyobyiza²

Christine Uwamwiza³

Daniel Ndahimana⁴

Vincent Bucyedusenge⁵

Isachar Maniraguha⁶

Simon Ndacyayisenga⁷

¹ntezalphonse1981@gmail.com

²nibyobyizasana@gmail.com

³uwamwizachristine0@gmail.com

⁴danielccat@gmail.com

⁵vbucyedusenge@gmail.com

⁶isacmani@gmail.com

⁷simondacyayisenga@gmail.com

¹<https://orcid.org/0009-0008-3081-7982>

⁴<https://orcid.org/0009-0003-3424-6543>

^{1,5,6,7}RP-Karongi College, ^{2,3}University of Technology and Arts of Byumba (UTAB), ⁴RP-Musanze College, ^{1,2,3,4,5,6,7}Rwanda

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ABSTRACT

This study aimed at assessing the extent to which debates are implemented in teaching and learning activities, identifying the benefits of debates in enhancing students' English-speaking skills, and evaluating the challenges faced in implementing debates during teaching and learning at G. S. Kareba and G. S. Jenda, selected in Nyabihu district. This research referred to constructivism and behaviorism theories. It employed a descriptive research design and targeted 1280 of the overall population from both schools. The sample size of 128, consisting of 93 lower secondary students, 31 teachers, and 4 administrative staff, was selected by using stratified probability and purposive sampling techniques. Quantitative data were collected from teachers and students by using questionnaires. On the other hand, qualitative data were collected from school leaders by using interviews. By the end, this study discovered that 73.4% of student participants participate in debates on a weekly basis, while 20.3% participate monthly. Furthermore, the students' pronunciation and responding skills were generally developed (100%) as a result of debates, followed by increased confidence in public speaking and vocabulary development. The most significant challenges include the students' lack of confidence in speaking English, reported by 100% of respondents, the lack of resources (93.0%), and fear of making mistakes (83.6%). Finally, the students are recommended to actively participate in debate sessions to enhance their English-speaking skills and take advantage of further opportunities related to practicing public speaking and engaging in discussions. Teachers, on the other side, should create an encouraging environment where students feel comfortable expressing their opinions, while the school leaders should provide necessary resources and follow up.

Keywords: Benefits of Debate, Challenges, Implementation of Debate, Lower Secondary Schools, Speaking Skills

I. INTRODUCTION

Worldwide, effective communication in the English language has become more fundamental because of its role as a transnational language in different areas of life, including business, education, and technology. According to Bakuriyehe et al. (2025) and Otieno and Saiteu (2023), the English language is used as a channel of teaching and learning in various nations. In line with that, debates have been identified as an efficient tool for improving language skills, specifically speaking (Santhosh, 2025). Different researches have shown that debates give learners a chance to apply critical thinking, argumentation, and oral communication—key aspects of language competence (Ghafar, 2024). Learning institutions have globally included debates in their curricula, accepting their effect on the development of students' self-confidence, fluency, and general language correctness (Normurodova et al., 2021). However, challenges



remain, particularly in countries where English is not a native language, where exposure to the language, resources, and teaching strategies are inadequate (Ghafar, 2024).

In Africa, the implementation of debates in schools as an educational strategy has recently gained momentum (Neza & Owino, 2025). As many countries in Africa have adopted English as either a medium of instruction or an official language in teaching, learning, and assessment (Bakuriyehe et al., 2025), the improvement of learners' speaking skills in English is a priority (Plonski et al., 2013; Baziganya et al., 2024). In Nigeria and Kenya, for example, studies have emphasized the role of debates in boosting learners' language skills, critical thinking, and academic performance (Neza & Owino, 2025; Baziganya et al., 2024). Notwithstanding these advantages, in many African countries, schools face challenges including insufficient training for teachers, inadequate resources, and overcrowded classrooms that hamper the effective execution of debates in teaching and learning activities (Arung & Jumardin, 2016).

In East Africa, the medium of instruction used in secondary schools is the English language (Otieno & Saiteu, 2023), particularly in Uganda, Kenya, Tanzania, and Rwanda (Bakuriyehe et al., 2025). Debates have been incorporated as both a teaching method and an extracurricular activity that supports usual teaching and learning activities by fostering dynamic participation and enabling verbal communication abilities. In Uganda, research has highlighted that students who actively participate in debates demonstrate considerable improvement in vocabulary use, pronunciation, and confidence while speaking the English language (Neza & Owino, 2025). Similarly, evidence from Kenya and Nigeria has proved that debates considerably enhance English-speaking, self-confidence, fluency, and critical thinking skills among students who actively get involved (Jimenez et al., 2024). Nevertheless, gaps in access to training and resources between rural and urban schools frequently lead to unreliable outcomes in language learning across the area (Neza & Owino, 2025).

In Rwanda, after the English language became a medium of instruction at all levels of education in 2008, a significant shift in the education sector is remarkable (Nteziyaremye et al., 2024). Since then, significant efforts have been made to enhance students' ability in the English language, including training teachers and the revision of curricula (Habanabakize & Mukamazimpaka, 2021). On the other side, some schools have introduced debates as part of co-curricular activities for language enhancement. However, the incorporation of those debates into everyday teaching activities is still limited, with particular attention to the rural areas where teachers' competencies in the English language and resources are sometimes limited (Irudukunda & Mugiraneza, 2024). Regardless of these barriers, debates still have some educative implications as an instrument for advancing students' English oral skills, specifically in the lower secondary level where basic language skills are acquired.

At G. S. Kareba and G. S. Jenda in Nyabihu District, debates are sometimes performed; however, their effect on students' English-speaking skills has not yet been assessed. These schools, located in a rural area of Rwanda, face challenges including limited exposure to the English language, where Kinyarwanda is the most spoken language by the entire community. However, anecdotal evidence indicates that students who take part in the debate activities demonstrate more confidence and eloquence in spoken English compared to their counterparts. Therefore, this current study aimed at exploring the role of debates in enhancing students' English-speaking skills in both schools, providing evidence supporting the connection between debates and English-speaking skills.

1.1 Statement of the Problem

According to Neza and Owino (2025), efficient communication in the English language is a key skill in today's interlinked world, acting as a gateway to education, career opportunities, and international engagement. Even though Rwanda adopted English as the medium of instruction in 2008 (Ndizeye & Tabaro, 2023), students in the countryside, specifically in Nyabihu District, still struggle with limited English-speaking abilities. In this area, problems such as inadequate exposure to the English language, limited interactional learning opportunities, as well as the supremacy of Kinyarwanda communication outside the classroom, are noticed. As mentioned earlier, these barriers impede the students' capacity to perform academically and effectively compete at the national and international levels. The limited exposure is worsened by traditional instructional methods that prioritize grammar and rote learning over oral communication. As a result, secondary students graduate with limited English-speaking skills, undermining their capacity to meet the linguistic requirements of higher education and employment (Endriyat, 2019).

In addition, limited studies have been conducted on the impact of debates in the Rwandan context, particularly in rural secondary schools where students experience unique educational and linguistic challenges. Therefore, this study was conceived in order to address the identified gap by exploring the role of debates in improving English-speaking skills among lower secondary school students in Nyabihu District. The findings of this study are, hence, expected to have significant implications for refining English-speaking teaching and learning in rural schools.

Lastly, this study is essential as it offers an alternative means of exposing lower secondary students to the English language by examining the role of debates in enhancing students' English-speaking skills. Whereas,



universally and locally, debates are considered efficient tools for language enhancement, their implementation in rural schools in Rwanda is currently scarce and informal.

1.2 Research Objectives

- i. To assess the extent to which debates are implemented in teaching and learning activities at G. S. Kareba and G. S. Jenda;
- ii. To identify the benefits of debates in enhancing students' English-speaking skills at G. S. Kareba and G. S. Jenda;
- iii. To evaluate the challenges faced by teachers and students in implementing debates during teaching and learning activities at G. S. Kareba and G. S. Jenda.

II. LITERATURE REVIEW

2.1 Theoretical Review

This research was conducted based on the following two theories:

2.1.1 Constructivism

According to Jean Piaget's 1980 constructivist learning theory (Waite-Stupiansky, 2017), students actively engage with their environment to construct knowledge. It views the learner as an active agent in the teaching and learning process (Bada, 2015). Debates align with this theory by providing students' opportunities to actively engage in discussions, analyze arguments, and construct knowledge through interaction. This process helps students develop critical thinking (Jimenez et al., 2024) and language skills while applying prior knowledge in real-world scenarios. This theory was deemed essential to study because debates have been observed to develop not only the language speaking skills but also the critical thinking abilities of students who actively participate in them (Neza & Owino, 2025; El Majidi et al., 2021).

2.1.2 Behaviorist Theory

The behaviorist theory by Skinner (1953), as discussed in Vargas (2017), focuses on learning through repetition and reinforcement. This closely relates to debates because students repeatedly use English to articulate arguments and respond to questions, receiving immediate feedback from peers and teachers. In the same context, positive reinforcement, such as encouragement or recognition of good performance, motivates students to improve their speaking skills and increases their confidence (Neza & Owino, 2025; Jimenez et al., 2024).

2.2 Empirical Review

2.2.1 Extent of Debate Implementation in Teaching and Learning Activities

The implementation of debates in teaching and learning activities varies significantly depending on factors such as teacher training, institutional priorities, and available resources. In many schools, debates are not systematically integrated into the curriculum but are occasionally used as a supplementary teaching method or as part of extracurricular activities (Normurodova et al., 2021). When implemented, debates are often informal and lack consistent planning or structured assessment. According to El Majidi et al. (2021), teachers may use debates to encourage active participation and critical thinking, but these sessions are sometimes limited by time constraints and a focus on traditional teaching methods that prioritize rote learning over interactive approaches. As a result, the extent of debate usage in teaching and learning activities remains limited, with considerable potential for further integration to enhance students' speaking and analytical skills (El Majidi et al., 2021).

2.2.2 The Benefits of Debates in Enhancing Students' English-Speaking Skills

Debates have been widely recognized as an effective tool in improving students' English-speaking skills, with numerous studies across the world demonstrating the association between the use of debates and the development of oral communication skills. In the United Kingdom, a study by Alasmari and Ahmed (2013) highlighted how debate activities in secondary schools fostered not only public speaking skills but also vocabulary acquisition and pronunciation accuracy. The research emphasized that debate clubs created opportunities for students to engage in discussions that challenged their linguistic abilities, thus promoting language growth. These findings underscore the global relevance of debates as an instructional strategy (Alasmari & Ahmed, 2013).

Various studies revealed debates as an essential pedagogical approach in English as a Foreign Language (EFL) classrooms. Researchers found that students exposed to regular debates improved in their ability to convey arguments and engage in meaningful conversations in English. The emphasis on argument expression during debates contributed to increased confidence and fluency among learners (Neza & Owino, 2025). Students who participate in debates mostly have better pronunciation, vocabulary use, and confidence in English-speaking than their peers who do not.

The study attributed these improvements to the interactive and practice-oriented nature of debates, which allowed students to repeatedly use and refine their English language skills in realistic scenarios (Neza & Owino, 2025; Baziganya et al., 2024). Similarly, research conducted by Olanrewaju and Ogundare (2017) concluded that debates reduced language anxiety and fostered an environment conducive to active learning.

Globally, many studies emphasized the role of debates in building verbal communication skills in both English-speaking and non-English-speaking students. The studies found that debate participants were better at conveying ideas clearly and responding to questions effectively, demonstrating the universal applicability of debates in improving language skills (Abid et al., 2024). In the same context, research conducted on the impact of debates on English-speaking skills in Kenyan secondary schools indicated that students involved in debates demonstrated better fluency, coherence, and articulation compared to their counterparts. The study also highlighted the importance of school support and teacher training in maximizing the benefits of debates for language development (Neza & Owino, 2025).

2.2.3 The Challenges Faced by Teachers and Students in Implementing Debates during Teaching and Learning Activities

Teachers encounter several challenges when implementing debates during teaching and learning activities. One major issue revealed is the lack of adequate training and experience in facilitating debates effectively. This is a result of some teachers not having received specific professional development in conducting debates, leaving them uncertain about structuring and guiding debates to maximize student participation and learning. Additionally, the limited availability of teaching resources, such as debate prompts, relevant materials, or access to language aids, further hinders their ability to organize meaningful debate sessions. Time constraints within the academic schedule also pose a significant barrier, as teachers often prioritize completing the syllabus over incorporating debates, which are perceived as time-intensive activities (Alasmari & Ahmed, 2013).

For students, some challenges are equally pronounced. Many students struggle with a lack of confidence and fear of speaking in front of their peers, particularly in a second language like English (Neza & Owino, 2025). This fear often stems from limited vocabulary, pronunciation difficulties, and a lack of fluency, which can make participating in debates intimidating. Moreover, students from rural or less-privileged backgrounds may have fewer opportunities to practice English in their daily lives, further reducing their preparedness for debates (Neza & Owino, 2025). Group dynamics can also present challenges, as some students may dominate discussions while others remain passive, limiting equal participation and learning opportunities (Olanrewaju & Ogundare, 2017).

Despite the extensive literature highlighting the benefits of debates in enhancing students' English-speaking skills globally, there is limited research specifically focusing on the practical role of debates towards students' English-speaking skills in rural secondary schools in the Rwandan context. Furthermore, most existing studies emphasize urban or well-resourced schools, leaving a knowledge gap regarding how debates can effectively enhance students' speaking skills when integrated into teaching and extracurricular activities in rural contexts with limited resources. In rural settings like G. S. Kareba and G. S. Jenda, challenges such as limited exposure to English remain underexplored. Therefore, this study seeks to address this gap by examining the role of debates in improving English-speaking skills within a rural Rwandan context, offering localized insights and actionable recommendations to improve English language education in similar settings.

III. METHODOLOGY

3.1 Research Design

This study employed the descriptive research design, which is a systematic approach to exploring and documenting a phenomenon as it exists in its natural context, focusing on describing characteristics, behaviors, and patterns without altering the environment or variables. The researchers chose it because it let them get detailed information through methods like surveys, interviews, and observations. This helped them find patterns, connections, and new ideas about the topic they were studying. This design is particularly suitable for understanding the "what" and "how" of a situation rather than testing causation (Grove et al., 2015).

3.2 The Study Site

This research was conducted at Groupe Scolaire Kareba and Groupe Scolaire Jenda schools, referred to as G. S. Kareba and G. S. Jenda. Both schools are public, having lower secondary school level. They are located in the Jenda sector, Nyabihu district, Northern Province of Rwanda.



3.3 Population and Sampling

3.3.1 Target Population

The target population for this study includes students, teachers, and school administrative staff members from G. S. Kareba and G. S. Jenda schools. Students constitute the largest group, with a total of 1280 individuals (623 males and 657 females), of whom G. S. Kareba has 495 (254 males and 241 females), while G. S. Jenda has a larger number of 785 (369 males and 416 females). The 1280 individuals include 1245 students, 31 teachers who participate in debate activities, and 4 school leaders (2 headteachers and 2 deputy directors in charge of studies).

3.3.2 Sample Size

As it is commonly known in research, a sample size is determined based on factors such as the research objectives, population size, and desired level of accuracy (Ahmed, 2024). A well-calculated sample size ensures that the study findings are representative of the larger population and statistically valid, while also being manageable for data collection and analysis (Taherdoost, 2016; Ahmed, 2024).

Taro Yamane’s (1967) formula of sample size calculation (Oluigbo et al., 2024; Ahmed, 2024) was employed in this study to determine the sample size for students. Therefore, researchers selected 128 participants, consisting of 93 lower secondary students, 31 lower secondary teachers, and 4 administrative staff.

Table 1

Selection of Participants from their Strata

Respondents’ Categories	G. S. Kareba			G. S. Jenda		
	S1	S2	S3	S1	S2	S3
Students	15	15	15	16	16	16
Teachers	15			16		
Leaders	2			2		

In Table 1, students from both G. S. Kareba and G. S. Jenda were stratified by grade level (S1, S2, and S3). From each grade, a proportional number of students was randomly selected. At G. S. Kareba, 15 students were chosen from each grade, resulting in a total of 45 students. At G. S. Jenda, 16 students were also chosen from each grade, making a total of 48 students. For the teachers, 15 were selected from G. S. Kareba and 16 from G. S. Jenda. This proportional distribution ensures that the sample accurately represents the larger population at each school. 4 school leaders also, as the smallest subgroup in the study, were all taken.

3.4 Sampling Techniques

In order to select participants, a probability sampling technique called stratified sampling was employed for students (Ahmed, 2024). This was done to ensure that all subgroups are adequately represented in the sample, increasing the accuracy and reliability of the study’s findings (Kothari, 2004). Student participants were selected from their respective strata using a stratified random sampling technique, ensuring fair representation of each subgroup based on shared characteristics such as school and grade level (Ahmed, 2024). On the other side, for teachers and administrative staff, the purposive sampling technique was applied (Irakarama et al., 2024; Ahmed, 2024). This approach allows the researcher to capture diverse perspectives while maintaining the proportionality across different subgroups.

3.5 Data Collection and Analysis Methods

This study used both the quantitative and qualitative data collection and analysis methods. On one hand, the quantitative data collected from teachers and students were analyzed by using descriptive statistics and presented in tables and figures to organize raw data and summarize and present numerical data in a meaningful way (Bhattacharjee, 2012). On the other hand, the qualitative data collected from the school leaders, through interviews and observations, offering depth and context to research findings (Patton, 2015), were analyzed by using thematic analysis techniques, and then after, were presented by using the paragraphing method. The last approach was preferred due to its flexibility and accessibility that allows researchers to make sense of complex qualitative data by uncovering underlying meanings and relationships.

3.6 Data Collection Tools

In addition to documentation, questionnaires, interview guides, and observation checklists were used to collect the necessary data for this study. As mentioned earlier, the questionnaires were mainly used to collect quantitative data, while the interview guides and observation checklist were applied to gather some qualitative data (Patton, 2015).



IV. FINDINGS & DISCUSSION

4.1 Demographic Information

As highlighted above, the sample size of this study was composed of 128 total participants. The following table gives the details of the gender distribution of those who willingly responded to the research questions.

Table 2
Gender of Respondents

Gender	Frequency	Percentage (%)
Male	61	47.65
Female	67	52.35
Total	128	100

The findings on the gender of respondents in Table 2 show that the study had a nearly balanced representation of male and female respondents. Out of the 128 respondents, 61 (47.65%) were males, while 67 (52.35%) were females. The balanced distribution ensures that the findings reflect diverse experiences and insights from both male and female students, teachers, and school leaders at G. S. Kareba and G. S. Jenda. Apart from the gender consideration, the following table highlights the general overview of the respondents from both schools.

Table 3
Distribution of Respondents by School

School	Frequency	Percentage (%)
G. S. Jenda	66	51.56
G. S. Kareba	62	48.44
Total	128	100

The findings in Table 3 indicate that the respondents were fairly distributed between the two schools, with 66 (51.56%) from G. S. Jenda and 62 (48.44%) from G. S. Kareba. This near-equal representation ensures that the study captures perspectives from both schools, allowing for a comprehensive analysis of how debates are implemented, their benefits, and the challenges faced in enhancing students' English-speaking skills. The following table presents findings related to the teachers' experience in teaching at both schools.

Table 4
Teaching Experience of Teacher Respondents

Teaching experience	Frequency	Percentage (%)
1–3 years	2	6.4
4–6 years	6	19.4
More than 6 years	23	74.2
Total	31	100

The findings table 4 reveal that the majority of teacher respondents (74.2%) have more than six years of teaching experience, indicating a highly experienced teaching staff. A smaller proportion, 19.4%, has between four and six years of experience, while only 6.4% have between one and three years of experience. This indicates that the teachers are well experienced in teaching. However, since this study focuses on debates conducted in English, the researchers assessed how actively the English teachers participated in the debate implementation at both schools. The table below presents the findings.

Table 5
Area of Specialization of Teacher Respondents

Area of specialization	Frequency	Percentage (%)
English	9	29.0
Social Sciences	7	22.6
Sciences	9	29.0
Other	6	19.4
Total	31	100



The above findings (Table 5) shows that the largest proportion of teachers specialize in either English (29%) or sciences (29%), followed by social sciences (22.6%), while 19.4% specialize in other fields. The relatively high percentage of English specialists suggests that there is a strong foundation for implementing debates as a tool for enhancing students’ English-speaking skills. However, the involvement of teachers from various disciplines indicates that debates may not be limited to English classes alone but could also be integrated into other subjects.

4.2 Extent of Debate Implementation at G. S. Kareba and G. S. Jenda

The first part of this study was to assess the extent to which debates are implemented in teaching and learning activities at G.S. Kareba and G.S. Jenda; the following table clearly shows the findings.

Table 6
The Level of Students’ Participation in Debates

How often do students and teachers respondents participate in debates organized at school?	Frequency	Percentage (%)
Weekly	94	73.4
Monthly	26	20.3
Once per term	8	6.3
Never	0	0
Total	128	100

The findings in Table 6, generally, indicates that debates are frequently conducted at G. S. Kareba and G. S. Jenda. A majority of student respondents (73.4%) reported participating in debates weekly, while 20.3% participate monthly, and only 6.3% engage in debates once per term. This implies that debates are an integral part of the teaching and learning process at these schools, with regular engagement from both students and teachers. The high frequency of participation highlights the schools’ commitment to using debates as a pedagogical tool to enhance students' learning experiences, particularly in developing their English-speaking skills. Furthermore, in line with the assessment of the reason behind some students’ and teachers’ rare participation in debates, the researchers assessed the occasions when the debates are mostly implemented. The next table presents the results.

Table 7
Debates Occasions

Debates are conducted as: (Select all that apply)	Frequency	Percentage (%)
Learning activities	128	100
Extracurricular activities	67	52.3
Competitions	34	26.6
Club activities	40	31.3
Public speaking practices	23	18.0

The above data indicate that debates are primarily conducted as part of regular learning activities, with all respondents (100%) confirming their integration into classroom instruction. 52.3% of respondents noted that debates also function as extracurricular activities, while 31.3% participate in them through club activities. Competitions (26.6%) and public speaking practice (18%) are less common formats for debates. This suggests that debates are widely recognized as a valuable teaching strategy within formal education, reinforcing their role in enhancing students’ English-speaking skills and providing opportunities for extracurricular engagement and skills development at the selected schools. Next, the researchers asked about the organization of the debate activities at both schools. The next table highlights the key findings.

Table 8
Individuals Involvement in Debates Organization

Who primarily organizes debates in your school? (Select all that apply)	Frequency	Percentage (%)
Teachers	128	100
Students	66	51.1
Debate club leaders	16	12.5
School leaders	98	76.6



Table 8 indicates that teachers play a primary role in organizing debates, as all respondents (100%) acknowledged their involvement. Second, school leaders significantly contribute to debate organization (76.6%), suggesting strong administrative support. Students (51.1%) also participate in organizing debates. Their involvement is not as dominant, indicating that debates are largely teacher-led rather than student-initiated. Debate club leaders (12.5%) play a minimal role, which suggests the need to strengthen student-led debate initiatives to encourage independent critical thinking, leadership skills development, and debate implementation sustainability. Lastly, the researchers investigated the specific roles of the students in conducting the debates. The following table summarizes the findings.

Table 9
Role of Students in Debates

Which roles do students play in debates? (Select all that apply)	Frequency	Percentage (%)
Moderator	31	24.2
Minutes-taker	35	27.1
Participant/Audience	93	72.7
Timekeeper	95	74.2

The data in table 9 reveal that student participation in debates is substantial, with 74.2% actively engaging as timekeepers and 72.7% as participants/audience. This indicates that most students are involved in a supportive role. These findings suggest that while debates are widely attended, efforts could be made to encourage more students to take on leadership roles to further enhance their confidence and public speaking skills.

4.3 The Benefits of Debates in enhancing Students' English-Speaking Skills at G. S. Kareba and G. S. Jenda

Based on the second objective, this study presents some benefits of debates in enhancing the students' English-speaking skills.

Table 10
Skills Developed by Students through Debates at G. S. Kareba and G. S. Jenda

Skills students developed through debates (Select all that apply)	Frequency	Percentage (%)
Vocabulary	59	46.1
Pronunciation	128	100
Confidence in public speaking	79	61.7
Responding to others	128	100
Grammar use	97	75.8

Based on Table 10, in terms of specific skills, pronunciation and responding skills were universally developed (100%), followed by confidence in public speaking (61.7%) and vocabulary (44.1%). Grammar use was also said to be improved for 75.8% of students. These findings, therefore, confirm that debates serve as an effective pedagogical tool for improving students' speaking abilities (vocabulary, grammar, and pronunciation) and confidence in oral communication in the English language.

4.4 The Challenges Faced by Teachers and Students in Implementing Debates during Teaching and Learning Activities

In relation with the third objective, the participants were asked about challenges to debate implementation at school. The table below summarizes their responses.

Table 11
Challenges Hindering Effectiveness of Debates at G. S. Kareba and G. S. Jenda

Challenges hindering effective implementation of debates (Select all that apply)	Frequency	Percentage (%)
Lack of student confidence in speaking English	128	100
Fear of making mistakes among students	107	83.6
Insufficient preparation time for debates	95	74.2
Lack of resources or materials for debates	119	93



The data in Table 11 present the major challenges hindering the effective implementation of debates in teaching and learning activities. The most significant issue identified is the lack of student confidence in speaking English, cited by 100% of respondents. This factor is closely followed by lack of resources or materials (93%) and fear of making mistakes (83.6%), both of which contribute to students' hesitation and reduced participation. Insufficient preparation time is also a concern, affecting 74.2% of the respondents. Overall, the above data show that psychological barriers and inadequate resources are the main obstacles, suggesting that boosting students' confidence and providing more learning tools and preparation time are essential for improving debate effectiveness.

4.5 Data from Interviews

All four school leaders reported that debates are sometimes conducted daily as learning and teaching activities and weekly or once a month as formal structured debates at both G. S. Kareba and G. S. Jenda. One of them stated, "We schedule debates every last Friday of the month to allow students enough time to prepare." Another one explained that debates are integrated into English, science, and social studies lessons, where teachers assign motion topics in advance. Briefly, their responses about the implementation of debates revealed that while some teachers actively use debates, others struggle due to time constraints, leading to irregular implementation in certain classes.

Regarding the benefits of debates, a head teacher noted, "Debates have significantly improved students' confidence and fluency in English." Another leader added that structured debate through clubs and inter-class competitions helps promote participation. Two among the school leaders highlighted that schools have debate committees, teacher moderators, and rewards for best speakers to encourage engagement. Another one mentioned, "We also invite guest judges from nearby schools to make debates more competitive. These mechanisms reportedly motivate students to practice speaking English more frequently."

Finally, the leaders also acknowledged some challenges, such as limited time, student shyness, and the lack of resources. One head teacher said, "Some teachers find it hard to manage debates alongside the syllabus due to the limited time." To address these challenges, schools have introduced teacher training workshops during CPD and CoP and allocated specific periods for debates. He further indicated that schools also use peer mentoring, where confident students assist weaker ones, and incorporate simpler debate formats to ease participation. One emphasized, "We encourage teachers to integrate mini-debates in regular lessons to make them less intimidating. These measures aim at sustaining debate activities despite existing difficulties."

4.6 Data from Observations

Via the structured observations, the researchers apparently found that debates are reasonably executed in both schools, with different regularity. We observed that the debates are more structured, occurring monthly as planned in one of the schools, whereas, in another, they were occasionally adjourned due to time constraints. Teachers predominantly used debates in English, science, and social science courses. But certain classes lacked appropriate organization, with their students appearing not ready. The sitting arrangements often followed a classroom discussion and debate format, which promoted collaborative engagement.

The observations reaffirmed that debates considerably improve students' English-speaking skills. The active participation of students noticeably displayed their improvement in fluency, pronunciation, and the structure of their arguments. For instance, in one observed debate on "Should school uniforms be mandatory?" the student participants uttered their arguments with effective expressions and coherent ideas, though some struggled with fear of committing some mistakes. Introverted students progressively increased confidence after being encouraged by their colleagues and facilitating teachers. Inter-class debate competitions also encouraged motivation at both schools, with students practicing during informal sessions. Furthermore, in well-organized sessions, students were actively engaged, demonstrating enhanced speaking confidence and critical thinking.

Even though the above practices and benefits were observed, some difficulties were also experienced among students and some teachers. Students faced challenges including stage fright, inadequate confidence, fear, anxiety, and poor management of time during their argumentation. Due to inadequate language background, junior students showed a need for particular debate activities based on their lower level of language than the experienced ones. Some of the junior ones heavily depend on written notes that reduce their expression freedom. On the other hand, teachers tended to struggle with some large class sizes, unsatisfactory trainings on how to conduct debates, and tight syllabi, making it difficult to allocate time for debates. Some teachers also chose to avoid debates because of classroom-related management problems such as noise or disengaged students that disturb the sessions.

4.7 Discussion

The first objective of this study was to assess the extent to which debates are implemented in teaching and learning activities at Groupe Scolaire Kareba and Groupe Scolaire Jenda. This research revealed that the majority of respondents (73.4%) participate in debates on a weekly basis, while 20.3% of them participate at least once a month.



The analysed data indicate that debates are mainly conducted as part of normal learning activities, as confirmed by all respondents (100%). This indicates that debates are more commonly known as a valued teaching and learning tactic in formal education than as an extracurricular activity. Conversely, some other researchers identified that the extent of debate implementation in teaching and learning activities was very limited, with significant potential for further incorporation to improve students' English-speaking and critical skills (El Majidi et al., 2021). Likewise, in Singapore, debates are not systematically integrated into the curriculum in many schools, but are occasionally used as an additional method of teaching or as part of extracurricular activities (Normurodova et al., 2021). Moreover, the analysed data reveal that students' involvement in debates is substantial, with 74.2% actively engaged as timekeepers and 72.7% as audience. This means that most students play a supportive role in debates. As a result, these findings suggest that while debates are commonly attended, efforts could be made to inspire more students to take on leadership roles to further boost their confidence and public speaking skills, as highlighted above (Neza & Owino, 2025).

As highlighted above, the second objective of this study was to identify the benefits of debates in enhancing students' English-speaking skills at G. S. Kareba and G. S. Jenda. The presented data strongly indicate that debates play a vital role in improving students' English-speaking skills. A substantial number of student-participants (100%) testified that debates advance their English-speaking abilities, particularly in pronunciation and responding skills. Grammar use is also enhanced, as confirmed by 75.8% of the respondents. Additionally, respondents indicated that debates improve their fluency, underscoring the importance of constructive criticism in language enhancement (Neza & Owino, 2025). Similarly, in the United Kingdom, a study by Alasmari and Ahmed (2013) highlighted how debates in secondary schools promoted not only public speaking skills but also vocabulary acquisition and pronunciation accuracy. The study stressed that debate clubs, lesson discussions, and competitions were opportunities for students to participate in English-speaking exercises that enhanced their language abilities, thus promoting their language development (Alasmari & Ahmed, 2013; Neza & Owino, 2025). Other researchers, in South African secondary schools, found that students who attended regular debates improved in their capacity to convey their opinions and engage in meaningful discussions in English. Hence, the continuous emphasis on argument expression during debate activities will always help the student-participants increase their confidence and fluency (Neza & Owino, 2025), leading to their overall performance across subjects as English is the medium of instruction in Rwanda (Nteziyaremye et al., 2024).

The third and last objective was to evaluate the challenges faced by teachers and students in implementing debates at G. S. Kareba and G. S. Jenda. In relation to this objective, the most important challenges identified include the students' lack of confidence in speaking English, reported by 100% of the respondents, followed by the lack of resources (93%), fear of making mistakes (83.6%), and insufficient time for preparation (74.2%). Similarly, these challenges were emphasized by the school leaders throughout the interviews conducted with them. In the same context, other studies found that many students struggle with a lack of confidence and fear of speaking in front of their peers in a second language like English (Neza & Owino, 2025; Alasmari & Ahmed, 2013). On the other hand, according to Olanrewaju and Ogundare (2017), the key challenges that teachers face include inadequate training and experience in facilitating debates, limited teaching resources, lack of access to language support, and time constraints within the school timetable.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

This study sought to generally investigate the role of debates in enhancing students' English-speaking skills in lower secondary schools of Nyabihu District of Rwanda, specifically at Groupe Scolaire Kareba and Groupe Scolaire Jenda. It was carried out based on a descriptive research design, employing quantitative and qualitative research approaches. The first specific objective sought to assess the extent to which debates are implemented in teaching and learning at both schools. Generally, the findings revealed that debate activities are commonly conducted weekly for the majority and inserted into regular classroom activities, specifically in English lessons. Nevertheless, their use is still basically teacher-led, with inadequate student independence or club-based organization. This shows a need to strengthen student-led initiatives and broaden debate practices outside formal class contexts. The study also found overwhelming evidences that debate activities help students improve their pronunciation, responding skills, and building vocabulary, grammar, and public speaking confidence in English language. Respondents agreed that debates foster oral fluency, help in organizing their opinions, resulting into the enhancement of classroom engagement. Furthermore, school leaders suggest that debates not only support in linguistic competence, but also critical thinking and overall academic confidence of active participants. In relation to the third objective, which was to evaluate challenges faced in implementing debates at the identified schools, this research found out significant challenges such as the lack of confidence in speaking English, fear of making mistakes, limited time and resources. Despite these



challenges, this study also noted strong support from teachers and school leaders towards the debates' success. Therefore, the study concludes that debates play a significant role in improving English-speaking skills among students nevertheless some challenges still persist at the selected schools of Nyabihu district.

5.2 Recommendations

This study recommends that the students should actively participate by taking lead-roles in debate sessions in order to enhance their English-speaking skills, confidence, as well as critical thinking abilities. They should always take advantage of available opportunities in debates to practice public speaking and engage in meaningful discussions because this will help them overcome the fear of making mistakes. On the other side, secondary school teachers are encouraged to regularly integrate debates into as many of their lessons as possible to boost active learning and language enhancement; to provide suitable guidance and support to their students, including efficient trainings on debate strategies instead of always taking a lead-role. We also urge the school leaders and other stakeholders in education to provide more resources such as debate materials, create a positive speaking environment, encourage students-led debate clubs, and integrate debate activities across more subjects. These steps and efforts would, further, strengthen students' English-speaking skills in rural Rwandan schools of the same context.

Lastly, as this study was limited in terms of time and resources, we do recommend that the future researchers may conduct further researches on “The effects of continuous participation in debates to students' overall academic success in advanced level of education” or “A comparative study on debate-based teaching and learning and the traditional teaching and learning methods in enhancing students' English overall proficiency”.

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Effects of organizational development practices on the effectiveness of local non-governmental organizations (NGOs) in Rwanda

Yannick Niyireba¹

¹niyreba3@gmail.com (+250783601560)

¹University of Rwanda

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ABSTRACT

The effect of Organizational Development (OD) practices on the effectiveness of local non-governmental organizations [NGOs] in Rwanda was investigated in this study guided by Open Systems and the Extended General Model of Planned Change. It sought to determine the levels of organizational effectiveness and OD practices, analyze the relationships between the two, and predict the effect of OD interventions on NGO effectiveness. Targeting 1,399 registered local NGOs, a stratified random sample of 302 respondents was used in a descriptive study methodology to assure representation across organizational size, sector, and geography. Structured surveys were used to gather primary data, and reports and organizational papers served as secondary sources of context. Regression analysis studied how OD practices affected performance results, correlation analysis looked at relationships between OD and organizational effectiveness, and descriptive statistics measured the extent of OD practice implementation. The results indicate that local NGOs use OD techniques, including performance management, leadership development, and strategic planning, to a moderate level, and that such practices have a high positive correlation with organizational effectiveness. While weaknesses in external relations and operational procedures limited wider OD outcomes, effective management, human resource systems, and the integration of cross-cutting themes emerged as the most important variables. The study comes to the conclusion that improving NGO capacity, adaptability, and long-term performance requires organized and contextually appropriate OD interventions. Strengthening human resource management, integrating cross-cutting themes into organizational procedures, and carrying out comparative or longitudinal research to assess the long-term and context-specific impacts of OD practices are among the recommendations.

Keywords: Effectiveness, Impact, Leadership, Local NGOs, Organizational Development, Performance Management

I. INTRODUCTION

It is commonly acknowledged that organizational development (OD) interventions and the ensuing organizational changes are essential mechanisms for improving the effectiveness, flexibility, and sustainability of organizations worldwide. According to research, OD practices not only give businesses a competitive edge and enhance business processes (Raj & Manivannan, 2021), but they also promote innovation, ongoing learning, and knowledge integration from external networks—all of which are critical for maintaining organizational performance (Inthavong et al., 2023). In the immediate future, OD activities have been associated with increased employee engagement, morale, and productivity; in the long run, they have been linked to enhanced financial performance, market positioning, and organizational resilience (Hasyim & Bakri, 2023). These results highlight the importance of OD in determining organizational effectiveness, especially for non-governmental organizations (NGOs) functioning in resource-constrained, dynamic situations like Rwanda, where the ability to adapt and change is essential for attaining long-term social impact. Increasing an organization's potential and competency, which makes it more adaptable and capable of carrying out planned change efforts on an action-oriented basis, is the main conceptual goal of organizational development (OD) (Velusamy, 2017). To promote self-renewal and ongoing development, OD improves the alignment of organizational structure, procedures, strategy, people resources, and culture. Using behavioral concepts to encourage improvements in how employees interact and perform, it is a methodical, organized, and ongoing endeavor to improve individual, group, and systemic performance (Intelliven, 2020). OD improves an organization's overall performance and adaptability by fostering teamwork, strong interpersonal interactions, and a positive organizational culture.

Structured interventions that include diagnosis, planning, execution, and assessment procedures are necessary for effective OD (Solanky et al., 2019; Warner & David, 2005). The goal of these procedures is to increase organizational congruence in a number of important areas, including as information systems, work policies, culture, structure, leadership, strategy, and mission. Adaptability, technical and financial performance, service quality, and employee and stakeholder satisfaction and engagement are all indicators of organizational effectiveness (Cummings & Worley, 2009;



Thomas & Christopher, 2009). In order for NGOs to successfully fulfill its objective, leaders must make sure that organizational design, culture, and staff are in line with changing operational and competitive situations. OD is a long-term, strategic, and future-focused approach intended to increase the organization's ability for sustained success, which sets it apart from change management (Worley & Cummings, 2009).

NGOs in Africa are subject to regional pressure from governments, local populations, and donors, which affects OD and management procedures. NGOs' ability to carry out OD projects successfully is frequently hampered by a lack of personnel, shaky finance, and uncertain operational environments (Emanuela, 2015). Despite these obstacles, OD has become a crucial facilitator of social and economic development, strengthening institutional capacity, encouraging accountability, and boosting service delivery in a variety of African contexts (Cheru, 2012).

NGOs are an essential part of civil society in Rwanda, supporting government initiatives to further social and economic development. Particularly in post-conflict and rural areas, civil society organizations (CSOs) offer venues for citizen involvement, advocacy, and service delivery (Celestin, 2020; USAID-Rwanda, 2020). The Rwanda Governance Board (RGB), which coordinates and enhances the ability of civil society actors to contribute to national development, has 1,339 local NGOs registered as of 2023 (RGB, 2022). Local NGOs in Rwanda confront ongoing OD issues despite their vital role, such as a high dependence on outside funding, a lack of material and human resources, top-down management structures, and poor organizational coordination (Transparency International Rwanda, 2015; Never Again Rwanda, 2019). Such limitations constrain their effectiveness and sustainability, highlighting the urgent need for structured OD interventions.

Leadership development, strategy planning, process optimization, performance management, institutional learning, and staff empowerment are among the organizational development practices which serve as the study's independent variable. Organizational effectiveness, the dependent variable, includes an NGO's capacity to effectively accomplish its goals, maintain operations, uphold stakeholder satisfaction, and adjust to both internal and external changes (Abdi et al., 2024). This study fills a significant empirical research vacuum and offers practical advice for improving NGO performance in Rwanda by investigating the connection between OD practices and organizational success.

Although OD is generally recognized as a strategy for enhancing organizational performance (Raj & Manivannan, 2021), there is no systematic data on its efficacy in regional NGOs, which is why this research is required. It is anticipated that the study's conclusions would educate development practitioners, policymakers, and NGO leaders on successful OD tactics that boost institutional capacity, encourage learning, and enhance service delivery results. Additionally, the research provides a thorough knowledge of the mechanisms through which OD practices impact organizational performance in Rwanda's complex and changing NGO context by contextualizing the study within global, regional, national, and local contexts.

1.1 Statement of the Problem

The long-term viability and operational efficacy of local non-governmental organizations (NGOs) in Rwanda are threatened by persistent challenges. According to Rehema (2014), Never Again Rwanda (2019), and Norwegian People's Aid (2020), these problems include limited flexibility to changing situations, deficiencies in organizational competencies, insufficient resources, and concerns about trustworthiness with stakeholders. The uneven implementation of Organizational Development (OD) methods, which are crucial for strengthening internal systems, boosting employee performance, and promoting organizational learning, is a major contributing reason to these difficulties.

Despite OD's widespread recognition as a tool for enhancing organizational capacity, its application in Rwandan NGOs is still dispersed and frequently lacks systematic techniques that might guarantee long-term improvement (Rehema, 2014). There is a knowledge gap on how these interventions lead to improved organizational outcomes, especially organizational effectiveness, because the efficacy and contextual relevance of OD approaches in Rwanda are still little known (Sarkar, 2018; Odeny & Namusonge, 2024).

Current frameworks, like the Revised Planned Change Model (RPCM), emphasize learning, empowerment, and participatory processes while providing structured advice for planned organizational change (Asumeng & Osae-Larbi, 2015). However, little is known about how widely these approaches have been used and how they affect local NGOs in Rwanda. Examining how OD practices—such as staff empowerment, strategic planning, leadership development, and institutionalizing learning—affect their efficacy is therefore crucial.

By examining Organizational Development Practices and Their Impact on the Effectiveness of Local Non-Governmental Organizations in Rwanda, this study directly fills this gap. NGOs will be better equipped to carry out their missions in a changing and resource-constrained world by using the evidence-based insights this research will provide to help them improve internal capacities, performance, and sustainable operations.



1.2 Research Objectives

- i. To assess the level of OD practices and organizational effectiveness of local NGOs in Rwanda
- ii. To assess the relationship between OD practices and organizational effectiveness of local NGOs in Rwanda
- iii. To evaluate the effects of OD practices on the organizational effectiveness of local NGOs in Rwanda.

1.3 Research Questions

- i. What is the level of OD practices and organizational effectiveness of local NGOs in Rwanda?
- ii. What is the relationship between OD practices and organizational effectiveness of local NGOs in Rwanda?
- iii. What is the effect of OD practices on the organizational effectiveness of local NGOs in Rwanda?

II. LITERATURE REVIEW

2.1 Theoretical Review

Theoretical viewpoints that take into consideration both internal organizational dynamics and interactions with the external environment are necessary to comprehend how organizational development (OD) practices affect the effectiveness of local NGOs. The Extended General Model of Planned Change and Open Systems Theory are two complementary frameworks that are used in this study. These ideas offer a basis for examining how OD interventions might improve performance inside Rwandan NGOs, increase internal capacity, and promote adaptation.

2.1.1 Open Systems Theory

Ludwig von Bertalanffy first presented Open Systems Theory (OST) in 1950 as a component of his General Systems Theory. Katz and Kahn then used OST in organizational research in 1978. According to the theory, organizations are dynamic entities that constantly engage in resource, information, and energy exchanges with their external environment. According to OST, an organization's effectiveness is determined by its capacity to convert inputs—such as staff, capital, and expertise—into outputs that satisfy stakeholder needs while preserving flexibility and striking a balance with outside demands. OST emphasizes the significance of responsive organizational systems, learning processes, and adaptive management in the context of Rwandan NGOs. NGOs can better adapt to shifts in donor priorities, policy requirements, and community needs by putting OD techniques like strategic planning, leadership development, and performance management into practice. In the end, this ability to adapt and learn enhances organizational resilience and boosts efficiency in achieving mission-driven results (Scott & Davis, 2015).

2.1.2 Extended General Model of Planned Change

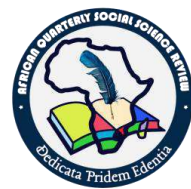
Building on previous models of planned organizational change, Asumeng and Osaе-Larbi (2015) created the Extended General Model of Planned Change in 2015. Entering and contracting, diagnosis and feedback, evaluating organizational elements, planning and implementation, assessment and institutionalization, and empowering-withdrawal are the six main phases described by the framework. Every phase places a strong emphasis on evidence-based planning, intervention alignment with organizational priorities, and participatory involvement. This approach offers a structured route for implementing OD practices that are both sustainable and contextually appropriate, making it extremely relevant for local NGOs in Rwanda. NGOs can incorporate procedures that improve internal processes, encourage employee ownership, and cultivate a culture of ongoing learning by adhering to these phases. These procedures improve the organization's ability to accomplish its strategic objectives and maintain performance over time, which raises the effectiveness of the organization as a whole.

2.2 Empirical Review

2.2.1. Introduction

This empirical review examines existing research related to the study's three objectives: identifying the level of OD practices and organizational effectiveness among local NGOs, assessing the relationship between OD practices and effectiveness, and determining the effect of OD practices on organizational effectiveness. By organizing the review around these objectives, the section highlights what is already known, points to areas of agreement and debate, and identifies gaps that justify the present study. The evidence is drawn from global, regional, and Rwanda-specific studies, providing a broad foundation for understanding how OD practices shape organizational performance in diverse contexts.

Organizational Development (OD) has been widely recognized as a systematic approach to strengthening organizational performance by improving structures, processes, behaviors, and culture. Early contributions by Lewin, Beckhard, and Schein framed OD as a participatory and organization-wide process that builds adaptive capacity and supports sustained performance (Beckhard, 1969; Lewin, 1947; Schein, 1968). These foundational perspectives continue to guide contemporary OD thinking and practice.



2.2.2. Level of OD Practices and Organizational Effectiveness

Studies across various regions show that the extent of OD practice adoption differs substantially across NGOs. Diagnostic OD—such as needs assessments, organizational scans, culture audits, and performance reviews—remains common, but its depth varies by capacity and resource availability. Evidence from Rehema (2014) points out that many NGOs apply OD elements such as leadership strengthening, culture shaping, and vision clarification, although implementation remains inconsistent.

In East Africa, Yaa (2024) found that NGOs frequently practice staff development, systems improvement, and monitoring and evaluation, reporting moderate to high organizational performance. Research from Uganda and Kenya similarly shows that leadership skills, financial management competencies, and strategic planning practices are increasingly present in the sector. However, smaller organizations tend to lag behind due to resource limitations.

In Rwanda, studies reveal a mixed picture. Kigenza and Nkechi (2024) observed that many NGOs incorporate strategic planning, stakeholder involvement, and risk management into their operations, reflecting growing organizational maturity. However, local NGOs—especially smaller and newly established ones—often struggle to consistently apply OD practices due to financial constraints, limited staffing, and high donor dependency. This uneven adoption contributes to varied levels of organizational effectiveness across the sector.

2.2.3. Relationship between OD Practices and Organizational Effectiveness

Empirical literature consistently shows a positive relationship between OD practices and organizational effectiveness. Research by Thomas and Christopher (2009) demonstrates that organizations with structured OD processes tend to achieve stronger performance outcomes. Studies by McEwan (2018) and Kaltiainen et al. (2018) further highlight that collaboration, fair processes, and trust-building enhance the impact of OD initiatives by improving staff engagement and acceptance.

African studies reinforce this link. Odeny and Namusonge (2024) found significant associations between learning organization practices—team learning, shared vision, and reflective thinking—and improved performance in humanitarian NGOs. Amanyire et al. (2024) also established that leadership and managerial competencies, which are central to OD, predict financial performance. These findings emphasize that the relationship between OD practices and organizational effectiveness is shaped by both structural and interpersonal dynamics.

Within Rwanda, evidence from organizations such as World Vision Rwanda confirms this positive association. Effective resource allocation, strategic alignment, and participatory planning have been shown to reinforce program quality and organizational performance, mirroring trends observed across the region.

2.2.4. Effect of OD Practices on Organizational Effectiveness

A number of studies have explored the direct effects of OD interventions on organizational outcomes. Anderson and Lannon (2018) demonstrated that staff training, role clarity, and engagement initiatives yield measurable improvements in organizational performance. Jafari et al. (2017) also established that empowerment and organizational support enhance motivation and learning, which in turn improve performance.

Supporting systems such as knowledge management, communication structures, and performance evaluation have also been identified as mediators of OD effectiveness. Zheng et al. (2013) showed that knowledge management strengthens the impact of OD by enabling organizations to learn and adapt, while Sarkar (2018) found that fair compensation and effective communication reinforce OD outcomes by strengthening staff commitment.

African studies also highlight OD's potential in resource-constrained environments. Evidence from Nairobi demonstrates that monitoring and evaluation structures, human resource development, and learning systems significantly strengthen NGO performance. Similar patterns appear in Rwanda, where OD components such as leadership development, strategic planning, and stakeholder engagement contribute to improved governance, accountability, and program delivery. Still, the depth and sustainability of these effects vary across organizations.

2.5 Research Gaps

Despite growing literature, several gaps remain:

- Limited comprehensive assessments of the level of OD practices among local NGOs in Rwanda
- Sparse research examining how specific OD components interact to influence effectiveness
- Few studies that focus on overall organizational effectiveness rather than project outcomes
- Heavy reliance on cross-sectional designs that restrict insights into long-term change
- Insufficient adaptation of OD models to the realities of resource-constrained NGOs

These gaps justify the present study, which examines the level, relationship, and effect of OD practices on organizational effectiveness among local NGOs in Rwanda, contributing evidence that is both contextually grounded and methodologically relevant.



III. METHODOLOGY

3.1 Research Design

This study used a quantitative, descriptive methodology that was enhanced by a review of secondary data. The descriptive approach was chosen because it makes it possible to quantify the connections between Organizational Development (OD) practices and organizational success as well as to systematically examine OD practices as they exist inside local NGOs (Creswell & Creswell, 2018). Given the study's goal of capturing the current state of OD practices across a broad and changing NGO sector in Rwanda, this strategy was especially appropriate.

3.2 Target Population

The study targeted 1,339 registered local NGOs in Rwanda as recorded by the Rwanda Governance Board (RGB, 2022). The target population included NGO leadership, managers, and staff directly involved in organizational planning and operations.

3.3 Sample Size Determination and Sampling Procedure

Using stratified random sampling, the study selected 302 respondents from across the population to ensure representation by NGO size, sector focus, and geographical location. Stratification was necessary to account for the heterogeneity of local NGOs in Rwanda, including small, medium, and large organizations. The sample size was determined following Slovin's formula (1960) for finite populations, balancing statistical reliability with feasibility in data collection.

3.4 Data Collection Instruments

Primary data were collected using a structured questionnaire, designed around validated Organizational Development assessment tools (Cummings & Worley, 2019; Asumeng & Osae-Larbi, 2015). The instrument captured dimensions of OD including leadership development, strategic planning, process optimization, staff empowerment, institutional learning, and performance management. Secondary data included organizational records from the 52 NGOs in the sampling frame, which provided contextual and historical information on OD initiatives and performance outcomes.

3.5 Validity and Reliability

To ensure content validity, the questionnaire was reviewed by three OD experts and pre-tested with 20 NGO staff outside the main sample. Construct validity was evaluated through exploratory factor analysis, confirming that items measured the intended OD dimensions. Reliability was assessed using Cronbach's alpha, with all scales achieving coefficients above 0.80, indicating high internal consistency (Nunnally & Bernstein, 1994).

3.6 Data Analysis Methods

Quantitative data were analyzed using descriptive statistics to summarize participant responses and organizational characteristics. Correlation analysis was employed to examine relationships between OD practices and organizational effectiveness, while multiple regression analysis assessed the effects of specific OD interventions on organizational outcomes, providing both effect size and statistical significance. Secondary data were used to triangulate findings, enhancing credibility and contextual interpretation.

This mixed approach ensured a comprehensive and contextually grounded analysis, combining statistical rigor with real-world insight into how OD practices are implemented and their effect on organizational effectiveness in local NGOs. By linking structured OD interventions to measurable outcomes, the methodology provides robust evidence to inform practice and policy within Rwanda's NGO sector.

IV. FINDINGS & DISCUSSION

4.1 Findings

This section presents the findings of the study, structured to align with the research objectives and the relationship between the independent variable—Organizational Development (OD) practices—and the dependent variable—organizational effectiveness of local NGOs in Rwanda. The findings are presented in four stages: demographic characteristics of respondents, descriptive statistics for OD practices and organizational effectiveness, correlation analysis examining the relationship between OD practices and effectiveness, and regression analysis evaluating the effects of OD practices on organizational effectiveness. This structured presentation ensures that the results address the three specific research objectives: (1) assessing the level of OD practices and organizational



effectiveness, (2) examining the relationship between OD practices and organizational effectiveness, and (3) evaluating the effect of OD practices on organizational effectiveness.

4.1.1 Demographics Characteristics

Table 1 summarizes the profile of the 302 respondents. The data indicate a mature and professionally qualified workforce, with substantial experience across various NGO sectors. This diversity enhances the validity of the analysis and contextual relevance of findings related to OD practices and organizational effectiveness

Table 1
Demographic Data of Respondents (N=302)

Characteristic	Description	No of Respondents	Percentage
Gender	Male	158	52.3
	Female	144	47.7
Age	18-29	7	2.3
	30-49	155	51.3
	50-64	140	46.4
Education level	Associate Degree/Equivalent:	18	6.0
	Bachelor’s Degree:	159	52.6
	Postgraduate Certificate/Diploma	75	24.8
	Master’s Degree	42	13.9
	Doctorate/PhD	8	2.6
Years of service	3-5 years	8	2.6
	6-10 years	118	39.1
	11-15 years	75	24.8
	16+ years	101	33.4
Specialization	Program Management	93	30.8
	Monitoring & Evaluation	25	8.3
	Finance & Operations	58	19.2
	Human Resources	42	13.9
	General Management	34	11.3
	Community Development	50	16.6
Position	CEO/President	17	5.6
	Executive Director /Executive Secretary	92	30.5
	Senior Management Team Member	152	50.3
	Middle-Level Manager	25	8.3
	Program /M&E Coordinator	16	5.3
Size of the organization	Large	54	17.9
	Medium	114	37.7
	Small	134	44.4
Sector of interventions	Governance	25	8.3
	Social transformation	199	65.9
	Economic transformation	78	25.8

The demographic profile indicates that most respondents are well-educated and experienced, predominantly aged 30–49, and actively involved in social and economic transformation sectors. These characteristics are critical for implementing OD practices and fostering a culture of continuous learning.

4.1.2 Descriptive Statistics

To address the first research objective, this section presents descriptive statistics summarizing the current level of Organizational Development (OD) practices and organizational effectiveness among local NGOs in Rwanda. The analysis highlights how these practices are implemented and the extent to which they translate into measurable organizational outcomes.

4.1.2.1 Level of Organizational Development Practices

Table 2 presents the descriptive statistics for OD practices in local NGOs in Rwanda. The overall average mean of 2.82 reflects a moderate level of implementation, indicating that while OD practices are present, there remains scope for improvement across key areas. Key: N=302, Legend: 1.00 – 1.79 Very low, 1.80 – 2.59 Low, 2.60 - 3.39 Moderate, 3.40 – 4.19 High, 4.20 – 5.00 Very High.

**Table 2***Level of Organizational Development (OD) Practices*

Item	Mean	Standard Deviation	Interpretation
Entering	2.63	0.59	Moderate
Contracting	2.36	0.76	Low
Diagnosing	2.64	0.50	Moderate
Feedback	2.71	0.61	Moderate
Assessing organizational and client factors	2.87	0.66	Moderate
Planning Change	2.82	0.63	Moderate
Implementation of change	2.88	0.78	Moderate
Evaluation of impact	3.07	0.82	Moderate
Institutionalization of impact	3.05	1.10	Moderate
Empowering people	3.03	0.86	Moderate
Internal Integration and Withdrawal of external support	2.95	0.92	Moderate
Average Mean	2.82	0.75	Moderate

4.1.2.2 Level of Organizational Effectiveness

Table 3 shows the descriptive statistics for organizational effectiveness (dependent variable), reflecting performance across financial management, program delivery, HR, external relations, operations, and crosscutting themes. The average mean of 2.91 indicates moderate effectiveness overall.

Table 3*Level of Organizational Effectiveness*

Item	Mean	Standard Deviation	Interpretation
Proficient Financial Management	2.95	0.88	Moderate
Program Implementation	2.97	0.91	Moderate
Program Monitoring & Evaluation	2.88	0.82	Moderate
Efficient Management and Human Resources	2.87	0.95	Moderate
Efficient External Relations	2.82	1.06	Moderate
Smooth Operations of IT, Procurement, and Logistics	2.92	0.85	Moderate
Integration of Crosscutting Themes	2.99	0.97	Moderate
Average Mean	2.91	0.92	Moderate

The descriptive data suggest that NGOs generally maintain moderate effectiveness across operational and programmatic domains, with opportunity for strengthening organizational systems.

4.1.3 Correlation Analysis

To address the second research objective, this section examines the relationship between Organizational Development (OD) practices and organizational effectiveness among local NGOs in Rwanda. The correlation analysis identifies the strength and direction of associations between the independent and dependent variables. Table 4 shows that the Pearson correlation coefficient between OD practices and organizational effectiveness is $r = 0.946$ ($p < 0.01$), indicating a very strong positive relationship. Improved OD practices are associated with higher organizational effectiveness across financial management, HR, program delivery, and other domains.

Table 4*Correlation Analysis*

Item	Measure
r	.946**
P -Value	0.00
N	302

** . Correlation is significant at the 0.01 level (2-tailed).



4.1.4 Relationship between OD Practices and Organizational Effectiveness in local NGOs in Rwanda

4.1.4.1 Regression Analysis

To address the third research objective, this section evaluates the effect of Organizational Development (OD) practices on the organizational effectiveness of local NGOs in Rwanda. Regression analysis quantifies how variations in OD practices predict changes in key effectiveness outcomes.

Table 5

Model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.966 ^a	.932	.931	.15957

a. Predictors: (Constant), DV7, DV1, DV3, DV2, DV5, DV6, DV4

Table 5 shows that the model demonstrates a strong and statistically significant relationship between OD practices and organizational effectiveness. $R^2 = 0.932$ indicates that 93.2% of the variance in OD practices is explained by the predictors

Table 6

Analysis of Variance

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.302	7	14.757	579.543	.000 ^a
	Residual	7.486	294	.025		
	Total	110.789	301			

a. Predictors: (Constant), DV7, DV1, DV3, DV2, DV5, DV6, DV4

b. Dependent Variable: Organizational Development (OD) Practices

The ANOVA confirms that the regression model is statistically significant ($p < 0.001$) and reliable for evaluating the effect of OD practices on organizational effectiveness.

4.1.4.2 Hypothesis Testing: Effect of OD Practices on Organizational Effectiveness of local NGOs in Rwanda

The high F-statistic (579.543) and the corresponding p-value (0.000) provide strong evidence to reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1). This finding establishes that OD practices significantly and positively affect the organizational effectiveness of local NGOs in Rwanda. Table 7 further disaggregates these effects, identifying specific OD components—such as entering, contracting, diagnosing, and others—that exert the greatest influence on organizational effectiveness..

Table 7

Regression Coefficients

Regression Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	1.010	.041		24.911	.000
	Proficient Financial Management	-.011	.028	-.016	-.407	.684
	Program Implementation	-.035	.031	-.052	-1.119	.264
	Program Monitoring & Evaluation	.051	.030	.069	1.718	.087
	Efficient Management and Human Resource	1.446	.170	2.256	8.491	.000
	Efficient External Relations	-.629	.083	-1.097	-7.580	.000
	Smooth Operations of IT, Procurement and Logistics	-.378	.078	-.527	-4.844	.000
	Integration of Crosscutting Themes	.172	.043	.275	4.013	.000

a. Dependent Variable: Organizational Development (OD) Practices

The regression coefficients indicate that Efficient Management & HR and Integration of Crosscutting Themes positively and significantly influence OD practices, whereas inefficient external relations and operational systems negatively affect OD outcomes. Financial management and program implementation show minimal direct effect, suggesting that OD success relies more on effective human resource management, learning, and integration of organizational values.



The findings confirm a strong, positive, and statistically significant relationship between OD practices and organizational effectiveness in local NGOs in Rwanda, providing empirical support for prioritizing HR efficiency, organizational learning, and crosscutting integration in OD interventions.

4.2 Discussion

This study set out to assess the effect of Organizational Development (OD) practices on the effectiveness of local NGOs in Rwanda, focusing on three specific objectives: assessing the level of OD practices and organizational effectiveness, examining their relationship, and evaluating the effect of OD practices on effectiveness. The findings provide empirical insight into how structured OD interventions shape NGO performance within the Rwandan context.

4.2.1 Level of OD Practices and Organizational Effectiveness

Descriptive statistics indicated that the overall level of OD practices among local NGOs is moderate (mean = 2.82), while organizational effectiveness is also moderate (mean = 2.91). This aligns with the first research objective, highlighting that although NGOs employ some OD systems—such as leadership development, strategic planning, and staff empowerment—these practices are not yet fully institutionalized or consistent across organizations. The moderate effectiveness scores suggest that NGOs achieve satisfactory operational outcomes in financial management, program implementation, monitoring and evaluation, and human resource management, but significant opportunities remain to optimize processes and performance.

These results are consistent with the literature on OD in NGOs. Rehema (2014) noted that OD strengthens organizational renewal and engagement, while Kigenza and Nkechi (2024) highlighted that strategic planning, stakeholder engagement, and resource allocation partially determine NGO performance. The moderate levels observed in this study suggest that Rwandan NGOs possess competent staff and foundational systems, but formal OD structures—such as institutionalized learning loops and systematic performance evaluation—require strengthening to fully translate human capacity into sustained effectiveness.

4.2.2 Relationship between OD Practices and Organizational Effectiveness

The correlation analysis revealed a very strong positive relationship between OD practices and organizational effectiveness ($r = 0.946$, $p < 0.01$), addressing the second research objective. This finding confirms that improvements in OD—particularly in human resource management and integration of crosscutting themes—are closely associated with enhanced NGO performance across key dimensions, including program delivery, financial management, and organizational operations.

The results support existing studies emphasizing the role of OD in organizational performance. Yaa (2024) and Odeny and Namusonge (2024) found that employee development, learning systems, and team-based interventions significantly enhance NGO performance in African contexts. Similarly, Asumeng and Osa-Larbi (2015) and Bushe and Marshak (2015) emphasized that OD interventions fostering leadership, cultural alignment, and participatory decision-making are critical to organizational success. The current study extends these insights to Rwanda, demonstrating that in resource-constrained environments, the strength of OD practices—rather than resource abundance alone—drives effectiveness.

4.2.3 Effect of OD Practices on Organizational Effectiveness

Regression analysis confirmed that OD practices significantly predict organizational effectiveness, with an R^2 of 0.932, addressing the third research objective. Among the OD components, Efficient Management and Human Resources and Integration of Crosscutting Themes were the strongest positive predictors of effectiveness. This suggests that leadership quality, HR systems, and deliberate incorporation of gender, inclusivity, and sustainability considerations are pivotal for strengthening NGO outcomes.

Conversely, inefficient external relations and operational processes, such as IT, procurement, and logistics, negatively impacted OD practices, indicating that misaligned or underperforming operational systems can constrain broader development initiatives. Financial management and program implementation showed weak direct effects, suggesting that resources and activities alone are insufficient to drive organizational effectiveness without the supporting mechanisms provided by structured OD practices.

These findings are consistent with the literature but also provide contextual nuance. While some studies (e.g., Yaa, 2024) found direct resource allocation effects on performance, the Rwandan context appears to mediate this relationship through organizational learning, HR management, and systemic integration. This underscores the importance of contextually adapted OD interventions, particularly in post-conflict and resource-limited environments where human capital and systemic alignment can outweigh mere financial or programmatic inputs.



4.2.4 Agreements, Contradictions, and Contextual Meaning

The findings largely align with prior research emphasizing the developmental and capacity-building nature of OD (Rehema, 2014; Brendel, 2022; Jafari et al., 2017). They affirm that structured OD practices—leadership, learning, HR management, and integration of crosscutting themes—are central to achieving measurable effectiveness in NGOs. However, the weak influence of financial management and program implementation contrasts with studies in other African contexts (Yaa, 2024), suggesting that in Rwanda, resource deployment must be coupled with robust OD practices to translate into organizational outcomes.

Contextually, these results highlight that Rwandan NGOs operate in an environment where professional competence alone is insufficient. The integration of systematic OD mechanisms—including institutionalized learning, staff empowerment, participatory planning, and crosscutting thematic alignment—is essential to bridge the gap between individual capabilities and collective organizational effectiveness. This finding reinforces the need for NGO leaders and policymakers to prioritize OD strategies that are both structured and contextually tailored to maximize institutional performance and sustainability.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Three specific objectives were addressed in this study, which looked at how Organizational Development (OD) practices affected the organizational effectiveness of local NGOs in Rwanda: determining the level of OD practices and effectiveness, analyzing their relationship, and assessing the effect of OD practices on effectiveness. The results show that both organizational effectiveness and OD practices are adopted at a moderate level, indicating that organized OD procedures are not yet fully institutionalized or regularly employed, even if NGOs have capable staff and fundamental systems.

The considerable predictive effect of OD practices ($R^2 = 0.932$) and the strong positive correlation ($r = 0.946$) show that organized OD interventions are important factors in determining the effectiveness of an organization, especially in human resource management and integration of cross-cutting themes. On the other hand, in order for NGOs to reach their full potential, they need to strengthen their operational systems, external relations, financial management, and implementation of programs techniques. Overall, the study demonstrates that professional capacity alone is inadequate in the Rwandan NGO context; systematic implementation of OD practices, such as staff empowerment, leadership development, participatory planning, institutional learning, and thematic integration, is necessary to improve local NGOs' performance, sustainability, and resilience.

5.2 Recommendations

The following important suggestions are put forth to improve the organizational effectiveness of local non-governmental organizations in Rwanda in light of the study's findings: **Boost Human Resources and Leadership Systems:** Leadership development, employee empowerment, and efficient HR management should be given top priority since they are the main factors influencing organizational effectiveness and OD practices. **Institutionalize Learning and Knowledge Management:** To guarantee ongoing development and sound decision-making, institutional systems for organizational learning, regular feedback, and reflective practice should be established. **Integrate Crosscutting Themes:** To increase relevance and impact, systematically include themes such as gender, inclusion, sustainability, and others into organizational policies, programs, and operations.

Optimize Operational Processes: Reduce inefficiencies that could impede larger OD initiatives by increasing efficiency in IT, procurement, logistics, and external relations. **Boost Strategic Planning and Performance Management:** Create and put into place thorough frameworks for planning and performance monitoring that match corporate goals, assets, and results.

Contextualize OD Practices: Tailor OD interventions to Rwanda's post-conflict and resource-constrained environment by focusing on human capacity and systemic alignment in addition to programmatic and financial inputs. Local NGOs can use organized OD methods to enhance efficacy, guarantee sustainable performance, and optimize the impact of their development projects by concentrating on these areas.



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Agricultural extension service accessibility under decentralised governance: Evidence from smallholder sunflower farmers in Dodoma and Singida regions, Tanzania

Ahmedi N. Nzao^{1*}
Mangasini A. Katundu²
Bikolimana G. Muhihi³

^{1*} ahmednzao@yahoo.com

¹Local Government Training Institute (LGTI), ^{2,3}Moshi Cooperative University (MoCU), ^{1,2,3}Tanzania

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ABSTRACT

Despite significant investments in agricultural extension systems in Tanzania, a critical research gap persists regarding the effectiveness of decentralised models for delivering extension services to marginalised smallholder farmers. Drawing on access and decentralisation theories, the study employed a cross-sectional research design to examine agricultural extension services' (AES) accessibility across districts and genders in the Dodoma and Singida regions of Tanzania. The target population comprised smallholder sunflower farmers across selected districts, and a sample size of 385 farmers was selected through multistage sampling techniques comprising purposive selection of districts and random sampling of farming households. Data were collected using structured questionnaires and analysed using descriptive statistics, an accessibility index derived from factor analysis, a χ^2 test, ANOVA and ordinal logistic regression. Findings revealed disparity in AES accessibility across districts, while across sex it was not. Conversely, findings further indicate that farmers' education, farm experience and frequency of extension visits positively predicted AES accessibility, whereas greater distance to extension centres was associated with lower accessibility. The findings suggest that decentralised extension service delivery exhibits uneven outreach of services across districts, particularly those with resource constraints. Hence, it recommends that the government allocate extension agents based on needs to ensure districts with low accessibility receive proportionately greater support, integrate adult literacy programmes within extension frameworks and leverage experienced farmers as peer educators through farmer field schools to promote extension services. This study contributes novel insights into extension service accessibility under decentralised governance structures, as it provides evidence-based recommendations for policymakers and development practitioners seeking to enhance agricultural transformation outcomes in Sub-Saharan Africa.

Keywords: Agricultural Extension Services, Decentralized Governance, Extension Service Accessibility, Smallholder Sunflower Farmers, Tanzania

I. INTRODUCTION

Agricultural extension services (AES) are widely recognised as the key drivers for increasing farm productivity and improving livelihoods, particularly for rural populations. They act as a bridge between agricultural research and farmers by translating scientific knowledge from research institutions into practical and useful information (Adamsone-Fiskovica & Grivins, 2022). Accessing these services empowers farmers to adopt improved farming methods. They help them to make informed decisions regarding seed varieties, input use and pests and diseases management. Additionally, they teach farmers about soil conservation, climate-smart farming and sustainable agriculture, which promote long-term environmental sustainability (Raj & Garlapati, 2020). However, despite the potential benefits of these services, accessing them remains a major and longstanding challenge, especially for smallholder farmers (Khattri *et al.*, 2024). As defined by Arif (2024), accessing AES is all about how easily farmers can reach, receive, and effectively utilise advisory and technical support provided by extension agents. It reflects the availability, affordability, timeliness and adequacy of extension services to meet farmers' needs.

Globally, it is estimated that there are approximately 600 million farms, of which more than 90% are classified as smallholder farms, which collectively produce about 80% of the world's food (Food and Agriculture Organisation [FAO], 2021). However, despite this dominant position in world food production, 75% of smallholder farmers lack reliable access to extension and advisory services (FAO, 2021). In Sub-Saharan Africa (SSA), it is estimated that there are around 33 million small-scale farms, employing about 90% of rural populations and producing around 70% of Africa's food supply (International Fund for Agricultural Development [IFAD], 2021). Yet, smallholder farmers have limited access to AES. According to the World Bank (2022) AES coverage remains highly uneven, with typical farmer-to-extension officer ratios ranging between 1:3000 and 1:10,000, far exceeding the often-recommended ratio of 1:500



farmers. In Tanzania, smallholder farmers account for about 75% of the country's rural population (National Bureau of Statistics [NBS], 2021). AES are provided a pluralistic system that involves multiple actors, including public, private and civil society organisations. However, access to AES remains low. According to the 2019/20 National Sample Census of Agriculture report, out of 7,499,219 crop-growing households in Tanzania mainland, only 520,757 (6.9%) had received any form of extension advice on crop production, a sharp decline from 67% in 2007/08 (NBS, 2021).

In response to the persistent limitations in access to AES among smallholder farmers, various initiatives have been implemented over the past two decades across Sub-Saharan Africa, and Tanzania in particular. These efforts have included, among others, the decentralisation of extension services, the introduction of participatory and demand-driven extension approaches, the establishment of farmer field schools, the use of ICT-based advisory platforms and the partnerships with private sectors and non-government organisations (NGOs) (World Bank, 2022; FAO, 2021). Out of these reforms, decentralisation in the form of devolution (D by D) was one of the most significant policy shifts influencing the management and delivery of extension services in Tanzania since 1998. Under this framework, responsibilities for extension services, including planning, financing and implementing agricultural services, were transferred from the central Ministry of Agriculture (MoA) to Local Government Authorities (LGAs) to bring decision-making closer to farmers and ensure that the extension delivery reflects local needs and priorities (United Republic of Tanzania [URT], 1998).

By decentralising extension services, LGAs were empowered to deploy extension officers at the ward and village levels, allocate budgets and engage farmers in the identification and prioritisation of agricultural interventions. This was anticipated to strengthen accountability, improve responsiveness and promote farmers' participation in extension planning and evaluation. Consequently, decentralisation emerged as a key pillar in the endeavour to improve the accessibility, relevance and effectiveness of AES in Tanzania. However, whether the accessibility of AES has improved remains a critical question that requires investigation. Challenges such as insufficient funding, an inadequate number of extension officers and limited logistical support continue to be reported as constrain in extension service delivery at the local level (URT, 2020; FAO, 2021). This concern is particularly evident in Dodoma and Singida regions, where the majority of farmers are smallholder sunflower farmers due to the agro-ecological zone suitable for sunflower cultivation.

The economic reliance and predominance of sunflower farming in these regions call for LGAs to provide extension services to honour the promise of devolution, that is, increasing service accessibility. However, it remains unclear whether the smallholder sunflower farmers in these regions have access to timely, equitable, and adequate extension services. This is because sunflower production remained low, ranging from 0.8 to 1.2 tons per acre, significantly below the potential of 4.0 tons per acre under effective extension services (URT, 2024). Studies (Kingu *et al.*, 2024; Tibamanya *et al.*, 2022; Mujama & Uchiyama, 2021) have linked the low productivity of sunflower with the limited use of yield-enhancing inputs such as fertilisers and certified seeds and weak extension contact - symptoms commonly associated with inadequate extension coverage. However, to what extent extension services are accessible among smallholder farmers in the study area has not yet been established. There is a gap in understanding the accessibility of AES in these regions, particularly across genders and districts. Literature (Justine *et al.*, 2025; Magesa *et al.*, 2023; Masanja *et al.*, 2023) suggests that accessibility of services often differs based on factors like gender or geographical locations as a result of differences in socio-cultural norms, resource endowments and institutional arrangements. This gap is particularly striking given that national frameworks such as the Agricultural Sector Development Programme Phase II (ASDP II, 2018-2028) and the National Agricultural Policy (NAP, 2013) emphasise inclusiveness in service delivery. Therefore, understanding AES accessibility across genders and districts can reveal disparities in service delivery and inform policymakers and extension service providers on how to enable equitable services to overcome disparities (Kauky, 2024).

In the literature, studies on decentralisation and extension services in Tanzania are adequate. However, most of them have often concentrated on assessing governance and accountability dimensions of decentralised AES delivery. For example, they assessed demand and supply accountability in extension service delivery (Kessy, 2020), upward and downward accountability mechanisms in AES (Lameck & Hulst, 2021). Others assessed the relationship between fiscal decentralisation and service autonomy (Lameck & Kinemo, 2021), the effect of the local government reform programme on enhancing farmers' demand for reformed extension service (Mapesa, 2020) and decentralisation by devolution and farmers' access to AES (Masanyiwa *et al.*, 2019). However, little attention has been paid to the accessibility of AES by gender and across different geographical locations, and factors that influence the extension accessibility.

Therefore, this paper focused on assessing the accessibility of AES under a decentralised system, using smallholder sunflower farmers in the Dodoma and Singida regions of Tanzania. Specifically, it addresses two objectives: (1) assessing the accessibility of AES by sex and across surveyed districts. (2) Determine factors (demographic characteristics, farm characteristics, and institutional) that influence accessibility of AES among smallholder sunflower farmers.



1.1 Research Hypothesis

H₀₁: There are no significant differences in AES accessibility between male and female smallholder sunflower farmers in Dodoma and Singida regions of Tanzania.

H₀₂: There are no significant differences in AES accessibility across the surveyed districts in Dodoma and Singida regions of Tanzania.

II. LITERATURE REVIEW

2.1 Theoretical Review

This study is guided by two theories: The Access Theory and the Decentralisation Theory to assess the accessibility of AES across districts and gender, and factors that determine their accessibility.

2.1.1 Access Theory

Access Theory, as proposed by Ribot and Peluso (2003) defines access as the ability to benefit from resources or services beyond formal ownership or entitlement. It assumes that access to a certain service is shaped by structural, relational, and institutional mechanisms, including socio-relations, economic status, geographical location, and governance structures. In the context of AES delivery, Access theory underpins the identification of factors influencing farmers' access to AES, operationalised through demographic and farm characteristics (age, sex, education, incomes, farming experience, farm size) and institutional factors (extension visits, proximity to service centres). These factors collectively shape farmers' ability to obtain, utilise and benefit from extension services (Masanja *et al.*, 2023). Similarly, in other fields such as natural resources and health systems, Access Theory has demonstrated its usability in identifying key determinants of service access (Coolsaet *et al.*, 2020; De Jong & Fernandez-Monge, 2020), thus affirming its versatility and suitability for investigating determinants of AES accessibility in this study.

2.1.2 Decentralisation Theory

Decentralisation Theory was incorporated to assess variations in extension service accessibility across districts and genders. The core idea of Decentralisation Theory is that devolving authority, resources and decision-making power from central governments to local governments enhances efficiency, responsiveness and equity in service delivery (Smoke, 2015; Rondinelli, 1981). In the context of AES, it posits that decentralisation can lead to more equitable access to AES across different socio-demographic and geographical locations. However, under Tanzania's D by D framework, differences in local government capacity, resource allocation, governance arrangements, and the extent to which local governments integrate gender perspectives in extension planning and implementation may create disparities in the accessibility of extension services among districts and across genders. Therefore, this theory guides the assessment of accessibility of AES across gender and districts.

2.2 Empirical Literature Review

In conducting the study of the accessibility of agricultural extension services among smallholder sunflower farmers in Tanzania's decentralisation system, several studies were reviewed. Empirical evidence indicates that accessibility of AES among smallholder farmers remains generally low despite reforms intended to improve service delivery. Masanja *et al.* (2023) in a district-level study in Kibondo, Tanzania found that only a small proportion (18%) of smallholder farmers had access to extension support, despite of the services being decentralised to LGAs. The authors argue that decentralisation by itself cannot ensure effective extension services while there are staffing constraints and logistical limitations at the district level. Similar findings are reported outside Tanzania. For example, Midamba and Ouko (2024) examined extension access among smallholder farmers in Western Uganda, found that only about 42.5% of farmers accessed extension services, indicating moderate but still insufficient coverage. Another evidence from Ghana further supports this observation. For example, a study by Mahama *et al.* (2024) on agricultural extension services and household welfare from the Ghana socioeconomic panel survey, found that only 11% of households reported receiving any form of extension support, indicating that access remained highly limited in practice, despite implementing decentralisation reforms.

Beyond overall access levels of AES, empirical literature further highlights that gender disparities in accessing AES are highly pronounced. Nchanji *et al.* (2025), while examining climate-smart agriculture in Southern Tanzania, noted a significant gender disparity in both access and utilisation of extension services. Female farmers were less likely to access extension support than male farmers, even when services are available within their localities. The authors attributed this disparity to differences in education, income, asset ownership and social network, as well as extension systems that implicitly favour male farmers. Beyond Tanzania, comparative evidence from other African contexts reinforces these findings. Midamba and Ouko (2024), using a cross-sectional survey in assessing gender disparities in agricultural extension among smallholders in Western Uganda, found that female farmers had a significantly lower extension access score than male farmers, even after controlling for household and farm characteristics. The study



highlights the role of social norms, mobility constraints and unequal access to information in shaping gendered outcomes within decentralised systems.

Another study by Midamba *et al.* (2022) using a systematic literature review method examined what impact gender differences have on agricultural extension. Their findings show that agricultural extension systems are not inherently gender neutral. Female smallholder farmers experience greater constraints related to time availability, household responsibilities and limited participation in decision-making, all of which systematically reduce their effective access to extension services. At the global level, FAO (2023) corroborate these findings by documenting persistent gender inequalities in agrifood systems, including unequal access to extension services, credit, and inputs. The report emphasises that extension systems often target male household heads and commercial producers, which systematically marginalises women smallholders.

In addition to gender differences, spatial disparities in extension access across geographical locations are widely reported. Decentralisation in many African countries, including Tanzania, was intended to improve equity and inclusiveness in service delivery across different geographical areas (URT, 1998). However, studies suggest that decentralisation has also introduced spatial disparities in service accessibility across districts. Nwafor *et al.* (2021) reviewed agricultural extension and advisory services in Sub-Saharan African countries and found that extension coverage varies significantly across countries and sub-national contexts, reflecting differences in institutional arrangements, financial structures and implementation capacity. The review documents that extension coverage is uneven across regions, districts and communities, particularly in countries that have adopted decentralisation or pluralistic extension systems. Another study by Agwu *et al.* (2023) reviewed agricultural extension and advisory services in Nigeria, Malawi, South Africa, Uganda and Kenya also found that a decentralised service environment produces significant variation in extension outreach, with farmers in remote or less resource-rich regions likely to receive inadequate advisory services. Similarly, evidence from Tanzania supports this view. For example, Wilson *et al.* (2025) examined farmer field and business schools in Iringa Rural district, found that participatory approaches improved access, but effectiveness varied considerably depending on district-level institutional support and resource allocation.

With respect to determinants of AES accessibility, empirical literature identifies a range of demographic, farm and institutional factors that shape farmers' access to AES. For example, Nagar *et al.* (2021) assessed determinants of farmers' access to extension services and adoption of technical inputs in India, where they found AES access to extension services was influenced by socioeconomic and technology variables such as caste, gender, religion and usage of ICT. Underlining investments in ICT to increase service accessibility. Another study by Mwangi *et al.* (2023) on determinants of smallholder farmers' access to agricultural extension channels and their effects on awareness and compliance with good agricultural practices in Kenya, also found that farmers' access to extension channels was shaped by farm size, incomes, higher asset scores, physical proximity and easy interaction with service provider, and communication channels used by farmers. The study suggests that farmers in resource-constrained areas and located farther from service points are structurally disadvantaged even under a decentralised extension system. Equally, in Tanzania, Masanyiwa *et al.* (2019) linked decentralised governance (D by D) to farmers' access to extension services, where they found that accessibility depends on number and distribution of extension offices at ward and village levels, financial capacity of local government authorities, distance between farmers and extension offices and logistical support (transport, allowances and training resources) the paper concludes that even under decentralisation many farmers remained unreached because local government lacked resource to operationalise extension mandates.

Overall, from the reviewed literature, three key empirical gaps emerge. First, although numerous studies document a low level of agricultural extension accessibility under decentralised reform, few examine accessibility within specific crop value chains, particularly sunflower, which has distinct production, marketing and advisory needs. Second, while gender disparities and spatial inequalities are well documented, existing studies tend to analyse these dimensions in isolation, without jointly examining how gender and district-level decentralisation interact to shape extension accessibility. Third, most studies focus on general smallholder populations and rarely integrate district-level institutional capacity, gender and household-level determinants within a single analytical framework. Consequently, there remains limited empirical evidence on how agricultural extension accessibility varies simultaneously across gender and districts among smallholder farmers in Tanzania's decentralised governance system.

III. METHODOLOGY

The study was conducted in the Dodoma and Singida regions of Tanzania's semi-arid central zone. Both regions experience low, erratic rainfall of 500-800 mm annually, making agriculture predominantly rainfall-dependent and susceptible to climate variability. The major economic activity in these regions is farming, whereas sunflower is the leading cash crop, contributing significantly to household income (Tibamanya *et al.*, 2022). These regions were purposively selected because they represent Tanzania's central agricultural corridor, where the government has emphasised the provision of AES to strengthen sunflower value chain development (URT, 2020). Thus, providing an



appropriate setting to assess how farmers access extension services and the factors influencing accessibility under decentralised governance.

A cross-sectional research design was employed to capture AES accessibility and its determinants at a single point in time (Wang & Cheng, 2020). This design aligns with similar assessment studies (Masanja *et al.*, 2023; Masanyiwa *et al.*, 2019), justifying its applicability in the current study. The study population was smallholder farmers involved in sunflower farming, and the unit of analysis was the heads of farming households. To ensure a representative sample, a multi-stage sampling technique was employed. The process began with the purposive selection of four districts, namely Kondoa and Chemba in the Dodoma region and Ikungi and Manyoni in the Singida region. These districts were selected because they lead in production, accounting for 55% of the total regional sunflower production (NBS, 2021). Next, eight wards were randomly selected: two from each district. Following this, two villages were selected at random from each ward (see Appendix I). In the final stage, households were identified from the village register, focusing specifically on heads of households involved in sunflower farming. The sample size was 385 households, computed using Krejcie and Morgan's (1970) sample size formula for a finite population. The total number of agricultural households (N) in all surveyed districts was 263,313. The Morgan's formula was expressed as:

$$n = \frac{X^2 * N * P(1-P)}{d^2 * (N-1) + X^2 * P(1-P)}$$

Where: n is the sample size required, X^2 is the table value of chi-square (3.841) for 1 degree of freedom at the desired confidence level of 95%, N is the total population size, P is the population proportion (assumed to be 0.5 for maximum sample size, and d is the degree of accuracy expressed as a proportion (0.05). Therefore, substituting N (263 313) into the formula resulted in a sample size of 384.54

$$(n) = \frac{3.841 * 263\ 313 * 0.5(1-0.5)}{0.05^2 * (263\ 313 - 1) + 3.841 * 0.5(1-0.5)} = 384.54$$

Besides, since the number of households varied across districts and wards, a proportional stratified sampling technique was applied to generate a representative sample size from each district and ward surveyed (see Appendix 2). Within each stratum, a simple random sampling technique was used to select households from the list of agricultural households obtained from the village registers.

The method of data collection was a survey questionnaire because it allows the systematic collection of data on a wide range of variables (Taherdoost, 2022). A questionnaire was used to gather data on the socio-demographic and economic characteristics of smallholder farmers, institutional, and farm characteristics that influence access to extension services. This facilitated statistical analysis to identify relationships and predictors of accessibility.

Data analysis was performed using Statistical Package for the Social Sciences (SPSS) version 26. The analysis involved both descriptive and inferential statistics. Descriptive statistics, including mean, median, and mode, were used to summarise farmers' socio-economic characteristics related to AES accessibility. These were the age, sex, year of schooling, annual income, farming experiences, farm size, distance to extension service, and frequency of extension visits. Equally, cross-tabulation was employed to determine AES accessibility by sex.

Inferential statistics, including Chi-square tests, One-Way Analysis of Variance (ANOVA), and Ordinal Logistic Regression (OLR), were also employed to assess the relationship between variables. Chi-square test of independence was used to assess associations between the sex of respondents and accessibility of AES (H_{01}). ANOVA with Tukey's Honestly Significant Difference (Tukey HSD) post hoc test was used to assess whether there are statistically significant differences in AES accessibility across districts (H_{02}). Before employing ANOVA, Levene's Test of Homogeneity of Variances was tested to verify that group variances are equal (Odoi, 2020); thereafter, One-Way ANOVA, with the Tukey HSD post-hoc test, was used to assess whether there are statistically significant differences in mean AES accessibility scores between districts. Tukey HSD post-hoc test was employed to provide precise pairwise comparisons of AES accessibility between districts. Tukey's HSD was preferred for its ability to control the familywise error rate and its suitability for unequal sample sizes across groups (Nanda *et al.*, 2021). It also offers a conservative and robust method for making all possible pairwise comparisons among group means while maintaining the overall Type I error rate (Midway *et al.*, 2020).

In determining predictors of AES accessibility (objective two), the OLR model was used. Before fitting the model, Accessibility was measured through an index derived from ten items using Exploratory Factor Analysis (EFA) and Principal Component Analysis (CPA). These items were the access to guidance on proper farm preparation, advice on seed variety selection, soil testing, planting methods, pest and disease control, harvesting and post-harvest handling, value addition, market information, linkage to agricultural credit services and application of mobile-based extension services. Before employing factor analysis, sampling adequacy and suitability of data for factorisation were tested using Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity, and reliability and internal consistency of the survey scale was tested using Cronbach's alpha. The KMO value was 0.931, indicating good sampling adequacy for EFA. According to Shrestha (2021), a KMO value of 0.90 or higher is considered excellent for factor analysis. Bartlett's Test of Sphericity was statistically significant ($\chi^2 = 2894.374$, $df = 45$, $p < 0.05$), further suggesting that the data were suitable for factor analysis.



Following confirmation of data suitability for factorisation, a Principal Component Analysis (PCA) with varimax rotation was conducted to construct a composite accessibility index for AES. This approach was used to reduce the ten observed indicators into a single latent variable representing the overall accessibility of AES among smallholder sunflower farmers. Varimax rotation was preferred because it produces uncorrelated factors with distinct, high-loading variables, enhancing easy interpretations (Mabel & Olayemi, 2020). The ten items measuring AES accessibility were loaded for PCA analysis, and a scree plot determined the number of components to retain, revealing a clear break after the first component (see Appendix 2). Only one factor was retained, with an eigenvalue of 6.5, accounting for 65.4% of the total variance, meaning all ten items loaded strongly on this single component with loadings ranging from 0.692 to 0.861, and communalities from 0.692 to 0.861 (see Appendices 3 and 4). The generated factor was treated as a unidimensional scale representing the overall accessibility of AES. Furthermore, the Cronbach Alpha coefficient value was 0.941, exceeding the recommended threshold of 0.70, indicating high internal consistency and reliability of the scale (Amirrudin *et al.*, 2021).

The generated composite index (overall accessibility of AES) was treated as a continuous variable in the ANOVA model to test mean differences across surveyed districts, because the index was constructed from multiple items that, together, provide a score with sufficient variability. This approach preserves the full variability of respondents' responses, allowing direct comparison of mean accessibility scores groups than when collapsed into categories like low, moderate, and high, which could lead to a loss of information (Langenberg *et al.*, 2022). For Ordinal Logistic Regression, however, the index was transformed into ordered categories (very low, low, moderate, high, and very high) to align with the model's assumption of an ordinal dependent variable. The categorisation was guided by the distribution of standardised scores, ensuring grouping captured the natural variability observed within the sample (Tutz, 2022). Standardised scores were preferred over other approaches, such as equal-quantile or fixed-interval, which risk imposing arbitrary cut-offs that may suppress true variability within the data (Graetz, 2022). The specific cut-off values for each accessibility level are provided in Appendix 5. The five ordinal levels functioned as the dependent variable in ordinal logistic regression to identify factors influencing AES accessibility. Predictor variables were categorised into three groups: farmers' demographics (age, sex, education, income), structural factors (number of extension workers, extension visits, proximity to AES centres), and farm-specific factors (farm size). Equation 1 represents the regression model formula employed.

$$\log\left(\frac{p(Y \leq j)}{P(Y > j)}\right) = \gamma_j + \sum_{m=1}^M \beta_m X_m \dots \dots \dots \text{(Equation 1)}$$

Y is the ordinal dependent variable (overall accessibility of AES) computed from ten items using EFA; J denotes the cut point threshold (for j =1234); P(Y ≤ j) = Cumulative probability that farmer's accessibility falls in category j or below; P(Y > j) = Probability that accessibility falls in a category above j; γ_j = Threshold (intercept) for category j; X_m = Predictor variables (Age, education, sex, extension visits, incomes, number of extension workers, proximity to extension service centres, farm size, farming experience); β_m = Coefficient of predictor X_m, assumed constant across all thresholds (proportional odds assumption) and; M = Total number of predictors in the model

IV. FINDINGS & DISCUSSION

4.1 Characteristics of Respondents

The paper sought to establish socio-economic and farm characteristics of smallholder farmers that may influence the accessibility of AES. Table 1 provides summary statistics on the general profile of respondents in terms of their age, education, sex, annual income, farming experience, number of extension visits, distance to the nearest extension service centre, and farm size.

Table 1
Socio-Economic Characteristics of Farmers

Variable	Mean	Median	Mode	Minimum	Maximum
Age	43.14	42	28	18	80
Years of schooling of respondents	7.65	7	7	0	17
Farming Experience in years	17.01	18	3	2	58
Annual income	2,931,948	2,700,000	3,000, 000	900,000	11,000, 000
Distance to extension centre	5.11	5	5	1	20
Number of extension visits	1.02	1	0	0	5
Farm size	2.91	2	2	1	30
Sex of Respondent	Frequency		Percentage (%)		
Male	244		63.4		
Female	141		36.6		



The findings in Table 1 show that the average age of farmers was 43 years, implying that the majority of farmers were middle-aged adults, a group generally considered to become economically active and more likely to participate in farming activities and agricultural decision-making. The findings further indicate that the median number of years spent in school was seven, equivalent to completion of primary education. This indicates that primary education completion is common among the surveyed farmers, although some had no formal education, while others had up to 17 years of schooling. The median level of education achieved by farmers implies that a significant percentage of farmers achieved a minimum level of literacy acquisition that can help facilitate the ability of these farmers to comprehend extension messages, innovation use, and utilisation of agricultural support services. Moreover, considering experiences in farming activities, the findings showed an average experience in farming activities of 17 years, showing a vast stock of knowledge in carrying out agricultural activities. The longer experience in farming activities is associated with greater familiarity with AES and their potential value addition to farming activities.

The findings further showed a great imbalance in farmers' annual income levels, with a median annual income of TZS 2 700 000. This indicates that many smallholder farmers operate with limited financial resources. According to the National Bureau of Statistics (NBS, 2022), the national basic needs poverty line was TZS 49,320 per adult equivalent per month, equivalent to about TZS 2,959,200 per household per year for an average of five five-member households. This reflects the low-income status typical of smallholder farmers in rural Tanzania, whose production and income sources are highly vulnerable to climate and market shocks. In terms of access to extension services, the median distance was about 5 km to the nearest extension centre, with a range that varied between 1 and 20km. This implied that a greater distance from the nearest extension service centre may be associated with lower accessibility to extension services, especially for farmers living farther from the points where extension services were being delivered.

The extent of extension visits was low, with a median of a single visit per cropping season, while some farmers did not receive any extension visits at all. According to FAO (2021) guidance, extension agents should visit farmers at every key stage, such as during farm preparation, planting, weeding, and application of inputs, harvest, and post-harvest handling, to provide technical advice and monitor progress. The scarce contact with the extension services implies probable gaps in the delivery of extension services that can interfere with knowledge and innovation transfer for farmers. The median farm size was 2 acres, which is typical for the smallholder farmers' profile that dominates Tanzanian agriculture (Abdulwahid *et al.*, 2024). In gender composition, male respondents were 63.4% compared to female respondents being 36.6%. This representation that favours males reflects likely more widespread enterprise on male-dominated land holding as well as decision making in agriculture. However, the fact that female farmers constitute a considerable proportion gives an intuition for gender consideration in the delivery of extension services in a bid to make such services more equitable.

Therefore, these findings on socio-economic characteristics of respondents noted in this study in alignment with previous findings on smallholder farmers in Sub-Saharan Africa. Middle-aged dominance reflects evidence by Maina *et al.* (2020), who found that farmers in their productive ages participate more in farm activities as much as they are receptive to new technologies. Likewise, findings on levels of schooling agree with Nkonki-Mandleni *et al.* (2022), who noted that the primary level of schooling was prevalent among smallholders, with implications for the interpretation of extension messages by farmers as they adopt. And visitation by extension personnel runs in parallel with Masanja *et al.* (2023) in Tanzania and Midamba *et al.* (2022) in Uganda, where limited extension contact by farmers with extension personnel came out as a crucial determinant against effective service delivery.

4.1.2 Agricultural Extension Service Accessibility by Sex

The paper further attempted to determine how AES accessibility differs across the sex of respondents. This aspect was chosen because it features prominently in the literature of extension as a significant predictor of accessibility to agricultural services (Azzarri & Nico, 2022; Kelil & Girma, 2021). Cross-tabulations were conducted across sex to determine the differences in AES accessibility across this variable. Similarly, the Chi-square test of independence was employed to test whether there are significant differences in AES accessibility between male and female farmers (H_{01}) as presented in Table 2.

Table 2

Accessibility of AES by Sex (n=385)

AES Accessibility	Sex of Respondent		Total (n=385)
	Female (n=141)	Male (n=244)	
Very low	44 (31.2%)	67 (27.5%)	111 (28.8%)
Low	34 (24.1%)	50 (20.5%)	84 (21.8)
Moderate	18 (12.8%)	32 (13.1%)	50 (13.0%)
High	23 (16.3%)	34 (13.9%)	57 (14.8%)
Very high	22 (15.6%)	61 (25.0%)	83 (21.6)
Total	141 (100%)	244 (100%)	385 (100%)

Note: Pearson's Chi-square test results - sex*AES accessibility (χ^2 (df 4, N=385) = 4.982, $p = 0.289$)



The findings in Table 2 present the accessibility of extension services across sex, revealing that female farmers were over-represented in the very low accessibility group (31%) compared to men (27.5%). In spite of these disparities, the Chi-square test of independence revealed that the sex and AES accessibility relationship was not statistically significant ($\chi^2 = 4.982, p = 0.289$). Therefore, we failed to reject the null hypothesis that there are no significant differences in AES accessibility between male and female farmers in the study area. Accordingly, this implies that sex had no significant influence on AES access in the study area. This finding contrasts with much of the literature (Osabuohien *et al.*, 2023; Midamba *et al.*, 2022), which often highlights persistent gender gaps in accessing services. To this effect, however, the non-statistical relationship reinforces the hypothesis that sex distinctions could be context-specific. In Tanzania's decentralised context, this outcome may reflect deliberate gender-mainstreaming efforts at lower local government levels where agricultural extension workers are mandated to ensure inclusivity while attending to farmers. Equally, the introduction of mobile platforms such as M-Kilimo (M-Agriculture) has likely contributed to making gender gaps less visible in quantitative analysis. Through these platforms, traditional barriers faced by women, such as mobility constraints, time conflict and limited voice during extension meetings, are reduced since M-Kilimo allows two-way communication between farmer and extension officer. However, in spite of this thinking, researchers firmly suggest that women often tend to experience structural as well as institutional constraints, such as restricted movement, resource access, and gendered expectations, that may not always appear in tests statistically (Okello *et al.*, 2023; Witinok-Huber *et al.*, 2021).

4.2 Agricultural Extension Service Accessibility by Districts

A one-way ANOVA was conducted to test the null hypothesis (H_{02}) that there are no significant differences in AES accessibility across the surveyed district in central Tanzania. A standardised composite index (standardised overall accessibility of AES) was used as the dependent variable. Similarly, the Tukey HSD post hoc test was conducted to determine where exactly the differences in accessibility of AES occur across the districts. Findings from ANOVA and Tukey HSD test are presented in Table 3.

Table 3

Accessibility of AES across districts

Factor	One-Way ANOVA	Sum of Squares	df	Mean square	F	P-value
District	Between Groups	31.304	3	10.435	11.272	0.000
	Within Groups	352.696	381	0.926		
	Total	384.000	384			
Tukey HSD Post Hoc I-J Test of Mean Difference across Districts						
District	(J) District	Mean Difference (I-J)	Std. Error	Sig.		
Chemba	Kondoa	-.629*	.143	.000		
	Ikungi	-.275	.130	.150		
	Manyoni	.177	.137	.571		
Kondoa	Chemba	.629*	.143	.000		
	Ikungi	.354	.143	.066		
	Manyoni	.806*	.150	.000		
Ikungi	Chemba	.275	.130	.150		
	Kondoa	-.354	.143	.066		
	Manyoni	.452*	.137	.006		
Manyoni	Chemba	-.177	.137	.571		
	Kondoa	-.806*	.150	.000		
	Ikungi	-.452*	.137	.006		

Dependent variable: Overall accessibility of agricultural extension services

*The mean difference is significant at the 0.05 level. Levene's test of homogeneity of variance for gender was significant at $p = 0.289$

The ANOVA results in Table 3 show that the variance in accessibility of AES by the four districts was statistically significant ($F=11.272, p < 0.05$). Therefore, we reject the null hypothesis, concluding that AES accessibility varies significantly across districts. Post hoc comparisons showed that the mean AES accessibility scores differed significantly between Kondoa and Chemba (mean difference = 0.629, $p < 0.05$) and between Kondoa and Manyoni, (mean difference = 0.806, $p < 0.05$). Similarly, Ikungi differed significantly from Manyoni (mean difference = 0.452, $p < 0.05$). However, no significant differences were observed between Chemba and Ikungi, Chemba and Manyoni or Kondoa and Ikungi ($p > 0.05$).

These results indicate that Kondoa district had the highest accessibility level, while the lowest being Manyoni. Kondoa's best performance could be attributed to better institutional strength, more extension workers, or persistent



digital extension efforts. In contrast, Manyoni's lower access can be attributed to inadequate infrastructure and limited ICT penetration- a common challenge cited in rural Tanzanian districts (Kurniasari & Herlina, 2022).

4.3 Determinants of accessibility of agricultural extension services in Tanzania

To further understand the factors influencing smallholder farmers' access to AES, an ordinal logistic regression analysis was fitted using a categorised overall accessibility index as the dependent variable. The regression model included a range of predictors, including socio-demographic factors (age, gender, education, income), farm characteristics (farming experience, farm size), and institutional factors (frequency of extension visit, proximity to extension service centres) as presented in Table 4. *Model fit Summary*: Null model, -2LL= 1208.467; Final Model, -2LL = 966.987 (Chi-square= 241.480, df=8, $p < 0.001$). Model goodness-of fit: Pearson Chi-square (1519.341, $p = 0.558$); Deviance = 966.987, ($p = 1.000$); Pseudo R-Square: Cox and Sell = 0.466, Nagelkerke = 0.487; McFadden = 0.200.

Table 4

Predictors of Accessibility of Extension Services in the Study Area

Predictors	Estimate (β)	Odds Ratio (Exp (β))	Std. Error	Wald	df	Sig.
Age	.028	1.03	.016	2.881	1	.090
Sex	-.002	0.998	.206	.000	1	.992
Education (year of schooling)	.165	1.18	.049	11.448	1	.001
Farming Experience (years)	.051	1.05	.018	7.701	1	.006
Annual Income (TZS)	1.941E-8	1.00	7.980E-8	.059	1	.808
Proximity to the extension service centre	-.097	0.91	.043	5.172	1	.023
Number of extension visits	1.071	2.92	.122	76.784	1	.000
Farm size	-.003	0.997	.038	.005	1	.942

Based on the assumptions of the model (Table 4), the fitting statistics indicate that the final model significantly improved over the intercept-only model (Chi-square = 241.480, $p < 0.001$), meaning that the selected predictors significantly contributed to explaining variations in AES accessibility. Also, the goodness-of-fit statistics (Pearson Chi-square = 1519.341, $p > 0.05$, Deviance = 966.987, $p > 0.05$), justify the goodness-of-fit of the model. The value of Pseudo R-square (Cox and Snell = 0.466, Nagelkerke = 0.487, McFadden = 0.200) also indicates the model explains a moderate proportion of the variability in AES accessibility.

After the establishment of the overall model fit, the analysis proceeded to identify important predictors of AES accessibility. As depicted in the regression findings (Table 4), the important predictors included the farming experience, level of education, location distance to extension centres, as well as the number of extension visits. Of all these predictors, the number of extension visits was the most significant ($p < 0.001$), highlighting the value of frequent and direct contact between extension agents and farmers in facilitating service uptake. In their own right, frequent visits not only ease the diffusion of knowledge as well as innovations but also build trust and familiarity required for long-term extension agent and farmer relationships. In the context of smallholder farmers, who often face limited access to agricultural information, regular extension visits serve as an entry point into gaining timely advice, adopting new technology, as well as increasing productivity. In effect, this finding is supported by evidence from Ethiopia, where it was established that the more extension agents visited farmers, the higher the likelihood of farmers' uptake of recommendations and higher trust in the extension system (Kibrom *et al.*, 2025).

Farmer's education level was also an important determinant ($p < 0.05$). Education enhances knowledge, sharpens the ability for critical thinking, and develops the ability for problem interpretation and solving. With regard to extension services, education gives the capacity for farmers to digest the technical content of agricultural information, interpret advice, and apply innovations. Educated farmers have higher chances of receiving instructions on the use of inputs compared to non-educated farmers. They are also more likely to communicate with extension agents than their non-educated counterparts. These results are similar to those of Mahama *et al.* (2024), who supported that educated farmers in Ghana have a higher likelihood of adopting agricultural innovation and conversing more with extension agents than non-educated farmers.

Proximity to extension service centres was a significant negative predictor ($\beta = -0.097$, $p = 0.02$). This means that those farmers living farther from the extension centre are less likely to access services. This is due to the fact that physical distance imposes practical barriers, for example, transport costs, time management, as well as limited infrastructure, especially in rural settings. Moreover, farming experience was an important positive predictor ($p < 0.05$), meaning that more experienced farmers tend to use extension services. This is because long-farming farmers, with time, have been faced with various agricultural challenges and have learned the value of professional guidance. Similarly, their built-in experience with time likely gives them reassurance in judging and utilising new agricultural information. However, other findings, for instance, Torres (2022), observed that start-up farmers desire certain value-added



technologies more in comparison to experienced farmers. This implies that while experience draws the farmer towards extension services utilisation, it may not necessarily mean openness to innovation, especially when new technologies challenge established practices.

Meanwhile, other predictors, including age, sex, annual farm income, and farm size, were not significant ($p > 0.05$). Although age had a positive coefficient, but was statistically insignificant in determining accessibility of AES ($p > 0.05$). This suggests that, although older farmers tended to have slightly higher odds of accessing extension services compared to younger ones, the difference was not strong enough to be considered significant. The positive direction of the coefficient implies that as farmer grow older, their experiences and familiarity with agricultural networks may somewhat enhance their engagement with extension services. However, the lack of statistical significance indicates that age alone does not meaningfully explain variations in accessibility within the study area.

Moreover, sex could not substantially predict AES accessibility ($p > 0.05$), indicating no significant sex bias in AES delivery in the study area. It is probably because the decentralised extension system in Tanzania continues to value inclusivity of extension delivery at the field level, where both male and female sex participate in decision-making. Contrary to the above finding, Okello *et al.* (2023) as well as Witinok-Huber *et al.* (2021) reported women being constrained by factors of mobility limitation as well as exclusion from the decision-making forums, among others, impacting their access to AES.

Regarding the annual income of the farmer, it was also found not to be a significant predictor ($p > 0.05$). This is likely because AES in Tanzania is largely provided as a public good rather than priced services, so it might well be accessed by households with less income. In contrast, income plays a stronger role in access to advice and technologies when provided by private extensions. Additionally, farm size was not significant ($p = 0.94$). Although larger landholdings tend to go along with higher extension agent visibility, the absence of effect here implies the service might as well be distributed more evenly among the farmers, or targeted more by type of crop (e.g., sunflower) than by land size. It was similarly reported by (Loki *et al.*, 2021) that farm size does not necessarily influence the need for extension services among smallholder farmers.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study assessed the accessibility of AES under decentralised governance in Tanzania, focusing on gender and district-level disparities in accessing extension services, as well as factors influencing accessibility. Findings revealed that the accessibility of AES differs significantly across surveyed districts but not across genders. Factors such as education level, farming experiences, proximity to the extension centre, and the number of extension visits predicted accessibility. Age, sex, annual income of the farmer, and farm size were not significant predictors. These findings suggest that the district-level disparities call for targeted resource allocation, ensuring that districts with low accessibility receive additional support to balance service delivery. The absence of gender-based disparities indicates progress towards inclusivity; however, continued monitoring is essential to sustain equity across diverse farmer groups. Likewise, the study also concludes that extension programs should be tailored to farmers' knowledge levels, experience and capabilities. Also, outreach mechanisms such as the use of digital platforms and community-based extension agents should be strengthened to reduce the physical distance to extension service and increase the frequency of extension visits.

5.2 Recommendations

To address the district-level disparities in accessing AES, this study recommends that the Tanzanian government should allocate extension agents based on needs to ensure districts with lower accessibility scores, such as Manyoni, receive proportionately greater support. At the same time, complementary measures such as expanding the use of digital platforms and community-based outreach should be integrated in geographically disadvantaged areas, while, tailoring extension contents to farmers' education levels and farming experiences to strengthen farmers' ability to understand and act on extension advice.

Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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APPENDICES

Appendix I: Proportionate sample sizes

Formula for determination of proportionate sample size (Cochran`s, 1977):

$$n_i = \left(\frac{N_i}{N}\right) \times n$$

Where:

n_i is the sample size from council i

N_i is the number of agricultural households in council i

N is the total number of agricultural households in all selected councils

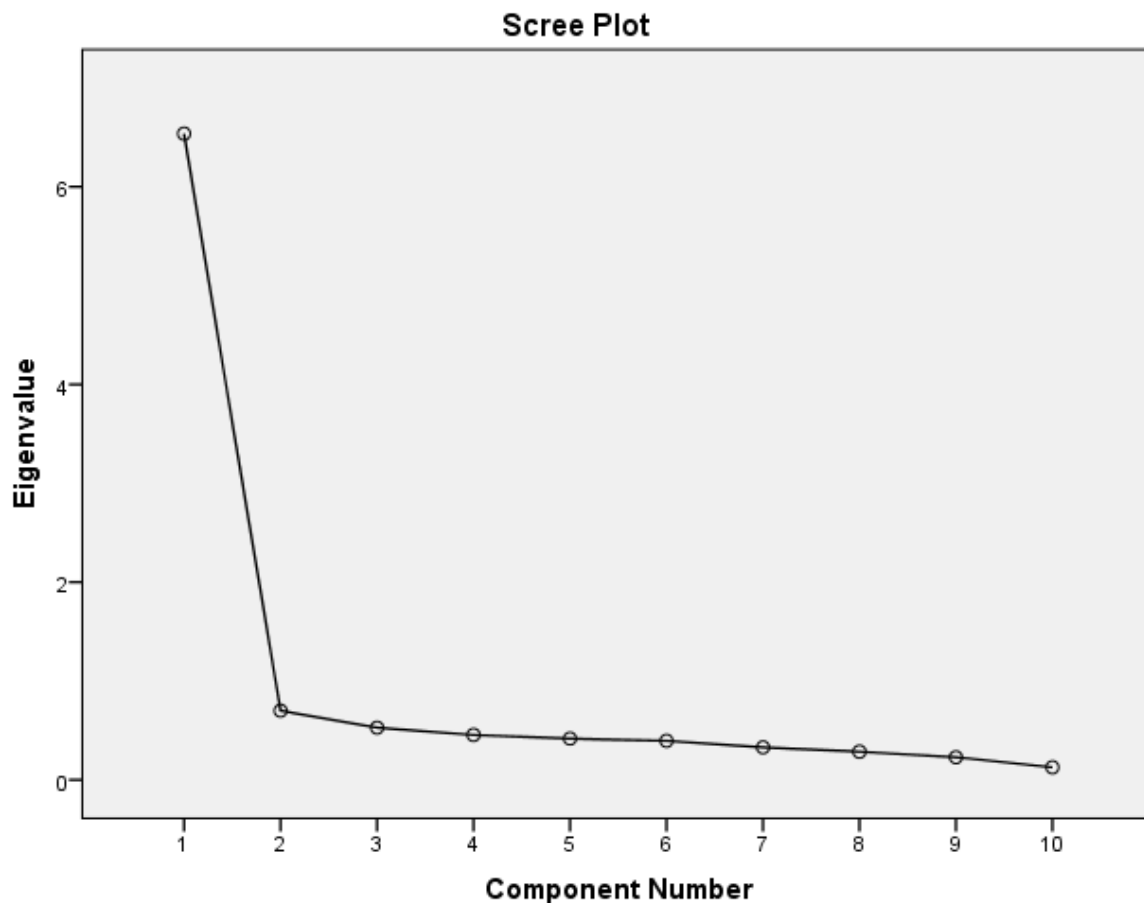
n is the desired overall sample size ($n = 385$)

Proportionate sample size

Council/ LGA	No. Households	Proportionate sample size per Council	Ward	No. Households	Proportionate sample size per Ward
Chemba	75 050	110	Gwandi	1 545	32
			Kidoka	3 693	78
Ikungi	74 527	109	Puma	2 686	56
			Dung'unyi	2 563	53
Manyoni	61 059	89	Chikola	3 294	54
			Heka	2 171	35
Kondoa	52 677	77	Pahi	3 382	42
			Mnesia	2 888	35
Total	263 313	385			385

Source: National Population and Housing Census (NBS, 2022)

Appendix II: Scree Plot of Principal Components for Accessibility Index





Appendix III

Cumulative column explaining the total Variance

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.537	65.373	65.373	6.537	65.373	65.373
2	.699	6.994	72.368			
3	.528	5.282	77.650			
4	.454	4.543	82.193			
5	.417	4.168	86.362			
6	.395	3.946	90.307			
7	.329	3.286	93.593			
8	.285	2.848	96.442			
9	.229	2.291	98.733			
10	.127	1.267	100.000			

Extraction Method: Principal Component Analysis

Appendix IV

Results of the exploratory factor analysis of the accessibility of AES (n=385)

	Factor 1
	Communalities
Access to guidance on proper farm preparation	.861
Access to advice on seed variety selection	.841
Access to advice on soil test	.692
Access to advice on proper planting methods for sunflower seeds	.832
Access to advice for pests and diseases control	.834
Access to advice on sunflower harvesting and post-harvest handling	.796
Access to advice on sunflower value addition	.816
Access to information on market opportunities for sunflower products	.771
Advice and linkage with agricultural credit service facilities	.837
Access to mobile based extension services	.792

Extraction Method: Principal Component Analysis.
1 factor extracted

Appendix V

Categorisation of the overall accessibility of AES using Z-score

Category	Z-Score Range ***	Label
Very low	≤ -0.70	Very low
Low	> -0.70 to -0.10	Low
Moderate	> -0.10 to 0.30	Moderate
High	> 0.30 to 0.80	High
Very high	> 0.80	Very high

Cut-off points were determined based on the **empirical distribution of standardised index scores**, aiming to ensure that category sizes meaningfully reflected observed variation in AES access among the sampled farmers.



Head teachers' instructional leadership practices in Tanzanian public primary schools: Evidence from Mwanza region

Venant Fundi^{1*}
Prisca Mbogo²
Coletha Ngirwa³

^{1*}mwesigav@gmail.com
²cole.edwin1995@gmail.com
³pirimbogo@gmail.com

^{1,2,3}The Open University of Tanzania (OUT), ¹The Agency for the Development of Educational Management (ADEM),
^{1,2,3}Tanzania

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ABSTRACT

The study assessed the head teacher's instructional leadership practices in public primary schools in Tanzania. Specifically, it examined the headteacher's effectiveness in defining school mission-focused practices, managing instructional-focused practices, and promoting positive school climate. The study employed a convergent mixed design within the framework of a mixed-methods approach in the Ilemela and Misungwi district councils in the Mwanza region, Tanzania. The study was grounded in instructional leadership theory, which guided it. From a population of 2,994 teachers in 218 public primary schools, Yamane's formula yielded a sample size of 352, including ordinary, academic, and head teachers, plus key informants. Respondents were chosen from 44 schools in two districts to ensure that the study's sample was both proportional and representative. Questionnaire, interview, and documentary review were employed in data collection. The study found that the perception of head teachers' adoption of instructional leadership practices was high. However, the qualitative data indicated the moderate adoption of instructional leadership practices due to heavy administrative responsibilities such as ad hoc meetings, supervising constructional projects, and financial management roles, which minimize head teachers' time and attention to fully focus on the instructional practices. Therefore, the study recommends that the government assign school construction projects to qualified engineers and employ school accounts personnel to reduce administrative duties.

Keywords: Head Teachers, Instructional Leadership, School Climate, School Mission, School Program

I. INTRODUCTION

Instructional leadership has widely been acknowledged in enhancing the quality of teaching and learning in schools across the globe (Aron & Amos, 2024; Bush & Anania, 2023). Empirical evidence from literatures shows that, most of the current researches on school leadership highlight the significant effects of instructional leadership practices on improving teaching and learning (Gyamerah, 2021). This approach, which is marked by knowledge sharing, collaboration, and leading by example, inspires teachers and contributes to the overall school improvement (Kano, 2024; Sharafat *et al.*, 2024). Moreover, instructional leadership has been identified as a key factor which influences teachers' work habits (Kano, 2024; Pendleton-Brown, 2019).

The demands for quality education provision have grown over the years and Tanzania is no exception of this phenomenon (URT, 2014). Since her independence in 1961, Tanzania has been struggling to provide quality education service to combat ignorance, poverty and diseases, with a strong focus on human capital investment for socio-economic development (Freeman, 2020; Ismail, 2022; Mushi, 2006). Empirical evidence reveals that, the quality of education system largely depends on effective school leadership, which is significant in shaping the teaching profession through influencing both teachers and pupils (Niemi, 2021; Stromquist, 2018).

In her education development journey, Tanzania adopted decentralized governance structures and policies from the 1990s, that promoted school-based management and increased accountability for head teachers (Manaseh, 2016; Rwiza, 2016). Accordingly, URT (2018) recognizes the role of the School Management Team (SMT) as an organ responsible for managing school functions and operations with the head teacher holding a central position. As such, head teachers are responsible for supervising, overseeing and ensure quality teaching and learning (Manaseh, 2016). Remarkably, decentralization process brought in new roles in school leadership (Rwiza, 2016). Under the devolution of decision-making authority, head teachers are thus required to lead the planning process for their school



development. In this role, they are responsible to create an effective school learning culture, coordinate the school instructional activities and ensure supportive teaching and learning school environment (URT, 2013). More importantly, the head teachers have to ensure that, teachers are supported, encouraged and motivated to be productive as they play their teaching roles. Benti and Tarekegne (2022) urge that, the head teachers need to reward their teachers often for the little achievement they make that make a positive significant difference for their students, colleagues, and for the school. Notably, such kind of appreciation raises teachers' working habits and enthusiasm and trigger in them high levels of job commitment, satisfaction, engagement as well as emotional well-being (ibid).

Similarly, Stromquist (2018) posits that, head teachers occupy a critical position in shaping the teaching profession in the school community. However, studies have consistently shown that the attributes for teachers' enthusiasm towards work are mutually connected to how their head teacher provides support and encourage them to bring about pupils' achievement. Thus, instructional leadership role has a decisive impact on teachers' commitment towards work, quality of teaching and pupils' achievements (Mahmoud-Raba, 2017).

The Education and Training Policy 2014 version 2023 identified the need to improve the provision of education in order to meet the objectives of education in the country. In addition, the school improvement directive issued by the Education Commissioner in July 2013 called upon head teachers to put in place a mechanism to provide coaching and mentoring to teachers, establish learning communities in schools to facilitate teacher engagement and promote competence and willingness to work (URT, 2018). Furthermore, studies conducted in Tanzania by Bush and Anania (2023) and Manaseh (2016) show that, the head teacher is considered to be an instructional leader as stipulated in the Ministry of Education, Science and Technology (MoEST) policy document. They are recognized as internal instructional supervisors and their core function is to ensure that, curriculum is effectively implemented through monitoring the preparation and use of academic documents needed for classroom instructions (Manaseh, 2016). However, studies on instructional leadership conducted in Tanzania, for example, Bush and Anania (2023) focused their attention on few instructional leadership practices and did not address core domains in Hallinger and Murphy's (1985) model such as monitoring student progress, protecting instructional time, curriculum coordination as well as creating a positive learning climate. Additionally, the very small, purposively selected sample (N=20) leaders limits generalizability and prevents a full understanding of instructional leadership practices across Tanzanian schools. Similarly, the study by Manaseh (2016) focused on one instructional leadership domain on how head teachers manage instructional programme in secondary schools while leaving other domains such as defining school mission and developing positive school climate unexplored, hence limiting full understanding of all instructional leadership practices across Tanzanian schools.

Several initiatives have been undertaken by the government in attempting to enhance quality instructional leadership skills among the head teachers in Tanzania. The Presidents' Office Regional Administration and Local Government [PO-RALG] (2022) issued a policy directive which requires head teachers to be holders of ordinary diploma in education assuming that, they have adequate instructional leadership skills to assume their instructional roles. On the other hand, the Ministry of Education and Vocational Training (MoEVT) by then, through a School Improvement Toolkit-Practical Guide for school leaders require all head teachers to carry out instructional leadership practices at their schools in order to realize quality education (URT, 2013; 2021). Furthermore, the guide calls upon school leaders to establish learning communities in the school to boost teachers' teamwork and share skills to foster effective teaching and learning process (ibid).

However, irrespective of the adopted initiatives, the literature has shown that head teachers' working commitment in performing their instructional duties in schools has remained at average levels as reported by (Kashamba *et al.*, 2023; Mohamed, 2020). This situation gives doubt on the proper adoption of instructional leadership practices by the head teachers in the context of Tanzania public primary schools. It is from these realities that the proposed study was developed to assess the head teachers' instructional leadership practices in public primary schools in Tanzania.

1.1 Research Question

To what extent do head teachers adopt instructional leadership practices in public primary schools in Tanzania?

II. LITERATURE REVIEW

2.1 Theoretical Review

Instructional leadership refers to anything that school leaders do to improve teaching and learning in the school (Hallinger, 2018). McBrayer *et al.* (2020) add that instructional leadership encompasses those actions taken by the school leader with the intention of developing a productive and satisfying working environment for teachers and a desirable learning conditions and outcomes for pupils.



This literature review examines the head teacher's adoption of instructional leadership practices in public primary schools in Tanzania. It is structured into key areas that explore the theoretical underpinnings of instructional leadership with its associated Principal Instructional Management Rating Scale (PIMRS) dimensions as practiced by the head teachers. The instructional leadership theory developed by Hallinger and Murphy (1985) offers a research-based framework for understanding how head teachers can effectively create enabling environment to enhance pupils' achievement. This theory is recognized for its significant contribution to instructional leadership research and remains accredited in contemporary scholarship (Bush & Anania, 2023; Hallinger & Wang, 2015). McBayer et al. (2020) add that instructional leadership encompasses those actions taken by the school leader with the intention of developing a productive and satisfying working environment for teachers and a desirable learning conditions and outcomes for pupils. Hallinger and Murphy (1985) conceptualized instructional leadership through three central dimensions namely: developing the school's mission; managing the instructional program; and fostering a positive school climate. Their framework has been expansively functional across various educational settings, offering treasured insights into the instructional leadership practices of head teachers.

2.1.1 Developing School's Mission

Good governance practices require schools like any other organizations to have well stated vision, mission and goals, stating where the school needs to be and to get there in order to achieve the intended goals. School governance policy identifies school leaders as responsible persons to initiate, develop, and lead the staff and community create, revise, and review the school mission (Hallinger & Wang, 2015). Notably, school leaders are required to use needs assessment methods, pupils' performance data to secure staff input in developing school goals that are easily understood by teachers in the schools while ensuring that staff responsibilities are aligned with the framed goals (Gyamerah, 2021; Ondong, 2024; Ralebese *et al.*, 2025). School leaders therefore, should develop school mission in collaboration with school staff, pupils, and school committee members and other school community members in order to ensure that there is a shared purpose (Kaisara, 2024). The school leaders should also make sure the framed mission centered on educational goals are widely communicated to all school stakeholders which serve as a foundation of sound decision-making. Hallinger and Wang (2015) avow that framed school goals are effectively communicated to members of the school community through discussion with teachers at subject or department levels when making curricular decision, displaying them on the school posters or bulletin boards. As noted also by Bush and Anania (2023); Dongo and Mahlangu (2022); Hallinger (2018), other means of communicating the school goals include having open forum with pupils during assemblies or discussions while ensuring that the classroom priorities of teachers are consistent with the goals and direction of the school.

2.1.2 Managing Instructional Program

Managing instructional programs requires the school leaders to supervise and evaluate instructions; coordinate curricula; and monitor pupils progress (Gyamerah, 2021; Hallinger & Wang, 2015; Puruwita *et al.*, 2022). It focuses on a leadership function that aim at enhancing effective teaching and learning process where the head teacher teams up with teachers to develop mechanisms that best align the curriculum with educational standards (Bush & Anania, 2023; Ngowi & Mafwolo, 2022; Sharafat *et al.*, 2024). It also entails provision of instructional support to teachers such as coaching and mentoring to improve teaching practices, supervising and evaluating classroom instruction, conducting observations in classrooms on a regular basis, pointing out specific strengths and weaknesses in teacher's instructional practices and providing timely and constructive feedback (Aureada, 2021; Kaisara, 2024). According to Gyamerah (2021); He *et al.* (2024); Musumi and Mkulu (2020), managing instructional program requires school leaders to meet individually with teachers to discuss pupils progress, discuss academic performance results with teachers to identify curricular strengths and weaknesses, use tests and other performance measure to assess progress toward school goals. Notably, school leaders need also to ensure school instructional resources are provided and used to enhance pupils learning and teachers teaching. Asmuri and Hamzah (2023); Sharafat *et al.* (2024) make an emphasis that head teachers should as well perform supportive instructional practices such as guidance and counselling, analyzing pupils' performance data to inform instructional decisions, monitoring school progress, motivations, effective decision making, communication, as well as promoting effective teaching strategies to ensure high-quality teaching (Hallinger & Wang, 2015; Puruwita *et al.*, 2022).

2.1.3 Promoting Positive School Climate

The third domain requires the school leader to promote a positive school learning climate through protecting instructional time; providing incentives for teachers; providing incentives for pupils' learning; promoting the professional development of teachers; and maintaining high visibility (Bush & Anania, 2023; Hallinger & Wang, 2015; Puruwita *et al.*, 2022). Fostering a positive school learning climate is determined on how the head teacher cultivates a positive school culture that foster a climate of trust, respect and collaboration among teachers, pupils and



parents; addresses teachers-wellbeing such as safety, social-emotional needs; engages families, community members and external partners in supporting teachers teaching; and resolve conflicts thereby promoting harmonious teaching and learning atmosphere within the school community. In this context; also, the head teacher as an instructional leader is determined on how he/she provides incentives to teachers teaching, protect instructional time, promote professional development for teachers, and maintaining visibility (Hallinger & Wang, 2015; Puruwita *et al.*, 2022).

2.1.4 Instructional Leadership Theory

This study is grounded on the Instructional Leadership Theory by Hallinger and Murphy (1985). The theory focuses on the role of the school leader in coordinating, controlling, supervising, and developing curriculum, and instruction in the school (Hallinger, 2010). This theory assumes that instructional leaders lead from a combination of expertise and charisma, focusing on inspiring teachers' belief to enhance their emotional well-being, pedagogical proficiency, and job commitment (Hallinger & Wang, 2015; Seong, 2019; Puruwita *et al.*, 2022; Bush & Anania, 2023). Within the context of a school, the head teacher operationalizes instructional roles to ensure that teachers are committed to perform their tasks effectively and pupils learn productively (OECD, 2016; Gharde *et al.*, 2018; Lane *et al.*, 2019). The theory further assumes that the instructional leader provides practical assistance in developing teachers' job pride and instructional skills and creating amicable school environment for teacher potential to meet the needs of all pupils through effective teaching and learning (Bellibaş *et al.*, 2020; Dilekçi & Limon, 2020; Hallinger *et al.*, 2018).

The theory views school leaders as hand-on principals with instructions and confident in working with teachers on the improvement of teaching and learning (Meyer *et al.*, 2022; Cansoy *et al.*, 2022; Groenewald *et al.*, 2023). The theory further advocates that instructional leaders are goal-oriented, culture builders, lead from a combination of expertise and charisma focusing on pupils' academic outcomes (Ahmad & Hamid, 2021; Bush *et al.*, 2022; Hallinger & Wang, 2015; Puruwita *et al.*, 2022). The Instructional Leadership Theory is useful in this study because it addresses mission focused, instructional programme and positive school improvement learning climate practices which are key instructional practices that are well-suited to driving improvements in teaching and learning outcomes (Hallinger *et al.*, 2018; Hui & Singh, 2020).

2.2 Empirical Review

Effective instructional school leaders are urged to assume instructional roles through creating mission-focused practices, managing instructional practices and promoting a positive school learning climate to enhance pupils' learning outcomes (Bush & Anania, 2023; Hallinger & Wang, 2015; Puruwita *et al.*, 2022). A good number of researchers attempted to establish the practicalities of the school leaders' instructional practices on the ground. For instances, Ahmad *et al.* (2020) conducted a study on teachers' perceptions on the effect of instructional leadership practices of primary school head-teachers on teacher effectiveness in Pakistani. The study employed quantitative approach and stratified sampling technique was used to get a study sample of 560 participants. The study found that the instructional leadership practices had a significant impact on teacher effectiveness. The study recommended head teachers to improve their instructional practices while through active involvement of teachers in school operational practices. The study by Ahmad *et al.* (2020) is important in the current study because it used the same independent variable which the current study is framed in. However, the previous study was conducted in a different geographical setting and employed quantitative research approach. This current study employed mixed approach as a means to counterbalance the weaknesses inherent within one approach with the strengths of the other (Creswell, 2022).

Another scholar, Kumari (2023) examined the role of primary school principals in enhancing teachers' instructional practices in Sri Lanka. The study employed a multiple case study approach, collecting qualitative data through semi-structured interviews, focus group discussions, observations, and document analysis. The four principals and four teachers who were interviewed provided insights regarding principals' engagement in instructional practices. The study found that all principals were assuming instructional leadership roles, including instructional supervision, feedback giving, providing instructional materials, and managing instructional time. The study also uncovered limited opportunities for principals to receive leadership training. The study recommended capacity building to principals on school management and leadership to enhance their effectiveness as instructional leaders. Kumari's study was important in the current study because it gave insights of instructional leadership practices in which the study objective was framed in. However, the study was limited by its lack of quantitative data, suggesting the need for a mixed-methods approach as adapted in the proposed study to fully understand instructional leadership practices in primary schools in the context of Tanzania.

Additionally, Muthoni and Mungai (2016) explored the efficacy of instructional supervision in public primary schools in Nyeri Central Sub County, Kenya. The study employed descriptive research design. The study revealed that head teachers were efficacious in providing instructional materials, motivating teachers and in enforcing discipline and used evaluation skills, discipline skills; reportorial skills and interactive skills in carrying out instructional supervision.



Notably, most of the head teachers were found to have low levels of efficacy in: making class visitations; defining school goals; monitoring classroom instruction; capacity building for teachers and in providing feedback on pupil's performance; pedagogical and analytical skills. Muthoni and Mungai (2016) recommended capacity building to head teachers on instructional supervision and that instructional supervision be incorporated in the curriculum training, while emphasizing the appointment of head teachers to base on their skills and aptitudes. The study by Muthoni and Mungai (2016) is useful in the current study because it focused on the instructional supervision by the head teachers upon which the current study was edged in. However, the current study went beyond the Muthoni and Mungai's methodological study by adopting mixed method design upon which qualitative and quantitative data were collected by interview, documentary and survey instruments respectively. Using surveys, documentary review and interviews enhanced the depth, validity, and breadth of data collection, allowing the researcher to gather a richer understanding of the research topic through methodological complementarity.

Moreover, Kaai (2016) employed mixed research design and adapted instructional leadership model from Bossert *et al.* (1982) in assessing the understanding and improving instructional leadership practices in primary schools in Karatu District, Tanzania. The study found that teachers were not able to explain the vision and mission of their schools neither the roles of the head teachers leading to poor cooperation within the schools. Kaai (2016) suggested that the government should ensure that, head teachers are properly trained to carry out their instructional roles. Importantly, the study recommended further studies be conducted on the effectiveness of head teacher's managerial and instructional roles due to rapid changes in policies and government reforms occurring in the education sector. Kaai's study is important in the current study because it focused its attention on head teachers' instructional leadership roles to enhance effective teaching and learning process so does the current study. However, the current study differs from Kaai's study, in terms of the models that were adapted in the respective studies. While, Kaai's study adapted instructional leadership model from Bossert *et al.* (1982), the current study adopted instructional leadership model from Hallinger and Murphy (1985). Arguably, literature consistently positions Hallinger and Murphy as operationalized model derived from Bossert *et al.* (1982), enabling measurable tools like the Principal Instructional Management Rating Scale (PIMRS) and that it best explains instructional leadership practices due to its specificity, empirical validation and widespread adoption in research over Bossert *et al.*'s (1982). Notably, the model expounds core dimensions while adding refinements, making it the benchmark for explaining practices. Bossert *et al.* serves as conceptual groundwork but lacks the behavioral granularity for practical explanation or measurement (Yaacob & Ishak, 2023).

Correspondingly, Logation *et al.* (2021) conducted a study to examine the perceptions and practices of heads of schools' instructional leadership in public secondary schools in Biharamulo district, Tanzania. The study employed concurrent triangulation design. The study found that heads of schools perceived instructional leadership in terms of showing right direction about the teaching through which they supervised preparation of schemes of work and lesson plans, providing teaching and learning resources, promoting program development, and in some occasions visiting teachers in classrooms. The study recommended regular in-service trainings to be organized for heads of schools and more research to be carried out to examine the extent to which heads of schools employ instructional leadership practices. The study by Logation *et al.* (2021) is important in the current study because it focused on instructional leadership practices that the current study was edged in. However, the previous study was conducted in a different geographical setting and focused on heads of secondary schools. The current study responded to the previous study's recommendation that urged more research to be conducted to examine the extent to which heads of schools employ instructional leadership practices.

III. METHODOLOGY

3.1 Research Design

Based on the research objective, this study employed a convergent mixed method design in which both qualitative and quantitative data were collected in parallel, analyzed separately, and then merged (Creswell & Creswell, 2023). More importantly, the study used concurrent triangulation design. The design was preferred because it enabled collection of large amount of data at once with less cost and time (Creswell & Clark, 2018). Having analyzed and merged quantitative and qualitative data, through this design, the results were integrated to get a comprehensive understanding of the research problem. Remarkably, the qualitative data were collected for the purpose of confirming, cross-checking and complementing the quantitative findings (Creswell, 2022).

3.2 Study Area

The study was conducted in Ilemela and Misungwi districts, Mwanza region. Mwanza region was randomly selected as the study area because it possessed the characteristic features relegated to contextual background of possessing urban, semi-urban and rural nature that were common to all other regions in Tanzania (David *et al.*, 2023).



On the other hand, Ilemela and Misungwi districts were stratified and randomly selected based on the nature of their environmental settings such that the findings served as suitable representative of both urban and rural context respectively (ibid). The study assumed that, the adoption of instructional leadership practices in the management of public primary schools was influenced by the nature of environmental contexts in which the school exists (Sultan *et al.*, 2022). Hence, the findings from a study that covers both rural and urban environmental settings would likely be relatively free from contextual limitations of generalizability (Kamper, 2019). Ilemela district covers the local administrative authority under Ilemela Municipal Council while Misungwi district is under Misungwi District Council. Currently, Ilemela district had 76 public primary schools with a total number of 1424 of teachers. On the other hand, Misungwi district had 142 public primary schools with a total number of 1570 teachers (URT, 2023).

3.3 Target Population

The population for this study included 2994 primary school teachers including Headteachers from all 218 public primary schools in Ilemela and Misungwi Districts, Ward Education Officers (WEOs) from all 46 wards in both districts, 2 District Pre and Primary Education Officers (DPPEOs) and 2 District School Quality Assurance Officers (DSQAOs) (URT, 2023). Headteachers constituted a necessary strategic group of respondents because they formed the core function of Instructional leadership practice within the school. On the other hand, teachers, being the key implementers of the school curriculum, provided valuable information regarding the instructional leadership practices that the headteacher operationalizes and their level of work morale. Similarly, the teachers formed a significant group of respondents regarding their roles and responsibilities in the school as teaching and learning process (URT, 2013). Furthermore, the WEOs, DSQAs and DPPEOs provided valuable information as the key informants to complement and justify what was provided by the primary respondents.

3.4 Sampling Procedures and Sample Size

From a target population of 2,994 teachers, including head teachers from all 218 public primary schools in Ilemela and Misungwi districts, Yamane's formula, $n = N / [1 + N(e^2)]$, was used to calculate the sample size, where n = sample size, N = target population, and e = margin of error (0.05). Using the target population ($N = 2,994$) (URT, 2023), the sample size was calculated as $n = 2,994 / [1 + 2,994(0.05)^2]$, resulting in 352 respondents. This sample comprised 264 ordinary teachers selected through simple random sampling, 44 academic teachers, and 44 head teachers who were purposively sampled. In addition, the study included 8 Ward Education Officers (WEOs), 2 District Pre and Primary Education Officers (DPPEOs), and 2 District School Quality Assurance Officers (DSQAOs) as key informants, all purposively sampled. Since each school provided 8 respondents, the sample was drawn from 44 primary schools ($352 / 8$). To ensure effective representation, the 44 schools were proportionally distributed between the two districts at a rate of 0.20 ($44 / 218$) based on their respective sampling frames.

3.5 Data Collection Instruments and Procedures

The research data were collected by using questionnaire adopted and modified from Principal Instructional Management Rating Scale by Hallinger and Wang (2015), interview and documentary review. The use of multiple methods was adopted in order to overcome the limitations inherent within one method by the strengths of the other (Creswell & Creswell, 2023). Notably, triangulation in the data collection ensured validity and enabled the researcher to get the reality of what was investigated (ibid.).

3.6 Data Analysis

Quantitative data were analyzed by descriptive statistics in terms of mean, standard deviation and skewness while, the qualitative data were analyzed through content analysis. Reliability of the data collection instruments was tested for internal consistency as determined by Cronbach's alpha and composite reliability while validity was ensured through content validity, criterion validity and construct validity. Moreover, ethical issues were considered by observing protocol, informed consent of respondents and confidentiality of information sources (Creswell & Creswell, 2023; Hurst, 2023).

3.4 Ethical Consideration

The planning, conducting and reporting of this research, involved considerations of ethical issues and principles as per set standard and practices (Creswell & Creswell, 2023). Such principles included securing research permit from relevant authorities, informing the respondents in advance that their participation in the study was voluntary, and that the information they would give would be kept confidentially (Fleming & Zegwaard, 2018).

IV. FINDINGS & DISCUSSION

The results of the study outline the key findings on the instructional leadership practices of head teachers in terms of defining school mission, managing school instructional program, and promoting positive school climate.

4.1 Findings

This section presents data analysis results that were intended to answer the research question of the study “*To what extent do head teachers adopt instructional leadership practices in public primary schools in Tanzania?*” Noticeably, the aim was to determine the extent of respondents’ agreement with the observable indicators for the adoption of instructional leadership practices on the five-Likert scale starting from “1= strongly disagree” to “5= strongly agree”. The instructional leadership practices variable was measured by eleven observable indicators whose results are shown in Table 1.

Table 1

Descriptive Results on the Level of Head teachers’ Instructional Leadership Practices in Primary Schools

Measured Indicators	Mean	SD	SK
Effective communication of school goals	4.11	1.092	-1.404
Supporting teachers on conducting SWOT analysis	4.09	1.107	-1.226
Supporting teachers on formulating well-focused school goals	4.11	1.151	-1.336
Supporting teachers in preparing schemes of work and lesson plans	4.59	.860	-2.649
Supporting teachers on adopting inclusive teaching and learning strategies	4.56	.834	-2.389
Encouraging teachers toward preparing and use inclusive teaching and learning aids	4.55	.810	-2.361
Encouraged to use instructional time efficiently for teaching and practicing new skills and concepts	4.59	.795	-2.452
Conducting classroom observation by head teacher during teaching on regular basis	4.24	1.138	-1.583
Feedback is given to teachers after classroom observation	4.28	1.120	-1.678
Supporting and giving opportunities to teachers to develop their professional skills	4.37	1.000	-1.946
Encouraging teachers to attend in-service trainings that align with school goals	4.38	1.008	-1.936
Overall Scores	4.35	0.992	-1.905

The results in Table 2 show that, the overall mean is ($M=4.35$) which is relatively closer to the maximum value (5) signifying that on average, teachers agree or strongly agree with the head teachers’ proper adoption of instructional leadership practices from the given observable indicators. This suggests that the majority of respondents rated head teacher’s instructional leadership practices very positively with respect to practices such as supporting teachers to: formulate and communicate well-focused school goals; prepare scheme and lesson plans; conducting situational analysis basing on identifying strengths, weaknesses, opportunities and threats (SWOT); adopt inclusive teaching and learning strategies. Other practices that were rated very positively include head teacher’s supporting teachers to prepare and use inclusive teaching and learning aids; use instructional time efficiently for teaching and practicing new skills and concepts; provide feedback after classroom observation; and attend in-service trainings that align with school goals. Such high mean score reflects a generally impressive evaluation of head teacher’s instructional leadership practices and implies that most of the respondents feel confident and satisfied with the head teacher’s instructional abilities.

Also, the average skewness value of ($SK= -1.905$) indicates that, most of the respondents had their responses distributed on the right side of the mean. These results show that, respondents rated positively the elements of head teacher’s instructional leadership practices to the agree or strongly agree on the likert scale. The high ratings strongly suggest that head teachers demonstrate a proper adoption of instructional leadership practices.

The results also show that the overall standard deviation among the responses was found to be ($SD=0.992$). This suggests that most of the respondents agreed or strongly agreed that head teachers demonstrate high adoption of instructional leadership practices and at the same time there were some variability of responses among the assessed indicators. On the other hand, a relatively moderate value of standard deviation ($SD=0.992$) indicates moderate inconsistency or variability of the responses implying that, despite a generally higher levels of adoption of instructional leadership practices, there are noticeable differences among individuals, with some of them rating head teacher’s adoption of instructional leadership practices much lower than the group average. The observed higher level of instructional leadership practices suggests that, head teachers play a significant role in defining a school focused goals, managing instructional program and in developing a positive school climate, which in turn positively influence teachers teaching and pupils learning outcomes. However, the moderate variability ($SD = 0.992$) and presence of a few lower scores of assessed indicators indicate that, not all respondents feel equally satisfied with head teachers’ proper adoption of instructional leadership practices, which highlights the need for targeted interventions or support strategies



to address the concerns of head teachers who may be experiencing lower level of adoption of instructional leadership practices. Overall, the findings reveal a strong foundation of head teacher's proper adoption of instructional leadership practices with a room for improvement to ensure consistency across all the head teachers.

Although the overall results revealed a high level of adoption of instructional leadership practices by the head teachers ($M = 4.35$), further examination of the data indicated notable extreme cases that enrich deeper insights on the head teacher's instructional leadership practices. For example, the respondents recorded an exceptionally higher mean score ($M = 4.59$) than the aggregate mean ($M = 4.35$) on head teacher's role of supporting teachers in preparing schemes of work and lesson plans and encouraging teachers to use instructional time efficiently for teaching and practicing new skills and concepts, suggesting that, majority of teachers feel empowered and motivated when they are supported in assuming their instructional roles. On the other hand, head teachers scored a mean as lower as ($M = 4.09$), ($M = 4.11$) and ($M = 4.11$) than the aggregate mean ($M = 4.35$) on head teacher's instructional role of supporting teachers to conduct situational analysis, formulating well-focused school goals and communicating school goals respectively, suggesting that, despite their responsibilities in practicing instructional roles, some head teachers do not adequately assume their instructional roles.

The qualitative data from interviews on how head teacher adopts instructional leadership practices was analyzed thematically, as shown in Table 2, and presented as narratives and verbatim, providing valuable insights into the quantitative data.

Table 2

Head Teacher's Adoption of Instructional Leadership Practices in Schools

S/N	Category	Themes	Theme-Explanations
1.	Head teacher's instructional leadership practices	Proper adoption of instructional leadership practices	Involve teachers to formulate school goals Head teachers discuss school progress with teachers Head teachers provides support in protecting instructional time Head teachers supervise the implementation of curriculum Head teachers involve teachers in making decisions on matters relating to school operations Head teachers provide teaching resources to teachers such as curriculum, pens, chalks, lesson preparation materials
		Government intervention in enhancing instructional leadership practices	Improved leadership practices through regular training of head teachers Provision of delayed promotions to those who for long time had their promotions delayed Active involvement of teachers in school operational activities such as decision making
		unplanned meetings	Give head teachers less attention to instructional practices Local government authorities have to prioritise instructional practices
		supervision of construction projects	This gives head teachers less attention to instructional practices. Authority should recruit qualified personnel for construction work supervision The local administration authority should streamline administrative tasks to qualified personnel.
		financial management and accounting and procurement practices	The local administration authority should streamline administrative tasks to qualified personnel. Authority to recruit qualified personnel for overseeing procurement practices Authority to advocate stress management workshops
		inadequate skills in creating school vision and mission, classroom observation and feedback giving skills to teachers	The local government need to organize Capacity building to head teachers on instructional practices particularly in formulating and communication school vision and mission, effective classroom observation skills and feedback giving practices

The qualitative data from interview provided valuable insights on the instructional leadership practices as adopted by head teachers that align with the quantitative results. The respondents articulated that most of the head teachers demonstrate instructional leadership practices in their day-to-day operational practices. In response to the matter at hand, one of the respondents reported that:

".....the majority of head teachers hold staff meetings with teachers to put in place school goals and discuss school progress and make decisions together. They encourage teachers to teach their lessons as



per time table..... administrative roles like ad hock meetings and supervision of construction of school buildings hinder full adoption of instructional practices,”(Interview: WEO, June 2025).

The quote indicates that, head teachers demonstrate high adoption level of instructional leadership practices, largely through active involvement of teachers in framing school goals, making informed decisions, as well as protecting instructional time. Nonetheless, persistent issues such as unplanned meetings, administrative duties such as supervision of construction projects undermine head teachers’ full adoption of instructional leadership practices indicating that, although the overall instructional leadership practices is high, targeted measures are needed to address specific challenges affecting some few head teachers. Arguing in the similar context, another respondent commented that:

“.....Nowadays, head teachers are trying their best to perform their leadership roles instructionally. They provide teaching resources to teachers; they lay down school goals with teachers, they supervise teaching and learning process and they monitor and evaluate teaching and learning process..... challenges remain in areas like creating school vision, mission and observe teachers teaching, feedback giving. Many schools do not have vision and mission statements.....” (Interview: DPPEO, June 2025).

A similar observation was made by another respondent who commented that:

“.....Our school visits have revealed head teachers encourage teachers to take part in continuous professional development sessions to improve their teaching skills. They motivate teachers and pupils for their good performance. To a large extent, the leadership training has improved their performance. However, they are overburdened by many administrative tasks such as frequent movements in various offices for preparing and signing payment documents.....” (Interview: DSQAO, June 2025).

The quote highlights a significant gradual positive change in head teacher’s leadership practices compared to earlier times. The quality assurance visit revealed a notable improvement in teachers’ involvement in various school leadership functions including decision-making, promoting teamwork, encouraging professional development, and improving working relationships. This indicates head teacher’s demonstration of instructional leadership practices in fostering a positive school climate, enhancing teacher motivation, and morale, and building a sense of ownership and commitment of teachers. Furthermore, this indicates growth in leadership practices where the focus is on empowering teachers, strengthening professional relationships and working collectively towards school improvement.

A comprehensive analysis of the quotes given by DPPEO and DSQAO are supported by the results obtained through documentary review. Through observing school documents, it was found that as leaders, head teachers perform their instructional roles such as supervising teaching and learning process, making sure that teachers prepare schemes and lesson plans before actual teaching in classroom as well as providing teaching materials to teachers needed for effective teaching and learning. This has been evidenced from documents such as issuing voucher of teaching materials the schools, schemes of works and lesson plans files, and monitoring and evaluation tool. It was further observed that most of the schools had no school vision and mission. They only had school motto and goals that were articulated in the Whole School Development Plans (WSDP). While stressing the issue of vision, mission and goals, the respondent added that:

“..... of course, some schools do not have vision and mission statements. Some of school which have vision and mission statements are not properly stated and are found in the WSDP document together with school goals. They are not posted on the notice board.....” (Interview: DSQAO, June 2025).

In view of this quote, it is evident that although the school goals are articulated in the schools, but they are not communicated to all stakeholders, hence limiting them to anticipate where the schools aim to be. Despite the noted high adoption of leadership practices, the quote also identifies existing challenges of excessive administrative tasks facing the headteachers such as supervising construction, attending frequent meetings outside their schools and frequent movements in various offices for preparing and signing payment documents which constrain instructional leadership practices for specific groups of head teachers.

The quotes from respondents emphasized head teachers being overburdened by excessive administrative duties namely that compromise full adoption of instructional leadership practices, hence suggesting immediate action to address head teachers’ concerns in order to heighten instructional leadership practices.

4.2 Discussion

This study examined the head teachers’ instructional leadership practices in Tanzanian Public Primary Schools in Mwanza region, yielding insights that address the research question and enrich educational literature. The results show that head teachers demonstrate a high adoption level of instructional leadership practices in public primary schools in Tanzania. This is because the overall computed mean, ($M=4.35$, equivalent to 87%) of the measured variables in the 5-point Likert scale was found to be greater than the normal average of 3 of the scale. Moreover, qualitative evidence from documentary review show high adoption of instructional practices by head teacher’s supporting teachers in preparing schemes of work and lesson plans and encouraging them to use instructional time



efficiently for teaching and practicing new skills and concepts. This finding is in line with the study findings of Kaisara (2024) in Botswana's Public Technical and Vocational Education and Training, in Botswana, which revealed that head teachers have a general understanding of instructional leadership practices with evidence of curriculum management and stakeholders involvement. This study finding matches with that of Shava *et al.* (2021) who found that principals play an instructional role in sustaining school learning improvement in South African schools.

Although the overall results revealed a high level of adoption of instructional leadership practices by the head teachers ($M = 4.35$), further examination of the data indicated notable extreme cases that enrich deeper insights on the head teacher's instructional leadership practices. For example, head teachers scoring a mean as lower as ($M=4.09$), ($M=4.11$) and ($M=4.11$) than the aggregate mean ($M= 4.35$) on their role in supporting teachers to conduct situational analysis, formulating well-focused school goals and communicating school goals respectively, suggest that, despite their responsibilities in practicing instructional roles, some head teachers do not adequately assume their instructional roles. This implies that, while instructional leadership practices require head teachers to provide full support to teachers in enhancing effective teaching and learning process, instructional skill gaps and structural-related issues still undermine head teachers' full adoption of instructional leadership practices.

The qualitative findings highlighted that structural-related issues impeding full adoption of instructional leadership roles are associated with head teachers shouldering heavy workloads such as attending ad hoc meetings, as well as supervising school construction projects, managing school procurement and financial management tasks which they were not trained in. This added responsibility often diverts time, attention, and energy away from core instructional duties such as classroom observations, teacher support, curriculum implementation, and student learning oversight (Ralebese *et al.*, 2025). The lack of expertise in construction is prone to stress, poor decision-making, and increased dependency on contractors, further reducing the head teacher's effectiveness in instructional matters. This finding is supported by Issa and Mhagama (2022) whose study on effectiveness of school heads in supervising school resources in Shinyanga District-Tanzania revealed that most of the school heads do not conduct effective supervision of school resources due to lack of supervision skills. Additionally, these findings match the study conducted by Nyambo (2017) in Chemba, Dodoma who confirmed that head teachers do not conduct instruction supervision properly because they are overloaded by administrative tasks. Basing on this finding, attention is drawn to the government to address this concern otherwise, the head's instructional leadership is likely to suffer, potentially leading to diminished teacher morale and reduced focus on teaching and learning outcomes (Aureada, 2021; Park & Choi, 2025).

As such, the highlighted unscheduled meetings are epitomized by disruption of planned instructional activities such as classroom observations, teacher mentoring, and curriculum monitoring, thereby reducing the head teacher's direct engagement with teaching and learning processes (Gyamerah, 2021; Hallinger & Wang, 2015). Recent studies show that school heads' instructional leadership practices are significantly affected by unplanned or reactive demands, which function much like ad hoc meetings and interruptions. This observation is echoed by Midha (2023), who confirmed that unplanned meetings repeatedly force head teachers to divert attention away from strategic instructional tasks, reducing consistency in leadership and fading their ability to sustain classroom observation, feedback, or curriculum monitoring. Similarly, the finding is supported by Dongo and Mahlangu (2022) whose study in South Africa confirmed that frequent disruptions of unplanned activities undermine the flow of teaching and learning. Likewise, a study conducted by He *et al.* (2024) in Nigeria, revealed that when principals are less able to devote time to planned instructional leadership due to exigencies, teacher professional growth suffers. Contemporary evidence suggests that ad hoc meetings and reactive demands can erode the quality and consistency of instructional leadership by head teachers, reducing their ability to engage in strategic, sustained work with teachers and instruction. To balance the competing demands of instructional leadership and school management, it is crucial for head teachers to establish boundaries around their time, delegate operational tasks where possible, and prioritize scheduled instructional leadership practices to maintain their focus on teaching and learning outcomes.

Notably, financial management and accounting and procurement practices have been highlighted as other administrative roles that occupy another big portion of head teacher's instructional supervisory time. It was highlighted that all primary schools do not have qualified personnel to assume financial and procurement roles. Such responsibilities are performed by the head teachers, who principally lack necessary accounting and procurement competences to regularly carry out procurement risks management; ensure procurement rules are followed, carry out procurement contract management; allocating funds for various school functions; and prepare payment documents for procured goods and services (Edmund & Lyamtane, 2018; Kosgei & Lekheto, 2024). Head teachers therefore, spend much of their time struggling to adhere to rules and regulations governing financial accounting and procurement practices, suggesting a negative impact on their ability to effectively supervise instructional practices as affirmed by Edmund and Lyamtane (2018); Wadasen (2024). Notably, it was also brought to the researcher attention that head teachers are on roads each month travelling from office to office searching for approval of payment for school procured goods and services. This extra responsibility often diverts time, attention, and energy away from core

instructional duties such as classroom observations, teacher support, curriculum implementation, and student learning oversight (Ralebese *et al.*, 2025). This requires a targeted attention address the situation by hiring qualified personnel to relieve head teachers' administrative roles. Notably, the need for training, mentoring and coaching to head teachers is crucial to improve their procurement competences, hence giving more time and attention on instructional practices.

While the quantitative results show head teacher's high adoption of instructional leadership practices, the qualitative findings show moderate adoption of instructional leadership practices due to administrative burdens. Integration of mixed-methods contributed immensely to generating robust and comprehensive knowledge on headteachers' adoption of instructional leadership practices than either approach could do alone. However, both, quantitative and qualitative findings revealed that head teaches have shown to demonstrate good adoption of instructional leadership practices. Notably, excessive workload related to administrative duties has shown to be a threat towards head teachers' full engagement in enhancing instructional leadership practices. It is therefore advised that, the policy makers and educational practitioners to balance workforce tasks as a means to give room to the head teachers to fully assume instructional leadership practices efficiently. Furthermore, capacity building to head teachers on instructional leadership is required to bridge instructional practice gaps and maintain their focus on teaching and learning outcomes.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

With regard to the study objectives, the study findings revealed that, respondents rated their extent of their agreement with head teachers' defining school mission practices by ($M=4.11$); managing instructional program practices by ($M=4.45$); and creating positive learning climate practices by ($M=4.39$). It was therefore concluded that, head teachers demonstrate good practices in defining school mission, managing instructional program and creating positive school learning climate which in turn contribute enormously to good adoption of instructional leadership practices. Moreover, it was also concluded that, much administrative responsibilities such as ad hock meetings and supervising constructional projects inhibit head teachers' full involvement with instructional leadership practices.

5.2 Recommendations

In response to the study findings, the study recommends the government to review head teachers' terms of services as a strategic mechanism to offload them with administrative duties such as construction supervision and provide classroom observation and defining school mission training to head teachers to heighten instructional leadership practices. The policy makers should make a deliberate effort in designing a capacity building training to head teachers to enhance their instructional skills so that they fully realize effective teaching and learning practices.

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Innovation climate and innovation performance in manufacturing small and medium enterprises in the Greater Kampala Metropolitan Area, Uganda: A developing country perspective

Mariam Nakate^{1*}
Bernard Nassiuma²
Joshua Kwonyike³

^{1*}kmariamnkt@gmail.com

²bnassiuma@mu.ac.ke

³jkwonyike@mu.ac.ke

¹Makerere University, Business School, Uganda, ^{2,3}Moi University, Kenya

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ABSTRACT

In today's dynamic business environment, improving innovation performance is fundamental to the competitiveness and sustainability of Small and Medium-Sized Enterprises (SMEs) in manufacturing. Existing research supports the association between innovation climate and innovation performance; however, there is a limited understanding of this relationship in developing countries, such as Uganda. This study examined the influence of innovation climate on the innovation performance of manufacturing SMEs in the Greater Kampala Metropolitan Area (GKMA), Uganda, using the Componential Theory of Innovation and Creativity. This study employed a positivist paradigm and a quantitative explanatory research design to collect data from 326 SMEs in a population of 958. The data were collected through a structured self-administered questionnaire. SMEs were selected through proportionate stratified sampling, and respondents were selected purposively. Hierarchical regression was used for data analysis. Results indicate a positive, significant relationship between the innovation climate and innovation performance. This study contributes to the literature on innovation performance, specifically on internal organizational context antecedents. In practice, the findings may support owner-managers of SMEs and the Ministry of Trade, Industry, and Cooperatives in improving the implementation of existing policies and practices in innovation management in manufacturing firms. This study therefore recommends that SME owners and managers empower employees and grant them autonomy to think innovatively for the firm without fear of failure to improve innovation performance.

Keywords: Innovation Climate, Innovation Performance, Manufacturing, Small and Medium Enterprises

I. INTRODUCTION

Small and medium enterprises (SMEs) operate in a dynamic business environment. It is characterized by globalization and technological advancements, requiring SMEs to pursue innovation (Usman *et al.*, 2024). Innovation is essential for the organisation's success and sustainability (Lazaretti *et al.*, 2020). Innovation enables organizations to transform by providing enhanced procedures, new markets, and new investment prospects (Kaur & Ferreira-Sutherland, 2024). To achieve greater success in innovation, SMEs require a supportive climate for innovative initiatives (Waheed *et al.*, 2019). There has been increased interest in understanding the influence of internal organisational contextual factors on innovativeness (Visser & Sheepers, 2022; Zacher & Rosing, 2015). By targeting organisational-level contextual factors, manufacturing SME owners and managers can build systems and structures that enable innovation within their enterprises, thereby enhancing the commercial success of innovation in manufacturing SMEs.

Manufacturing is a leading sector in developed and emerging countries worldwide (World Manufacturing Foundation [WMF], 2022). The World Trade Organisation Report by Ganne *et al.* (2022) indicates that the manufacturing sector comprises predominantly small and medium-sized enterprises. Globally, SMEs are recognised as drivers of economic growth through job creation and employment, which alleviates poverty (Abisuga-Oyekunle *et al.*, 2020; Nor, 2024; Surya *et al.*, 2021). SMEs contribute 43.5% to the USA's GDP (National Business Association [NBA], 2024), and in the UAE, they contribute 63.5% to the non-oil GDP (Almehairbi *et al.*, 2024). In China, SMEs account for more than 60% of GDP (Jia *et al.*, 2020), and in the UK, they account for nearly 20% of the UK's GDP (Dey *et al.*, 2022). In Africa, SMEs contribute to both the GDP and employment creation. For example, in Nigeria, SMEs offer 70% of industrial employment and 50% of manufacturing output (Ogunmuyiwa & Okunleye, 2019). In Kenya, they account for more than 35% of GDP (Kiiru *et al.*, 2023) and employ 14.9 million people (KNBS Economic Survey, 2022). In Uganda, a developing economy, SMEs are pivotal to its economic development. They constitute

approximately 90% of all Ugandan businesses, employ around 2.5 million people, and produce 80% of manufactured output, contributing 20% to Uganda's GDP Uganda Bureau of Statistics [UBOS] (2021). According to the MSME Policy 2015, small businesses are defined as those with 10 to 49 permanent employees (Ministry of Trade, Industry and Cooperatives [MTIC], 2015). Medium-sized enterprises have 50 to 100 permanent employees (MTIC, 2015). SMEs comprise of 93.5% establishments in the manufacturing sector (Calabrese *et al.*, 2019; UMA, 2024).

The government of Uganda has implemented several strategies to support SME growth to improve SME innovation performance (National Planning Authority [NPA], 2020). For example, MTIC introduced policies and established regulatory frameworks to support SMEs by creating an enabling business environment, including the MSME Policy 2015, the Buy Uganda, Build Uganda Policy 2015 (MTIC, 2015), and the National Innovation Fund 2019, under the Ministry of Science, Technology, and Innovation. Despite these efforts, the innovation performance of Ugandan manufacturing SMEs remains poor (Birungi *et al.*, 2024), and their potential remains unrealized (Guloba *et al.*, 2024). Sector growth was reported at 5,740 billion UGX in the first quarter of 2025 and 5,713 billion UGX in the fourth quarter of 2024, accounting for 16.5% of GDP and 30% of tax revenue (Atukunda, 2025). Additionally, the manufacturing sector operates at only 53% capacity (Sserunjogi *et al.*, 2022), with sales declining due to low demand for locally produced goods. Moreover, 90% of SMEs fail within their first year, and 40% do not endure beyond five years (Kakooza *et al.*, 2023). Similarly, the loan performance of manufacturing firms is weak, as evidenced by difficulties repaying loans, reflecting low financial performance (Endris & Kassegn, 2022; Turyatamba *et al.*, 2022). SMEs in Uganda are also held back by limited funding (Eton *et al.*, 2021) and intense competition from large firms. Correspondingly, SMEs have a very low adoption of business technologies at only 35% (MTIC, 2024). This hampers their innovative efforts (Mugisha & Ijjo, 2022), including technological advancement, increased research and development, and securing the resources needed for innovation. Therefore, manufacturing SMEs need to leverage aspects of their controllable environment to improve their innovation performance if they are to thrive.

Small and medium-sized enterprises are regarded as engines of innovation because their flat organizational structures make them flexible. However, SMEs face resource limitations when implementing necessary innovations (De Massis *et al.*, 2018; Jjagwe *et al.*, 2024; Sendawula *et al.*, 2023). Consequently, SMEs are encouraged to leverage factors within their control to advance their innovation efforts (Hanifah *et al.*, 2019; Tastan & Davoudi, 2017). Khalili (2016) proposes that an innovative organisational climate supports the introduction and adoption of innovation by providing support and supplying innovation resources. Innovation climate refers to 'the shared perceptions within a team regarding the extent to which organisational processes foster and enable innovation' (Anderson & West, 1998). Alblooshi *et al.* (2021) state that an innovation climate requires an environment that encourages and empowers employees' specialization, ensures resource availability, and communicates the importance of creative thinking. Innovation performance is 'the combination of the overall achievements of the organisation as a result of renewal and improvement efforts in business innovations like processes, products, organisational, and marketing' (Jia *et al.*, 2018). It can be achieved through the introduction of new products, process changes, improvements in market structure, and enhancements in organizational systems, leading to commercial innovation success (Abdulai, 2019; Kwon & Cho, 2016).

Numerous studies have examined organisational climate and its impact on organisational innovativeness (Baer & Frese, 2003; Hanifah *et al.*, 2019), although research on innovation climate is still in its infancy (Newman *et al.*, 2020). Only a few studies have examined innovation climate as a domain-specific phenomenon and its relation to innovation performance (Hunter *et al.*, 2007; Popa *et al.*, 2017). An innovation climate reflects a supportive environment for innovation, characterized by top management support, the provision of resources to enable employee innovation, and a positive sense of challenge that enhances innovation performance (Bridges, 2024; Newman *et al.*, 2020). What is clear is that most studies on innovation climate and innovation performance have been conducted in developed countries, which have different business landscapes from Uganda's. Additionally, most empirical research on innovation climate targets SMEs in general, with only a few focusing specifically on the manufacturing sector. This has motivated the researcher to explore how an innovation climate influences the innovation performance of manufacturing SMEs in Uganda, an emerging economy.

1.1 Research Objective

To examine the effect of innovation climate on innovation performance of manufacturing SMEs in GKMA, Uganda.

II. LITERATURE REVIEW

2.1 Theoretical Review

This study is grounded in Amabile's (1988) Componential theory of creativity and innovation. The theory identifies three within-individual components that affect an individual's creativity and innovation: domain-relevant skills, creativity-relevant processes, and task motivation. The fourth component is the environment surrounding the individual (Amabile, 2011). In this regard, CTCI argues that the organisational environment can either enhance or inhibit



innovation (Amabile, 1988). Innovation arises from multiple components that organisations can shape and develop (Kahn, 2018; West & Richter, 2024). According to Bridges (2024), a work climate that promotes intrinsic motivation, encourages innovative thinking, offers development opportunities, and supports innovative work is more likely to yield innovative outputs, as employees are more encouraged to innovate. Amabile and Pratt (2016) argue that organisations must motivate employees to innovate through creating an innovation vision. Anderson *et al.* (2014) add that organisations should communicate this innovation vision to all management levels for successful implementation. Amabile (2011) and Amabile *et al.* (2002) further discuss the resources required in the task domain, including sufficient time, financial resources, expert knowledge, information, systems, and processes necessary for work. In addition, management practices such as autonomy and freedom, challenging work, managerial encouragement, and workgroup support will enhance innovation in the organisation.

A supportive innovation climate must be integrated into SMEs as a system to enhance innovation performance. CTCI suggests that for SMEs to develop new products, enhance processes, and create value for customers, there must be support for innovation that allows for failure and encourages employees to think creatively and outside the box (Afsar & Umrani, 2020). Furthermore, SMEs must provide the necessary resources for idea implementation, promote collaboration within the SME, encourage experimentation, and empower employees to explore new ideas (Anshari & Almunawar, 2022). This will lead to the development of competitive products that appeal to the market, thereby increasing productivity, profitability, customer value, and market expansion (Farida & Setiawan, 2022). This study distinguishes innovation climate as a focused climate that SME owners and managers should implement in their firms to encourage innovative thinking and improve their innovation performance.

2.2 Empirical Review

2.2.1 Innovation Performance

Several authors have examined innovation performance as bidimensional, whereas others have viewed it as unidimensional or related to a specific type of innovation. The majority of studies have focused on product innovation performance, followed by process innovation performance (Bamel *et al.*, 2024; OECD, 2005). However, some researchers have argued that innovation performance is multidimensional (Yang *et al.*, 2018). Based on these arguments, this study considered a comprehensive definition of innovation performance. Reference is made to Le & Lei (2019), who defined innovation performance as “the product of several management techniques employed in organisations' business operations to produce or improve products, processes, marketing, and management”. Thus, innovation performance is considered an outcome of the organisation's innovation efforts. Based on this, this research examined the performance of product, process, marketing, and management innovation.

2.2.2 Innovation Climate and Innovation Performance

Organisational climate has been an area of scholarship and application in many studies. Employees' perceptions of a company's policies and procedures are reflected in its climate (Patterson *et al.*, 2004). Employee descriptions of organisational functioning and strategic attention are reflected in the company's organizational environment (Parker *et al.*, 2003). Schneider *et al.* (2013, p. 362) described organisational climate as “the shared perceptions of and the meaning attached to the policies, practices, and procedures employees experience and the behaviours they observe getting rewarded and that are supported and expected.” Innovation climate is a type of organisational climate that focuses on fostering innovation as a specific objective. The concept of “innovation climate” describes a vital environment that encompasses a company's social and environmental factors, including employee care, supervisor support, and employees' openness to sharing ideas and knowledge during the creative process (Ghosh, 2015). Afsar and Umrani (2020) contend that an innovation climate creates a psychologically safe environment in which employees are encouraged to take risks and inspired to implement new ideas.

Individuals' attitudes, beliefs, motivations, values, and innovative behaviours will be affected by this perception, ultimately influencing the organisation's overall innovation performance and capabilities (Bharadwaj & Menon, 2000). With an innovation climate, the environment is supportive with readily available resources that foster innovation (Newman *et al.*, 2020). Consequently, employees will be motivated to reach their full creative potential when working in such an environment (Vuong *et al.*, 2023). Workers are more likely to share knowledge and engage in active communication with others, which improves idea generation (Song & Shan, 2019). According to Pamela and Steven (2002), organisations with leaders who provide sturdy support and encouragement to their followers can inspire them to produce innovative results.

Innovation climate, when treated as an independent variable, has been shown by researchers to impact employee behaviours (Shanker *et al.*, 2017a) and organisational outcomes (Newman *et al.*, 2020). In this study, we concentrated on understanding the effects of innovation climate, with particular attention to innovation performance. Existing studies show that an innovative environment facilitates organization-level innovation (Newman *et al.*, 2020; Olsson *et al.*, 2019). Firms with a supportive innovation climate encourage risk-taking and creative thinking (Oke *et al.*, 2013; West & Richter, 2024). Innovative firms foster a conducive environment for innovation, distinguishing them from complacent

organizations, as evidenced by their patent acquisitions, technological advancements, commercial strategies, and success in launching new goods and services (Yue *et al.*, 2024).

Hoang *et al.* (2019) showed that workers in an innovative environment feel encouraged to think for themselves and contribute to the company's innovation. According to Wang *et al.* (2013), when the climate for innovation strength was high, innovation was enhanced. Earlier research by Ubius *et al.* (2013), conducted in Asian and European countries, urged further research on the innovation climate, focusing on organisational-level factors in developing countries. Jaiswal and Dhar (2015) contend that employees working in a workplace climate that tolerates failure and values experimentation exhibit higher levels of creative behaviours leading to innovative outcomes. Relatedly, Song *et al.* (2020) found that a creative climate positively affects green product innovation performance by fostering an atmosphere that encourages novel and valuable ideas, thereby improving innovation.

According to earlier research, SMEs' innovation potential increases when an environment that supports innovation is established (Popa *et al.*, 2017). To understand how an innovation-friendly environment affects innovation performance, further research is needed (Newman *et al.*, 2020). The current study demonstrates that an innovative climate fosters innovation in SMEs by integrating theoretical insights and empirical evidence. Additionally, research on the innovation climate and innovation performance remains limited, with a primary focus on developed economies (Popa *et al.*, 2017). Similarly, most studies have viewed the innovation climate solely as support for innovation, neglecting the supply of resources (Newman *et al.*, 2020; Alblooshi *et al.*, 2021). Furthermore, there is a growing call to examine specific climates within organisational climate to better align with desired organizational outcomes (Hussainy, 2022; Schneider *et al.*, 2017). Therefore, this study aims to fill this gap by exploring the relationship between innovation climate—considered both as support for innovation and as a resource supply—and innovation performance among manufacturing SMEs in Uganda, a developing country.

Based on the literature review, we propose that the innovation climate is positively associated with innovation performance:

H₀₁: Innovative climate does not significantly relate to innovation performance in SMEs.

This hypothesis is mathematically represented as:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

The estimate indicates that changes in R^2 are explained by innovation climate, with other factors held constant. Where;

Y = Criterion variable: innovation performance

X_1 = Predictor variable: Innovation climate

β_0 = Y intercept: value of Y when all independent and control variables are zero

β_1 = Coefficient of the independent variable

ε = Error term, variation in Y not explained by the model

III. METHODOLOGY

This study adopted a positivist philosophy with a deductive approach. A quantitative explanatory design was used to gather cross-sectional data. The target population consisted of 958 manufacturing SMEs in the Greater Kampala Metropolitan Area, Uganda. The respondents were owner-managers of these SMEs. A total of 326 small and medium enterprises for this research using Taro Yamane's formula. Simple random sampling using random numbers in Excel was used to select the actual SMEs that were used for this study. Purposive sampling was then used to gather data from the owners/ managers of SMEs as they were regarded as knowledgeable. Data was collected through a structured, closed-ended questionnaire, and regression analysis was employed to analyse the data.

Innovation performance, the criterion variable, was assessed using 22 items adapted from previous research (Abdulai, 2019; Kankisingi & Dhliwayo, 2022; OECD, 2005; Soto-Acosta *et al.*, 2017). Owner-managers were asked to rate the extent to which their SMEs had recently benefited from their innovations on a seven-point Likert scale, ranging from 1 (Very strongly disagree) to 7 (Very strongly agree). An example item is "In the last three years, new products have resulted in increased sales."

The innovation climate, the predictor variable, was measured using the Climate for Innovation scale by Scott and Bruce (1994). Owners or managers were asked to evaluate the extent to which their SMEs supported innovation on a seven-point Likert scale, ranging from 1 (Very strongly disagree) to 7 (Very strongly agree). An example item is "In this enterprise, employees are allowed to try to solve the same problems in different ways."

To account for potential confounding effects, this study included control variables such as firm size and firm age, as earlier research has shown that these factors can influence innovation performance (Kireyeva *et al.*, 2021; Le & Lei, 2019). We measured firm size by taking the logarithm of the number of employees. Firm age was measured as the number of years the firm has existed, using an ordinal scale. The final equation used to run the regression to estimate the variances of innovation climate and control variables on the criterion variable was modified as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Y = Criterion variable: innovation performance



X_1 = Predictor variable: Innovation climate
 β_0 = Constant: value of Y when the independent variable and covariates are zero
 β_1 - β_3 = The estimated regression coefficients
 X_2 and X_3 = Covariates (firm age and firm size)
 ε = Error term

IV. FINDINGS & DISCUSSION

4.1 Response Rate

In this study, 326 questionnaires were distributed, and 308 were returned, which yielded a 94% response rate. Based on Holtom *et al.* (2022)'s guidelines, this response rate was considered sufficient for analysis, as it exceeded the recommended threshold of 50% or higher. In addition, upon scrutiny of the data, three questionnaires had multivariate outliers and were discarded from the analysis. Therefore, the usable questionnaires for further analysis totalled 305.

4.2 Preliminary Analyses

To assess internal consistency in this study, we used Cronbach's alpha (Nunally, 1978). Podsakoff *et al.* (2024) state that a Cronbach's alpha coefficient of 0.7 or higher is considered satisfactory. The Cronbach's alpha for innovation climate was 0.837, and for innovation performance was 0.848, as shown in Table 1. Both values exceed the 0.7 threshold, indicating internal consistency. Therefore, the items reliably measured innovation climate and innovation performance. The instrument's validity was assessed through expert review, content analysis of relevant literature, and construct validity.

Table 1
Means, Standard Deviations, Cronbach, Convergent, and Divergent Validity

Variable	Mean	S. D.	Cronbach's Alpha (α)	Convergent Validity (AVE)	Divergent Validity (\sqrt{AVE})
Firm age	3.170	0.944			
Firm size	1.420	0.495			
Innovation climate	4.594	0.904	0.837	0.600	0.775
Innovation performance	4.633	0.814	0.848	0.637	0.798

An Exploratory Factor Analysis was conducted using principal component analysis with varimax rotation to examine the underlying structure of the constructs. The results of the EFA showed that the factor loadings for all items ranged from 0.579 to 0.935 for innovation climate and from 0.727 to 0.908 for innovation performance, both of which exceeded the conservative cut-off of 0.5 (Hair *et al.*, 2010) as indicated in Table 2.

To summarise the data, means and standard deviations were used. Firm age (Mean=3.170, SD=0.944), firm size (Mean=1.420, SD=0.495), innovation climate (Mean=4.594, SD=0.904) and innovation performance (Mean= 4.633, SD=0.814). The results indicate a low variation relative to the mean. This implies that most responses are close to the average. Therefore, the data were consistent, as the calculated means closely reflect the data used.

Both convergent validity and discriminant validity were used to assess the content validity of the measures. We employed average variance extracted (AVE), as recommended by Fornell and Larcker (1981), to evaluate convergent validity. According to their guidelines, the AVE should exceed 0.5. The AVE values for IC and IP were 0.600 and 0.637, respectively, as shown in Table 1, indicating acceptable convergent validity for all constructs. The square root of the constructs' AVE was used to assess discriminant validity. Fornell and Larcker (1981) state that the square root of the measurement's AVE must exceed the inter-construct correlation. The AVE square root values for IC and IP were 0.775 and 0.798, respectively, as shown in Table 2. These values exceeded the construct correlation, as shown in Table 4. Therefore, discriminant validity was acceptable, indicating that innovation climate and innovation performance are distinct constructs measuring different concepts.

To determine whether the data were inflated or deflated by respondent bias, a common-methods bias (CMB) analysis was performed. This can occur when data is collected from the same respondents, which can introduce bias (Podsakoff *et al.*, 2024). Harman's single-factor test, as recommended by Fuller *et al.* (2016), was conducted. The results showed that the single factor explained only 16.779% of the variance, which is below the 50% threshold, indicating that CMB was absent and that our data were bias-free.

Table 2
Factor Loadings

Item	Statement	Factor Loading
IC1	Creativity is encouraged in this enterprise.	0.859
IC2	We respect employees' ability to function creatively.	0.819
IC3	The main function of members in this enterprise is to follow orders which come down through channels.	0.814
IC4	Around here, employees are allowed to try to solve the same problems in different ways.	0.799
IC5	An employee can't do things that are too different around here without provoking anger.	0.655
IC6	The reward system here encourages innovation.	0.579
IC7	The assistance in developing new ideas is readily available.	0.935
IC8	There are adequate resources devoted to innovation in this enterprise.	0.672
IP1	New products have increased the daily cash flow of the enterprise.	0.857
IP2	New products from this enterprise are produced by other enterprises on license.	0.793
IP3	The new products have increased the profits realised by this enterprise.	0.754
IP4	At least ten per cent of ideas generated by the enterprise have been used in new products.	0.727
IP5	The enterprise uses new processes that produce products faster than competitors.	0.777
IP6	The enterprise's production processes are adaptable and can accommodate changes when necessary.	0.763
IP7	Our enterprise's product development cycle is shorter than that of our competitors.	0.757
IP8	The enterprise's new production process has reduced the cost of production.	0.757
IP9	The new products have improved the reputation of the enterprise.	0.908
IP10	The new products have attracted new customers to the enterprise.	0.870

4.3 Firm Characteristics

The classification defines small businesses as those with 5 to 49 permanent employees, and medium-sized businesses as those with 50 to 100 permanent employees. Table 3 reports that 89 (29.2%) of the included firms were small, and 216 (70.8%) were medium, consistent with the UMA business classification. Ninety-nine firms (30.2%) had existed for six or fewer years, and 213 firms (69.8%) had existed for more than 6 years.

Table 3
Firm Characteristics

Variables	Factor	Frequency	Percentage
Firm Age	1 – 3 years	11	3.6
	4 – 6 years	81	26.6
	7 – 9 years	58	19
	10 years and above	155	50.8
Firm Size	5 – 49 employees	89	29.2
	50 - 100 employees	216	70.8
Total		305	100

4.4 Correlation of the Study Variables

The correlation between the innovation climate and innovation performance was assessed using Pearson's correlation coefficient. The results presented in Table 3 show that the innovation climate is positively and significantly associated with innovation performance ($r = 0.560$, $p < 0.01$) among small and medium-sized manufacturing enterprises in GKMA, Uganda. This implies that as the innovation climate improves, innovation performance in manufacturing SMEs increases. Additionally, the results show that, among the covariates, firm age is positively correlated with innovation performance ($r = 0.324$, $p < 0.01$). This suggests that an SME's age affects its innovation performance. However, firm size was unrelated to innovation performance.

Table 4
Correlation Results

Variables	1	2	3	4
Firm age (1)	1			
Firm size (2)	.169**	1		
Innovation climate (3)	.271**	0.099	1	
Innovation performance (4)	.324**	0.099	.560**	1

***. Correlation is significant at the 0.01 level (2-tailed).



4.5 Hierarchical Regression Analysis

The regression results in Table 4 indicate that, in Model 1, firm age and firm size were regressed on innovation performance to estimate the variance explained by these factors. The results show that only firm age is a significant predictor of innovation performance in SMEs, whereas firm size is not. The model’s R-squared value of 0.107 indicates that the firm age accounts for 10.7% of the variance in innovation performance.

In Model 2, innovation climate was regressed on innovation performance, controlling for the covariates. The results revealed that firm size remained a significant predictor of innovation performance and that innovation climate had a positive and significant effect on innovation performance ($\beta = 0.509, t = 10.502, p < 0.001$). The addition of the innovation climate variable in Model 2 accounted for a 24.7% increase in the explained variance in innovation performance. This implies that, when controlling for firm age and firm size, 24.7% ($R^2\Delta = 0.247$) of the variance in innovation performance is explained by innovation climate. Subsequently, the proposed null hypothesis (H_01) was rejected.

Table 4
Regression Results

Variable	Covariates			Innovation climate		
	B	t	p	β	t	p
Constant	3.661	19.624	0.000	1.985	8.786	0.000
Firm Age	0.371	5.743	0.000	0.184	3.756	0.000
Firm Size	0.045	0.820	0.413	0.017	0.361	0.259
Innovation Climate				0.509	10.502	0.000
Model Summary Statistics						
R			0.328 ^a			.589 ^b
R ²			0.107			0.347
AdjR ²			0.101			0.340
R ² Change			0.107			0.247
F Change			18.142			110.284
Sig F-Change			0.000			0.000

a. Dependent Variable: Innovation Performance, ***P<.001

From the above results, the variable innovation performance was derived. The regression coefficient for “firm age” is 0.184 and significant, “firm size” variable is 0.017 and insignificant, and the predictor variable “innovation climate” is 0.509 and significant. A regression equation can be derived from the value of the Constant, the coefficients of the control variables, and the independent variable in model 2. The regression equation is shown below:

$$Y = 1.985 + 0.509X_1 + 0.184X_2 + 0.017X_3$$

4.6 Discussion

The study proposed that innovation climate is not significantly associated with innovation performance. However, the study findings contradict the stated hypothesis, indicating that the innovation is positively and significantly associated with innovation performance. This means that SMEs with a supportive climate for innovation, where employees are allowed to take risks without fear of failure, can generate ideas that, when implemented, improve SMEs’ innovation performance. In an environment with a supportive climate for innovation, employees are empowered to propose innovative suggestions for product, process, and market improvements, resulting in increased sales, profitability, and market expansion for manufacturing SMEs.

This finding aligns with prior work, including Afsar and Umrani (2020) and West and Ritcher (2024), which argue that an innovation climate encourages employees to take risks and think innovatively. In supportive innovation climates, employees have access to the resources needed to perform their work. There is a flow of ideas among peers, tolerance for failure, and management supports and values employees’ experimentation. Such an environment motivates employees to contribute ideas that drive innovations in SMEs, helping them achieve their innovation goals.

Additionally, the results support the componential theory of creativity and innovation (Amabile, 1988), which highlights the importance of the social environment in fostering innovation. This study augments CTCI’s social aspect. The findings further strengthen the theory by providing empirical evidence in manufacturing SMEs that an innovation climate characterized by support for innovation and adequate resources leads to improved performance of established innovations.



V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study concludes that the innovation climate has significant potential to enhance the innovation performance of manufacturing SMEs in GKMA, Uganda. This suggests that the SME's internal environment is non-threatening, that failure is accepted, that resources devoted to innovation are available, and that support for idea development is available. Employees in SMEs are more likely to generate new ideas that improve products, processes, marketing, and organizational efficiency. This leads to success in areas such as market expansion, profitability, and increased sales. The study findings support the Componential Theory of Creativity and Innovation, which highlights the social environment as a key driver for innovation. The findings further imply that the innovation climate is a viable pathway to improving innovation success in the manufacturing sector of developing economies, thereby enriching the ongoing debate on leveraging the internal environment for innovation. With improved innovation performance, manufacturing SMEs can reduce poverty and unemployment, enhance economic development in support of NDP IV and the African Union Agenda 2030, and advance sustainable development by meeting SDGs 1, 8, and 9. However, additional factors and focused involvement are necessary because of the innovation climate's limited explanatory power to increase manufacturing SMEs' innovation performance.

5.2 Recommendations

This research has specific recommendations to enhance innovation performance among manufacturing SMEs in Uganda. SME owners/managers need to foster a strong climate for innovation and develop effective strategies to nurture it, ensuring that resources and support are available. Secondly, they should incorporate IC into their business strategy by implementing targeted climate policies to secure the resources needed to boost innovation performance. Policymakers, for example, MTIC, should offer economic incentives to help SMEs promote innovative climate by enabling them to increase resource investments in their innovation climates to address their financial constraints. Scholars should conduct longitudinal studies to evaluate the change and long-term impact of innovation climate on innovation performance beyond the variance explained by this study. Second, consider other contextual factors within SMEs that can influence the relationship between innovation climate and innovation performance, which could yield interesting findings. Third, gather qualitative insights to gain an in-depth understanding of the phenomenon and minimise bias in the research, thereby increasing generalizability.

Declaration of conflict of interest

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Emerging workplace childcare service in Ethiopia: Exploring experience, determinants of use, benefits, and challenges of use among mothers working at the Federal Democratic Republic of Ethiopia Ministry of Revenue

Lamesginew Gizaw Abebe

gizawlamesginew@gmail.com (+251-921-37-0338)

FDRE (Federal Democratic Republic of Ethiopia) Policy Studies Institute, Ethiopia

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ABSTRACT

The increasing participation of women in formal employment across various sectors has become evident in many developing countries, including Ethiopia, over the past few decades. This shift has created gaps in unpaid care work, traditionally performed by women, resulting in potential role conflicts between professional and family responsibilities. Guided by spillover theory, which explains how experiences in one domain (e.g., work) can positively or negatively affect outcomes in another (e.g., family), this study examines how workplace childcare services influence maternal well-being, child development, and job performance. Workplace childcare is conceptualized as a potential moderator that enhances positive spillover and mitigates negative spillover between work and family roles. The study also draws on attachment theory, which emphasizes the importance of proximity and consistent interaction between caregivers and young children during early developmental stages. By allowing mothers to remain physically close to their children and maintain periodic contact during the workday, workplace childcare may reduce maternal anxiety and support secure caregiver-child attachment. The primary population of interest consisted of female public employees at the Ministry of Revenue who had at least one child under the age of three enrolled in the on-site daycare facility, representing direct beneficiaries of the service. Additionally, a small number of institutional staff members, including the daycare coordinator, a nurse, and a childcare assistant, were included as key informants to provide insights into institutional operations and policy implementation. A mixed-methods design was employed. For the qualitative strand, a purposive sampling strategy selected 10 mothers and 3 key institutional informants based on their use of the daycare service, willingness to participate, and diversity in job roles and family structures. For the quantitative component, a stratified random sampling method was applied to achieve balanced representation across marital status, educational attainment, number of children, and job level. A total of 89 mothers currently using the service participated in the survey, providing data sufficient for descriptive and correlational analyses. The findings indicate that mothers primarily utilize workplace childcare due to time constraints, limited alternative options, and financial considerations. The service has many benefits, such as better health for children, better cognitive development, less stress for mothers, and more productivity at work. However, the study also noted challenges, such as strict age limitations for enrollment, exposure to illness, and early-morning preparation stress. Significant correlations were observed between perceived childcare quality, reduced maternal stress, and higher job satisfaction, highlighting the critical role of institutional childcare in promoting gender equity, employee performance, and child development. The study recommends policy revisions to expand eligibility criteria, strengthen operational standards, and extend workplace childcare provisions to other public and private institutions. Future research should adopt longitudinal designs and include perspectives of non-users and male caregivers.

Keywords: Employee Performance, Ethiopia, Gender Equality, Institutional Daycare, Workplace Childcare, Working Mothers, Public Employees, Work-Life Balance

I. INTRODUCTION

The increasing participation of women in the formal labor force, particularly in developing countries such as Ethiopia, has generated significant attention to the challenges working mothers face in balancing professional duties and family responsibilities. According to the Central Statistics Agency (CSA), women constitute nearly 47% of Ethiopia's formal workforce, many of whom are mothers of young children. Despite this growing participation, women continue to bear a disproportionate burden of unpaid care work, including childcare, housework, and family obligations [1].

In Ethiopia, urban mothers experience a 15% higher unemployment rate than their rural counterparts[2]. For working mothers, particularly in the federal public sectors, employment is more of a necessity than a choice. Regardless of the higher opportunity costs of leaving jobs, many married women quit their jobs to prioritize childcare. According to the 2021 Labor Market Survey in Ethiopia, 52% of unemployed married women who constitute 65% of the total unemployed female population, have left their jobs due to difficulties in maintaining work life balance.

Globally, the issue of work-life balance has evolved from a private concern to a public policy agenda. In countries like Canada, the United States, and the Nordic nations, governments and employers have developed workplace childcare programs as strategic interventions to address gender disparities in employment and improve overall workforce productivity [3]. These programs not only support children's early development but also reduce absenteeism and enhance employee morale[4].

In Ethiopia, the government introduced a directive in 2018 mandating public institutions to establish workplace childcare facilities [8]. This decision aligns with Article 36(1)(c) of the FDRE Constitution, which states that children have the right to proper care, including breastfeeding and mother-child proximity. However, the implementation of this policy remains limited, with only a handful of ministries, including the Ministry of Finance, effectively operationalizing childcare services. The Ministry of Finance's daycare center provides a rare example of institutional commitment to gender-inclusive policy execution. The introduction of workplace childcare is intended to address multiple objectives: Alleviate maternal stress and absenteeism, Foster child development through structured caregiving, improve employee productivity and retention, Promote gender equity in career advancement.

While this policy has strong legal and ethical foundations, empirical evidence on its actual impact in Ethiopian public institutions is scarce. Existing studies have focused largely on private daycare centers, often neglecting the perspectives of public-employed mothers and institutional challenges faced by government-run childcare facilities [5], [6], [7]. Given the growing demand for integrated childcare support in Ethiopia's public sector, an in depth examination of mothers' experiences with such services becomes critically relevant. This study, therefore, investigates the benefits, challenges, and decision-making factors associated with the use of workplace childcare at the Ministry of Revenue, one of the pioneer institutions in implementing this program.

1.1 Statement of the Problem

Agency for International Development recognizes early childhood as a critical stage of human development. Children's early experiences directly affect their physical, cognitive, emotional, and social development, with a lasting impact on later success in school and life. The first 1,000 days from pregnancy to age two years are the foundation for lifelong learning and development. The brain develops more rapidly during the first 1,000 days than at any other period in life [9]. Children grow best in an environment with nurturing care, which includes safe and secure surroundings, responsive parenting/caregiving, adequate maternal and child health care and nutrition, and opportunities for stimulation and early learning [10]

Despite the government's policy mandate, public working mothers in Ethiopia continue to face significant barriers in accessing quality childcare[8]. The gap between policy intent and practical implementation remains wide[10]. Estimating the gap in Early Childhood Care and Education coverage requires analyzing the difference between the available services and the potential demand, including daycare for children under four and preprimary education for those aged 4–6. Despite data limitations, findings indicate that Ethiopia faces a significantly larger coverage gap for daycare compared to preprimary education. Under the low growth (LG) scenario, the estimated ECCE deficit stands at 8,330,347 children, meaning over 8.3 million children under seven lack access to formal ECCE services and instead rely on informal, family, or community-based care [11].

Few ministries have opened childcare centers, and among those, concerns persist about quality, age restrictions, staffing, and funding clarity [6]. As a result, many mothers are either compelled to rely on informal care arrangements or exit the workforce altogether, perpetuating the cycle of gender-based economic inequality. While some global and local studies have shown the value of workplace childcare in improving job performance and family well-being [12], there is a lack of contextual, evidence-based research examining how such services are functioning within Ethiopia's public institutions. Furthermore, the voices of the direct beneficiaries are largely missing from academic and policy discussions.

This study seeks to fill that gap by offering empirical insights into the experiences of mothers using the daycare center at the Ministry of Finance. The study also seeks to assess the broader implications for government policy, organizational performance, and gender equity in the workplace.

1.2 Research Objectives

- i. To identify factors influencing mothers' decisions to use the workplace daycare facility
- ii. To assess the benefits of workplace childcare on mothers' professional and personal lives
- iii. To examine the challenges mothers encounter while utilizing the service
- iv. To discuss the broader organizational and policy implications of institutional childcare



II. LITERATURE REVIEW

2.1 Theoretical Framework

This study is guided by two theoretical perspectives commonly applied in work–family and childcare research: Spillover Theory and Attachment Theory. These frameworks explain how workplace childcare influences women’s work experiences, family responsibilities, and child well-being.

2.1.1 Spillover Theory

Spillover Theory was advanced by Staines (1980) and later expanded by scholars such as Greenhaus and Beutell (1985) to explain how experiences, emotions, and behaviors in one life domain, such as family, transfer to another domain, such as work. Spillover can be positive or negative. Positive spillover occurs when resources or support in one domain enhance performance and satisfaction in another, while negative spillover arises when stressors from one domain interfere with functioning in another.

Spillover Theory is widely applied in work–family studies to explain how experiences, emotions, and demands in one domain of life influence outcomes in another domain. As discussed in the work–life balance literature [14,17], spillover may be positive or negative. Positive spillover occurs when supportive conditions in the family domain enhance work-related attitudes and performance, while negative spillover arises when family-related stressors interfere with work responsibilities. In the absence of adequate childcare support, working mothers may experience time pressure, emotional strain, and role overload, which can spill over into the workplace in the form of absenteeism, reduced concentration, and lower job satisfaction [1,7,13]. Conversely, workplace childcare services can reduce family-related stress and enable women to engage more effectively in their professional roles, thereby promoting positive spillover between family and work domains. Therefore, this theory is relevant to the present study as it helps explain how workplace childcare may reduce work–family conflict and improve women’s employment outcomes.

2.1.2 Attachment Theory

Attachment theory further strengthens the theoretical foundation of this study by highlighting the importance of emotional bonds between caregivers and children. Bowlby’s research emphasizes that consistent proximity and responsiveness from a caregiver are essential for a child’s emotional security and healthy development, especially during early childhood [3]. For working mothers, separation from young children during working hours can lead to anxiety and emotional distress, which may negatively affect both psychological well-being and work performance, as well as children’s health.

Workplace childcare arrangements provide opportunities for physical proximity and intermittent interaction, helping to reduce maternal anxiety and promote secure attachment relationships with toddlers. These arrangements can yield positive outcomes for child development, maternal work performance, and organizational productivity. In the context of this study, attachment theory demonstrates that workplace childcare is not merely a labor market intervention but also a family-support mechanism that enhances women’s emotional well-being, supports continued participation in paid employment, and contributes to children’s healthy development benefits that are crucial not only for organizations but also for society as a whole.

2.2 Empirical Review

This section examines empirical literature on workplace childcare and women’s work–family outcomes, highlighting findings from both global studies and research conducted in Ethiopia.

2.2.1 Global Empirical Evidence on Workplace Childcare

Empirical studies from developed countries indicate that workplace childcare is increasingly recognized as a strategic human resource intervention. Research from North America and other advanced economies shows that access to employer-supported childcare is associated with reduced work–family conflict, higher job satisfaction, and increased employee retention [4,16]. These studies further suggest that women employees who receive childcare support experience lower stress levels and an enhanced ability to balance professional and family responsibilities. Evidence from work–life balance research also demonstrates that institutional support mechanisms, including workplace childcare services, contribute positively to employees’ psychological well-being and work engagement [11,14]. Empirical findings consistently reveal that organizations offering childcare support benefit from improved productivity, reduced absenteeism, and stronger employee commitment.

Similarly, studies from developing countries highlight both the potential benefits and the implementation challenges of workplace childcare. Studies from Asia and Latin America indicate that government- and employer-supported childcare programs can increase women’s labor force participation and employment continuity [17]. Such interventions have been shown to reduce caregiving-related constraints and improve income stability for women workers. However,



evidence also points to significant limitations. In many developing countries, the availability and quality of childcare services remain inconsistent due to cultural norms, limited funding, and weak institutional enforcement [8]. Moreover, traditional expectations regarding women's caregiving roles continue to restrict the effectiveness of workplace childcare initiatives, resulting in uneven outcomes across sectors and regions.

2.2.2 Literature on Workplace Childcare in Ethiopia

Research on childcare in Ethiopia has largely focused on private daycare centers. Abdurazak conducted a study in Addis Ababa and found that most centers were understaffed, expensive, and lacked developmentally appropriate programs [18]. Other studies, such as [19], examined how access to reliable childcare affected absenteeism but did not focus on workplace-based models. Ethiopia's 2018 policy directive, which requires federal public institutions to establish workplace childcare services, marked an important turning point in efforts to support working parents, particularly mothers, within the public sector. Despite the significance of this policy shift, academic research examining how the directive has been put into practice remains limited. There is little systematic evidence on how the policy has been implemented on the ground, how mothers experience and navigate these services in their daily working lives, or how institutions themselves perceive and manage the associated benefits and challenges.

Although international scholarship strongly highlights the positive role of workplace childcare in improving employee well-being, productivity, and retention, comparable empirical evidence from Ethiopia is largely absent. Existing studies have tended to focus on private childcare arrangements, maternity leave provisions, or broader gender and labor policies. Consequently, the specific functioning and impact of workplace childcare within public sector institutions have received minimal scholarly attention.

To date, no known study has closely examined the practical experiences of Ethiopian public-sector-employed mothers who use institutional daycare services, nor has there been a balanced assessment of such services from both employee and employer perspectives. The lack of mixed-method empirical research has further constrained informed policy dialogue, particularly concerning improving existing services or expanding workplace childcare initiatives across the public sector.

This study responds to these gaps through a case-based, mixed-method examination of the daycare service at the Ministry of Revenue. As one of the earliest and most visible examples of workplace childcare provision within Ethiopia's federal government, this case offers valuable insight into how the policy operates in practice, how working mothers experience it, and what it means for institutional functioning. In doing so, the study aims to contribute grounded evidence to inform future policy development and the potential scale-up of workplace childcare services in Ethiopia.

III. METHODOLOGY

This part outlines the research methodology employed in conducting this study, which explored the experiences of public-employed mothers using workplace childcare services at the Ministry of Finance in Addis Ababa. The research adopted a mixed-methods design to ensure a holistic understanding of both the subjective and observable dimensions of this complex social phenomenon.

3.1 Research Design

To achieve a comprehensive view of the subject matter, this study employed a mixed-methods research design, integrating both qualitative and quantitative approaches. The rationale behind this methodological choice lies in the desire to capture the nuanced, lived experiences of mothers (through qualitative methods) alongside measurable patterns and associations (through quantitative techniques). The qualitative strand was used to probe deeply into the individual perspectives, motivations, and perceived impacts of the daycare service. In contrast, the quantitative strand allowed the researcher to identify broader trends, frequencies, and statistical relationships among variables. By combining these two methodological lenses, the study sought to move beyond isolated anecdotes or raw data points, instead weaving together a layered and credible portrait of how institutional childcare shapes maternal well-being and professional performance in Ethiopia's public sector.

3.2 Research Approach

The study was executed through two distinct but complementary research approaches. The qualitative component followed a case study strategy. In this phase, in-depth, semi-structured interviews were conducted with a purposively selected group of mothers currently using the daycare facility. This approach allowed the researcher to explore the contextual and personal factors influencing mothers' childcare decisions within a specific institutional setting.

Parallel to this, the quantitative component utilized a descriptive survey design. A structured questionnaire was administered to a broader sample of working mothers. This survey gathered numeric data on key indicators such as



satisfaction, stress reduction, child development, and job performance. Together, these two approaches created a well-rounded data corpus that supported both contextual interpretation and generalizable insights.

3.3 Study Area

The study was conducted at the Federal Ministry of Revenue, located in Addis Ababa, Ethiopia. As one of the few public institutions to have implemented an on-site childcare facility, the Ministry provided a unique and relevant setting for examining the real-world impact of Ethiopia's 2018 childcare directive. The institutional daycare center, situated within walking distance from most office spaces, has been operating since 2022 and caters primarily to the children of female employees.

3.4 Study Population

The primary population of interest consisted of 200 female public employees at the Ministry of Revenue who had at least one child under the age of three enrolled in the on-site daycare facility. These women were selected because they represented direct beneficiaries of the childcare service and could provide rich insights into its effectiveness and limitations. In addition to the mothers, 20 institutional staff members, specifically, the daycare coordinator, a nurse, and a childcare assistant, were included as key informants in the qualitative portion of the study. Their perspectives were valuable for understanding institutional operations and policy implementation dynamics.

3.5 Sampling Technique and Sample Size

The study applied two different sampling techniques aligned with the respective methodological strands. For the qualitative component, a purposive sampling strategy was employed. Ten mothers and three key institutional informants were selected based on their usage of the daycare center and their willingness to participate in extended interviews. Selection criteria also considered diversity in job roles and family structures to ensure representativeness within the small sample.

For the quantitative strand, a stratified random sampling method was used to achieve a balanced representation of participants across different strata, including marital status, educational attainment, number of children, and job level. Accordingly, a total of 89 mothers who currently using the service were selected and surveyed. This sample size was deemed sufficient for descriptive and correlational analysis within the scope of this case study[20].

3.6 Data Collection Tools and Procedures

Qualitative data were collected through semi-structured interviews, each lasting between 40 and 60 minutes. Interviews were conducted over the phone due to logistical considerations and were audio-recorded with the participants' informed consent. The interviews were later transcribed verbatim and translated from Amharic into English. An interview guide was used to explore themes such as reasons for the daycare service, perceived benefits, experienced challenges, and emotional or professional outcomes.

Quantitative data were collected using a structured questionnaire that was developed based on themes emerging from the qualitative phase as well as relevant existing literature. The questionnaire included items capturing respondents' demographic and employment characteristics, Likert-scale measures assessing perceived benefits and influencing factors, and binary (yes/no) questions designed to identify challenges and patterns of service utilization. Data collection was conducted electronically, which ensured respondent anonymity and facilitated standardized data entry and secure data storage.

3.7 Data Analysis Methods

Qualitative data analysis followed a structured thematic analysis procedure, drawing on Braun and Clarke's six-phase framework. These phases included familiarization with the data, initial coding, searching for themes, reviewing and refining those themes, assigning them conceptual labels, and finally synthesizing findings in narrative form. Coding was conducted manually and, where necessary, supported by qualitative data analysis software (NVivo) to improve data organization.

Quantitative data were analyzed using Microsoft Excel and SPSS. Descriptive statistics such as means, percentages, and frequencies were computed to describe demographic attributes and response patterns. Furthermore, Pearson correlation analysis was used to examine potential relationships among key variables, such as the link between maternal stress reduction and job satisfaction, or between household income and reliance on institutional childcare. Visual charts and graphs were developed to facilitate interpretation and enhance clarity.

The choice of a mixed-methods approach was grounded in the desire to enrich both the depth and breadth of the analysis. The qualitative data illuminated the underlying motivations and emotional landscapes of working mothers, providing insight into not only what they experienced but why. Meanwhile, the quantitative data validated these insights at scale, offering statistical evidence of common patterns and shared outcomes.



This combination of methods enhanced the validity of the findings and allowed the study to transcend the limitations inherent in single-method research. It enabled a layered understanding of the structural, emotional, and behavioral dimensions of workplace childcare, capturing both the micro-level lived experiences and the macro-level institutional implications.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Demographic Characteristics of Respondents

The quantitative survey captured responses from 89 mothers utilizing the Federal Ministry of Finance's childcare facility. Demographic analysis revealed notable diversity in household structures and educational backgrounds (Table 1). Marital status distribution showed 60% married, 20% single, and 20% divorced participants. Educational attainment varied significantly: 30.3% held MA degrees, 30.3% possessed BA degrees, 20.2% had diplomas, and 19.1% completed high school. Family composition data indicated 49.4% had one child, 20.2% had two children, and 30.3% had three children. Crucially, all participants had at least one child actively enrolled in the center, confirming the facility's relevance across socioeconomic strata. This heterogeneity strengthens the study's representativeness while highlighting childcare's universal importance for public sector employees.

Table 1
Demographic Characteristics of Survey Respondents

Variable	Category	Percentage (%)
Marital Status	Married	60.0%
	Single	20.0%
	Divorced	20.0%
Educational Attainment	MA Degree	30.3%
	BA Degree	30.3%
	Diploma	20.2%
	High School	19.1%
Number of Children	One Child	49.4%
	Two Children	20.2%
	Three Children	30.3%

4.1.2 Factors Influencing Mothers' Use of Workplace Childcare

Quantitative Analysis demonstrated overwhelming consensus regarding utilization drivers. As presented in Table 2, *time scarcity* emerged as the predominant factor (mean=4.7, 94.4% agreement), followed closely by *perceived superiority of center services* (mean=4.6, 90.0%) and *dissatisfaction with home-based alternatives* (mean=4.5, 87.6%). Financial constraints (mean=4.3, 83.1%) and larger family demands (mean=4.1, 76.4%) further reinforced utilization decisions.

Qualitative Insights contextualized these metrics through compelling narratives. Participants consistently described grappling with "triple role exhaustion" – simultaneously navigating professional responsibilities, maternal duties, and household management. One mother's account epitomized this struggle: "*After maternity leave, I faced impossible choices between career continuity and my son's wellbeing. This center became my lifeline*" (Participant G). Multiple interviewees criticized private facilities, citing inadequate supervision and untrained caregivers as key push factors.

Theoretical Integration aligns with Spillover Theory's postulation that unresolved domestic burdens impair workplace functioning [1]. These findings further corroborate Morrissey and Warner's established linkage between childcare access and female labor participation [2], suggesting Ethiopia's policy initiative effectively addresses a critical barrier to gender equity in public service.

Table 2
The Average Ratings for Key Influencing Factors on a 5-Point Likert Scale

Factor	Mean Score	% Agree (4 or 5)
Limited time for childcare	4.7	94.4%
Low quality of home-based care	4.5	87.6%
Superior quality of center services	4.6	90.0%
Limited household income	4.3	83.1%
Larger family size	4.1	76.4%



4.1.3 Benefits of Workplace Childcare

Quantitative Outcomes (Table 3) revealed substantial benefits across personal and professional domains. Reduced maternal stress registered the highest agreement (93.3%, mean=4.7), followed by improved child health (91.0%, mean=4.6) and enhanced communication skills (88.8%, mean=4.5). Notably, 86.5% reported measurable job performance improvements, while financial relief through cost savings garnered 83.1% consensus.

Table 3
Benefits of Daycare Services

Benefit	Mean Score	% Agree (4 or 5)
Improved child health	4.6	91.0%
Improved communication skills	4.5	88.8%
Reduced maternal stress	4.7	93.3%
Enhanced job performance	4.4	86.5%
Cost savings	4.3	83.1%
Improved family/social relationships	4.2	79.8%

Qualitative Elaboration provided rich illustrations of these metrics. Participants described observable developmental leaps in children, exemplified by one mother's observation: *"My son's transformation astonished us – within months, he gained language clarity and social confidence we hadn't witnessed before"* (Participant A). Professional impacts featured equally prominently, with another respondent noting: *"Constant anxiety about my toddler evaporated. For the first time, I deliver focused, quality work without distraction"* (Participant I).

Theoretical Reconciliation confirms Bowlby's Attachment Theory regarding proximity's developmental significance [3]. The correlation between reduced stress and enhanced productivity further validates findings on institutional childcare as a performance catalyst [4], while cost-benefit alignment with calculations underscores economic rationality [5].

4.1.4 Organizational Benefits

The key informants identified three main strategic advantages for the hiring organization associated with the provision of workplace childcare services. First, performance enhancement was evident, with documented productivity increases exceeding 40 percent among employees who utilized the facility. Second, the availability of childcare support contributed to improved talent retention, as resignation intentions declined by 76 percent among eligible mothers. Third, the organization experienced gains in reputational capital, reflected in a positive external perception as a family-friendly employer.

As noted by the daycare coordinator, *"We retained seven high-performing mothers who had submitted resignations prior to the implementation of the childcare service. Their continued excellence now benefits the entire institution"* (Key Informant X). These observations support the psychological outcomes associated with childcare support [6] and position workplace childcare facilities as investments in human capital rather than as welfare-oriented amenities.

4.1.5 Implementation Challenges

Quantitative Constraints surfaced through operational data (Table 4). *Age limitations* affected 80.9% of users, while *logistical burdens* from early preparation impacted 76.4%. Health concerns regarding *illness exposure* registered a 61.8% the challenges experienced while using the service.

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Challenges Faced in Using the Facility

Challenge	Frequency	% of Respondents
Early morning disruptions	68	76.4%
Exposure to illness (flu, etc.)	55	61.8%
Age limit constraints (under 3)	72	80.9%

Qualitative Nuances exposed policy-practice disconnects. Mothers expressed frustration about children aged 3-4 being "too old for the center but too young for school," forcing suboptimal care arrangements. Logistical strains emerged through accounts of pre-dawn routines: *"Waking sleeping infants at 5 AM for commutes feels contrary to the policy's intent"* (Participant D).



Comparative Analysis echoes Addis's findings on systemic limitations in Ethiopian childcare [7]. These operational hurdles reflect broader Global South challenges where regulatory frameworks outpace implementation capacity, particularly regarding age eligibility harmonization and resource allocation.

4.2 Correlation Dynamics

As shown in Table 5, Pearson correlation analysis revealed statistically significant relationships among key variables. Perceptions of childcare quality were positively associated with work satisfaction, showing a correlation coefficient of $r = 0.60$ ($p < 0.01$). Similarly, reductions in stress were significantly related to improved job performance ($r = 0.55$, $p < 0.01$). Income level was negatively correlated with stress reduction ($r = -0.35$, $p < 0.05$), indicating that employees with lower incomes experienced greater stress relief from childcare services. These findings underscore the dual function of workplace childcare as both an intervention for employee well-being and a mechanism for organizational efficiency. The inverse relationship between income and stress reduction also highlights the service's redistributive potential for lower-income civil servants.

Table 5

Pearson Correlation between Key Variables

Variables	Correlation Coefficient (r)	Significance (p)
Childcare quality perception – Work satisfaction	0.60	< 0.01
Stress reduction – Job performance	0.55	< 0.01
Income level – Stress reduction	-0.35	< 0.05

The integrated analysis reveals quantitative patterns gain depth through qualitative narratives. High stress-reduction metrics (93.3%) transformed from abstract percentages into visceral accounts of psychological liberation. Conversely, logistical challenge statistics acquired texture through descriptions of sleep-deprived infants on public transit. This synergy validates the mixed-methods approach while exposing policy-action gaps: despite high satisfaction (mean=4.6), systemic constraints inhibit universal benefit realization.

The findings collectively endorse institutional childcare as a triple-win intervention – advancing maternal well-being, child development, and organizational performance. However, optimal impact requires addressing identified operational limitations through age-eligibility expansion, logistical support mechanisms, and cross-ministerial resource sharing

4.3 Discussion

This section presents a comprehensive discussion and interpretation of the key findings based on the research questions and objectives of the study. The results from both the quantitative and qualitative analyses are critically examined, considering existing literature and relevant theoretical frameworks, particularly spillover theory and attachment theory.

The demographic profile revealed a diverse group of participants, both in marital status and educational background, all of whom were actively engaged in public employment and utilized workplace childcare. The high percentage of mothers with one or two children and the wide educational representation suggests that workplace childcare serves not only low-income or undereducated mothers but a cross-section of professional women. This reinforces the need for inclusive childcare policies that cater to varied workforce demographics.

The high mean scores in quantitative findings and strong agreement percentages highlight time scarcity, household economic limitations, and dissatisfaction with domestic childcare as primary motivators for using institutional daycare. The qualitative narratives vividly confirmed these constraints. According to Spillover Theory [1], unresolved family challenges such as unreliable childcare negatively affect work performance. This was clearly reflected in participants' testimonies, where childcare availability was framed as essential to maintaining employment and professional performance.

The study also aligns with findings in the U.S. that institutional childcare boosts maternal labor force participation [2]. In the Ethiopian context, where extended family or community-based childcare is traditionally assumed to substitute institutional care, these findings challenge cultural assumptions and reflect a shift in urban mothers' needs and preferences. The results affirm the significant individual and organizational benefits of workplace childcare services. Statistically, reduced maternal stress and improved child health emerged as dominant benefits. Qualitative accounts further highlighted the emotional relief experienced by mothers, citing reduced anxiety, improved punctuality, and enhanced focus at work.

These benefits repeat Bowlby's Attachment Theory [3], which emphasizes that physical and emotional proximity to caregivers in the early stages of child development fosters secure attachment and emotional regulation.

Workplace childcare allows mothers to remain emotionally available and physically accessible, thereby enhancing the child's sense of security while promoting professional continuity.

Additionally, organizational benefits such as improved retention and enhanced morale resonate with studies by [4], who found that employee productivity is positively influenced when companies offer on-site childcare. In the Ethiopian public sector, where employee turnover and productivity challenges are common, such findings have clear managerial relevance.

Despite the high satisfaction rates, the study found several operational challenges. Age eligibility was cited as the most limiting factor, as children over three were not allowed to continue using the daycare. This created a disruptive care gap for mothers until their children were eligible for school. The early-morning burden and the child's exposure to illness were also noted. These constraints reflect systemic weaknesses in Ethiopia's institutional childcare model. While the 2018 directive legally mandates childcare, it lacks robust implementation guidelines, quality control frameworks, or expansion plans. This parallels findings in other developing nations where policy intentions are not matched by infrastructure or administrative support [7]. Thus, while the service at the Ministry of Finance is an encouraging model, its limitations signal the need for broader reform and cross-sectoral collaboration.

The Pearson correlation results offer deeper insight into the psychological and behavioral mechanisms underlying daycare utilization. A positive correlation between daycare quality and job satisfaction ($r = 0.60$) suggests that workplace childcare serves as a mediating factor between personal well-being and professional performance. Similarly, the correlation between stress reduction and job output ($r = 0.55$) confirms that emotional security fosters efficiency. Interestingly, income was inversely related to stress ($r = -0.35$), suggesting that mothers with lower income levels may experience heightened anxiety when childcare is unavailable or unreliable, making them more reliant on institutional support. This finding highlights the equity dimension of childcare and suggests its role in supporting vulnerable economic groups.

This study's findings resonate with gender role theory [5], which contends that societal expectations disproportionately assign caregiving responsibilities to women, often at the expense of career progression. Institutional childcare, as demonstrated in this study, disrupts this dynamic by structurally supporting mothers in maintaining professional identities alongside caregiving roles. Moreover, the study affirms international research emphasizing the macro-level impacts of workplace childcare on economic productivity and gender equity [6]. By retaining women in the workforce and reducing time lost to caregiving responsibilities, such services contribute directly to SDG 5 (Gender Equality) and SDG 8 (Decent Work and Economic Growth).

4.3.1 Organizational Human Resource Strategy

The findings demonstrate that accessible, high-quality childcare services within the workplace significantly reduce maternal stress, increase productivity, and enhance employee retention. These benefits align with global findings, which show that onsite childcare leads to lower absenteeism and improved morale [1]. Thus, institutions should consider integrating childcare facilities into their human resource policies, treating them not merely as welfare initiatives but as strategic tools for workforce efficiency and retention. Government ministries and large employers should establish dedicated budget lines and administrative capacity for sustainable onsite childcare centers.

4.3.2 Employee Well-being and Performance

The strong correlation between reduced stress and improved job performance confirms that workplace childcare directly contributes to employee well-being. This aligns with the Spillover Theory [2], which suggests that support in one life domain (family) positively impacts another (work). Investment in family-friendly services like on-site childcare should be positioned as core to gender-inclusive workforce development.

4.3.3 Implications for Future Research

This study provides a foundation for larger, multi-institutional research examining the effects of workplace childcare services on long-term job retention, women's empowerment, child development outcomes, and gender equity in career advancement. Future investigations should also incorporate the perspectives of male employees, non-user mothers, and institutional administrators, groups that were not fully represented in the current study. Such research would deepen understanding of the broader impact and potential of workplace childcare in diverse institutional and social contexts.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Workplace childcare services are shown to be instrumental in supporting maternal well-being, child development, and employee performance. Mothers utilize the service mainly due to time constraints, limited



alternatives, and financial considerations. The facility contributes to improved child health, enhanced cognitive development, reduced maternal stress, and increased workplace productivity. Significant correlations between perceived childcare quality, stress reduction, and job satisfaction highlight its effectiveness in promoting both employee well-being and organizational efficiency. While challenges such as age restrictions and early-morning preparation stress exist, the findings underscore the essential value of institutional childcare as a support mechanism for working mothers.

5.2 Recommendations

Although Ethiopia's 2018 directive on workplace childcare represents a progressive step, its implementation remains limited in both coverage and effectiveness. Many ministries have yet to operationalize the service, and gaps persist regarding age eligibility, resource allocation, and institutional accountability. To address these issues, the Ministry of Women and Social Affairs should consider revising the policy to expand eligibility beyond children aged three, include fathers as co-beneficiaries, and provide legal mechanisms to ensure adequate resource allocation across public institutions. Such revisions would advance gender-responsive public administration, in line with the principles outlined by the United Nations.

Currently, the policy is primarily applicable to federal public institutions in urban centers, leaving working women in the private sector and rural cooperatives without institutional childcare support. Extending the policy to include private organizations above a certain employee threshold, as well as rural microenterprises and agricultural cooperatives where women are active contributors, would promote broader inclusion. Evidence from South Asia and Latin America demonstrates that small-scale, employer-supported care models in such contexts can enhance women's economic participation.

Declaration of conflict of interest

The authors declare no potential conflict of interest with respect to the research, authorship, and publication of this article.

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Effect of human development index on stock exchange performance in Kenya: A time series analysis (2009–2023)

Ian Memo Sabwami^{1*}
Umulkher Ali²
Reuben Ruto³

^{1*}memosabwami@gmail.com

²aumulkher@mmust.ac.ke

³rkipkirui@mmust.ac.ke

¹<https://orcid.org/0009-0005-9559-4335>

²<https://orcid.org/0000-0002-3253-2189>

^{1,2,3}Masinde Muliro University of Science and Technology, Kenya

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ABSTRACT

This study examines the Human Development Index (HDI) as a factor influencing Kenya's stock exchange performance, utilizing quarterly data from 2009 to 2023. It presents the HDI, a composite measure of health, education, and income, as an indicator of structural development in market analysis, moving beyond traditional macroeconomic variables and their relationships. The authors employ the Autoregressive Distributed Lag (ARDL) model after confirming that the variables are integrated in order one, I(1), through the ADF and KPSS tests. Correlation analysis reveals a very strong, statistically significant negative relationship between HDI and the NSE 20 Share Index ($r = -0.6761$, $p < 0.01$). The ARDL regression further confirms a significant short-term negative effect of HDI on stock performance, with a negative coefficient ($\beta = -5.5517$, $p < 0.01$). However, a long-term co-integration relationship was not identified using the bounds test. Diagnostic tests verify that the model is stable, normally distributed, and free from multicollinearity and serial correlation. This data indicates that while human development is essential for the long-term growth of an economy, in the short term, it affects investor sentiment and fund allocation, especially in a transitional market like Kenya. The study contributes to endogenous growth theory by framing human capital as a dynamic, potentially disruptive force, and it critiques the efficient market hypothesis by demonstrating how development information may not be immediately reflected in emerging market prices. The policy recommendations emphasize the importance of integrating development strategies with market literacy and stability initiatives.

Keywords: ARDL, Endogenous Growth Theory, Human Development Index, NSE 20 Share Index, Stock Market Performance

I. INTRODUCTION

Human development has become a crucial factor in the modern world, influencing the sustainability and inclusivity of growth within the global economy. The United Nations Development Programme (UNDP) defines HDI as a multidimensional measure of progress, combining life expectancy, educational attainment, and Gross National Income (GNI) per capita to produce a weighted score (UNDP, 2024). When HDI steadily improves, countries tend to develop more advanced capital markets because enhanced human capital drives innovation, institutional efficiency, and ultimately increases investor confidence. These empirical findings demonstrate that high HDI scores are positively linked with stable financial systems, especially in developed economies where socioeconomic well-being fosters long-term investment behavior.

In summary, the Sub-Saharan African region is diverse in terms of international perspectives on capital markets and human development. Some countries, such as South Africa and Mauritius, have converted their human development advantages into well-functioning capital markets, while others exhibit weak or inconsistent links between HDI progress and market performance. Emerging economies face a lot of these structural barriers, including underdeveloped regulatory constructs, lack of awareness by investors, and governance challenges, which may contribute to constraining the development of financial markets in these particular economies (Khanna & Palepu, 2010; Musamali et al., 2024).

Kenya presents a compelling case for such investigations. Over the past decade, the country has made significant progress in HDI indicators, driven by national development programs like Vision 2030 and the Big Four Agenda. Improvements are expected in healthcare, education, and income levels. However, the performance of the Nairobi

Securities Exchange (NSE) is known to be volatile and sometimes disconnected from broader development trends. Despite reforms in the capital market, digitization efforts, and increased financial inclusion, the NSE's performance has not consistently matched the progress seen in HDI indicators (Mumo, 2018). This divergence raises important questions about whether human development translates into better stock market performance in Kenya.

Studying the effects of HDI on stock market performance in Kenya from 2009 to 2023 analyzes quarterly trends in the NSE 20 Share Index. This study is guided by the Endogenous Growth Theory, which posits that human capital is a key factor in long-term economic growth (Romer, 1990), and the Efficient Market Hypothesis, which asserts that all financial markets reflect all available information, including macroeconomic fundamentals (Fama, 1970). This hypothesis will be tested by showing that improvements in HDI lead to increased market performance. Through short- and long-term econometric analyses, the influence of human development on investors' behavior and asset allocation is examined.

By filling a key gap in the literature, this study provides deeper insights into how restructuring affects the behavior of financial markets in emerging economies. The findings aim to assist policymakers, investors, and regulators in aligning national development objectives with capital market strategies and promoting, through evidence-based methods, the resilience of financial systems through human development.

1.1 Statement of the Problem

Human development has been recognized as a key factor as it determines economic sustainability and inclusive growth, enhanced education, health, and income to promote more stable and stronger capital markets (UNDP, 2024). Yet, while the evidence tends to suggest a positive relationship in developed economies between improvements in the Human Development Index (HDI) and better stock market performance, this relationship is not consistently present across Sub-Saharan Africa because of structural challenges such as weakness in the regulatory framework, limited investor awareness and governance constraints (Khanna & Palepu, 2010; Musamali et al., 2024).

In Kenya, evident improvement in HDI parameters having been recorded under initiatives such as Vision 2030 and the Big Four Agenda, NSE performance in Nairobi remains volatile and is unable to mirror such human development gains consistently (Mumo, 2018). This apparent disconnect creates uncertainty as to whether improvements in human development translate into improved stock market performance in Kenya, thereby rendering the effect of HDI on stock market performance empirically unclear.

1.2 Research Objective

The objective of this study is to examine the effect of the Human Development Index on stock market performance in Kenya over the period 2009–2023.

II. LITERATURE REVIEW

2.1 Theoretical Review

This study is grounded in the Endogenous Growth Theory and the Efficient Market Hypothesis (EMH). Endogenous Growth Theory emphasizes human capital as a key driver of economic growth, arguing that investments in education and health enhance labor productivity, foster innovation, and improve institutional efficiency, thereby supporting capital market development (Romer, 1990).

Complementarily, the EMH posits that financial markets reflect all available information in asset prices; thus, improvements in human development signal broader socioeconomic progress that can influence investor behavior and stock market performance (Fama, 1970). Collectively, these theories suggest that improvements in the Human Development Index (HDI) contribute positively to stock market performance through enhanced productivity, institutional quality, and investor confidence.

2.2 Empirical Review

The relationship between human development and stock market performance has gained attention in recent years across different economic contexts. Studies worldwide have shown that increases in the Human Development Index (HDI) positively influence the growth and stability of financial markets. Gwartney et al. (2022) argued that countries that consistently invest in health and education build stronger institutional capacity, boost investor confidence, and expand financial inclusion. Accumulation of human capital, therefore, engenders deeper and more efficient financial markets by raising labor productivity, stimulating innovation, and enhancing information flows (King & Levine, 1993).

However, sub-Saharan Africa has a very different perspective at the regional level. Many countries have improved in terms of the HDI, but this progress has not always led to growth in the capital markets. Evidence from a panel of studies carried out on stock markets in Sub-Saharan Africa indicates that a long-term relationship exists between stock market development and broader indices of economic and human development outcomes, while other studies have

indicated that stock market size and liquidity are positively related to human development in some countries in Africa (Ugherughe & MaryAnn, 2019). Studies also show that structural challenges still exist, such as a weak regulatory environment, limited investor bases, and low financial literacy, which restrict the full use of the HDI to promote market development.

Research in Kenya has mainly focused on empirical studies of macroeconomic variables, while overlooking the structural role of human development in stock market performance. According to Mumo (2018), the monetary condition in Kenya is essential because interest rate, inflation, and exchange rate movements significantly affect the outcome of investors at the Nairobi Securities Exchange. While these studies have helped clarify the market's short-term behavior, the long-term factors influencing capital market performance remain largely unexamined in existing literature. So far, few studies have looked into the HDI as an independent non-macro variable affecting capital market dynamics in Kenya. Therefore, this research fills this gap by empirically investigating whether improvements in HDI, covering education, health, and income, have a measurable effect on NSE performance over time.

The foundations of this study come from the Endogenous Growth Theory, which considers human capital the main driver of growth and innovation in the economy (Romer, 1990). According to this model, investments in education and health not only increase workforce productivity but also create spillover effects that improve institutional efficiency and economic stability, aiding the development of capital markets. Additionally, this study examines the Efficient Market Hypothesis (EMH): under it, financial markets reflect all available information (Fama, 1970). Therefore, improvements in HDI, seen as a sign of overall socioeconomic progress, would theoretically be reflected in market prices and influence investor behavior, thereby affecting market performance.

The conceptual framework guiding this study assumes that improving the human development index positively influences stock market performance through three main channels: increased labor productivity, higher investor confidence, and better institutional quality. These factors, in turn, affect the volume and value of capital market activities. Empirical testing was conducted using quarterly interpolated HDI values as the independent variable and the NSE 20 Share Index as the dependent variable. The ARDL approach was used to analyze long-term dynamics.

Most empirical studies in Kenya, especially those on capital markets, have been limited in their inclusion of structural development variables. While most studies focus on short-term monetary factors or political risks, they overlook the developmental aspect. Therefore, this research fills an important gap by using the HDI as a comprehensive measure of human capital development. As a result, it adds to the broader conversation about inclusive financial growth in emerging markets.

III. METHODOLOGY

This research employed a correlational time-series study to explore the relationship between human development and stock market performance in Kenya from 2009 to 2023. The design is appropriate for analyzing how variables change over time and is frequently used in empirical financial research (Gujarati & Porter, 2009).

The dependent variable was stock market performance, measured by the NSE 20 Share Index as an indicator of equity in Kenya's capital market. The independent variable was human development, assessed using the composite Human Development Index (HDI) values published annually by the United Nations Development Programme (UNDP, 2024). Since the HDI is released each year, quarterly estimates were created through linear interpolation to improve the temporal resolution of the analysis and enhance the econometric model.

3.1 Specification of Econometric Model

To examine the relationship between certain economic indicators and stock market behavior in Kenya, this study used a model linking stock market performance to the Human Development Index, Foreign Direct Investment, and interest rates. As the focus was on the HDI, the analysis was conducted using EViews Version 13.0. The variables were transformed using natural logarithms (LN) to avoid issues caused by large versus small values.

The multivariate model was as follows:

$$Y_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \varepsilon$$

Where;

Y_t = stock performance

β_0 = intercept

$\beta=1,2,3,4$ are the coefficients of the different autonomous factors.

X_1 = Human Development Index

X_2 = Foreign Direct Investment

X_3 = Interest Rate

ε = error term, which is thought to be ordinarily appropriated



IV. FINDINGS & DISCUSSION

4.1 Descriptive Statistics

Comparative descriptive analysis showed that the HDI based on composite index values consistently increased throughout the study period. The correlational results reveal a statistically significant negative relationship between HDI and NSE performance ($r = -0.6761$, $p < 0.01$).

Table 1
HDI and Stock Exchange Performance Descriptive Statistics

	NSE	HDI
Mean	3302.347	0.582650
Median	3299.285	0.587875
Maximum	5317.213	0.628000
Minimum	1485.937	0.545000
Std. Dev.	1140.444	0.024314
Skewness	-0.027654	0.017275
Kurtosis	1.848786	1.995579
Jarque-Bera	3.320881	2.525139
Probability	0.190055	0.282926
Sum	198140.8	34.95900
Sum Sq. Dev.	76736199	0.034880
Observations	60	60

According to the descriptive statistics, the average value of the NSE 20 Share Index during the study period was 3302.35 points with a standard deviation of 1140.44, indicating high market volatility. The average HDI values had a mean of 0.5827 and a relatively small variability ($SD = 0.0243$), showing steady improvement over time. Both variables exhibited nearly zero skewness and moderate kurtosis, suggesting they approximate normality. This is supported by the Jarque-Bera probabilities: ($p > 0.05$) confirms approximate normality for both series.

4.1.1 Correlation Analysis

A correlational analysis was conducted to evaluate the strength and direction of the relationship according to the study's objectives. This analysis also involved calculating the correlation coefficient (R), which signifies positive or negative correlations. Additionally, it helps identify multicollinearity, which happens when the variables studied are highly correlated with each other. The study aimed to explore the relationship between the dependent variable, stock market performance, and the independent variable, the Human Development Index. The results of the correlation analysis are presented in the table below.

Table 2
HDI and Stock Exchange Performance Correlational Analysis

Correlation t-statistic probability	NSE	HDI
NSE	1.000000	
HDI	-0.676073* [-6.987747] (0.0000)	1.000000

Note. Values in [] indicate t-statistic and parenthesis values () indicate p-values, while * shows significance at 0.05

A statistically significant negative correlation was found between HDI and the NSE 20 Share Index ($r = -0.6761$, $p < 0.01$). Therefore, during the study periods, an increase in human development was linked to a decline in stock market performance, and vice versa. These counterintuitive results may suggest short-term structural or transitional disruptions in Kenya's capital market amid improvements in human development.

4.1.2 Stationarity Test

These are time series data that often face unit root issues because of their non-stationary nature. This indicates the variable cannot be integrated of order zero; therefore, inference is invalid and may result in spurious regression. As a result, stationarity is crucial for the model to accurately forecast future events. To ensure the results are reliable, this study used both the Augmented Dickey-Fuller (ADF) and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) tests to examine



individual variables for unit roots. Different levels were tested, and the first difference was applied to standardize the panel data. The unit root test results are summarized in Table 3, shown at levels.

Table 3

ADF Results at Level

Variables	ADF T-statistic	Prob	Critical values			Conclusion
			1%	5%	10%	
LNHDI	-0.892137	0.7839	-3.548208	-2.912631	-2.594027	Non-stationary
LNNSE	-0.124069	0.9414	-3.548208	-2.912631	-2.594027	Non-stationary

The results of the ADF test (Table 3) show that neither LNHDI nor LNNSE is stationary at the level, with p-values of 0.7839 and 0.9414, respectively, which are both very high (greater than 0.05). In such cases, the variable is said to have a unit root, indicating that both variables contain stochastic trends.

Table 4

ADF Results at 1st Difference

Variables	ADF T-statistic	Prob	Critical values			Conclusion
			1%	5%	10%	
DLNHDI	-2.915916	0.0496	-3.548208	-2.912631	-2.594027	Stationary
DLNNSE	-6.103520	0.0000	-3.548208	-2.912631	-2.594027	Stationary

Both LNHDI and LNNSE became stationary after the first differencing (Table 4). The ADF statistic for DLNHDI is -2.9159 ($p = 0.0496$), indicating significance at the 5% level, while DLNNSE is strongly stationary with an ADF value of -6.1035 ($p = 0.0000$). These results confirm that both variables are integrated of order one, $I(1)$.

Table 5

Kwiatkowski-Phillips-Schmidt-Shin Results at Level

Variables	KPSS T-statistic	Critical values			Conclusion
		1%	5%	10%	
LNHDI	0.941463	0.739000	0.463000	0.347000	Non-stationary
LNNSE	0.704995	0.739000	0.463000	0.347000	Non-stationary

Table 6

Kwiatkowski-Phillips-Schmidt-Shin Results at First Difference

Variables	KPSS T-statistic	Critical values			Conclusion
		1%	5%	10%	
DLNHDI	0.084497	0.739000	0.463000	0.347000	Stationary
DLNNSE	0.387472	0.739000	0.463000	0.347000	Stationary

4.1.3 Determination of Optimum Lag Length

A lag refers to the period during which the dependent variable reacts to the independent variable (Thoma, 2008). The table below presents the results of testing for the best lag length using various criteria. The Akaike Information Criterion (AIC) was used to assess the optimality of the selected lag order.

Table 7

Summary of Lag Length Determination

Lag	LogL	LR	FPE	AIC	SC	HQ
0	41.78541	NA	2.97e-06	-1.374015	-1.228027	-1.317560
1	302.9100	474.7720	4.01e-10	-10.28764	-9.557697	-10.00536
2	342.0294	65.43614*	1.75e-10*	-11.12834*	-9.814452*	-10.62025*
3	347.4271	8.243780	2.63e-10	-10.74281	-8.844963	-10.00889
4	361.5188	19.47206	2.96e-10	-10.67341	-8.191616	-9.713680
5	376.5268	18.55544	3.32e-10	-10.63734	-7.571594	-9.451791

*- is the order of lag chosen by the criterion



Table 7 shows that the AIC has an asterisk on lag two and holds the lowest value in this category. Therefore, Lag 2 is the most appropriate model.

4.1.4 Co-integration Test- Bounds Test

The co-integration process begins with a bounds test for an existing co-integrating equation between variables. If the F-statistic exceeds the 5% critical value for both the lower bound I(0) and the upper bound I(1), the null hypothesis is rejected, and vice versa, according to the bounds co-integration test.

Table 8

F-Bounds Test

F-Bounds Test		Null Hypothesis: No level relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
		Asymptotic: n=	1000	
F-statistic	3.757530	10%	2.72	3.77
k	3	5%	3.23	4.35
		1%	4.29	5.61
Actual Sample Size	58	Finite Sample:	n = 60	
		10%	2.838	3.923
		5%	3.415	4.615
		1%	4.748	6.188
		Finite Sample:	n = 55	
		10%	2.843	3.92
		5%	3.408	4.623
		1%	4.828	6.195

Based on the bounds co-integration tests in Table 8, there was no evidence of a long-term relationship between the variables. Therefore, the researcher moves on to the regression analysis to explore potential short-term relationships between the independent variables and stock market performance in Kenya.

4.1.5 Regression Analysis

The main goal of this study was to analyze how specific economic indicators influence Kenya’s stock market performance. From the pre-diagnostic tests, it’s clear that the explanatory variables (Human Development Index, Foreign Direct Investment, and interest rate) are statistically significant in explaining Kenya’s stock market performance.

Table 9

Regression Results

Dependent Variable: DLNNSE				
Method: Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLNHDI	-5.551741	0.821721	-6.756239	0.0000
LNFDI	0.107966	0.032724	3.299337	0.0017
LNINR	0.209873	0.132085	1.588922	0.0011
C	4.564220	0.562245	8.117853	0.0000
R-squared	0.613026	Mean dependent var		8.035826
Adjusted R-squared	0.592296	S.D. dependent var		0.381242
S.E. of regression	0.243430	Akaike info criterion		0.076364
Sum squared resid	3.318451	Schwarz criterion		0.215987
Log likelihood	1.709079	Hannan-Quinn criterion.		0.130978
F-statistic	29.57092	Durbin-Watson stat		1.768722
Prob(F-statistic)	0.000000			

Table 9 shows the regression results with a p-value of (0.0000), indicating that the objectives in the models are collectively significant in explaining changes in stock market performance in Kenya at a 5% significance level. The findings also suggest autocorrelation presence since the Durbin-Watson statistic (1.768722) falls within the recommended range of 1.5 to 2.5.

The estimated regression equation is given as



$$DLNNSE_t = 4.5642 - 5.5517 \cdot DLNHDI_t + 0.1080 \cdot LNFDI_t + 0.2099 \cdot LNINR_t$$

Where;

- DLNNSE first difference of the Nairobi Security Exchange
- DLNHDI is the first difference of the Human Development Index
- LNFDI natural log of Foreign Direct Investment
- LNINR natural log of Interest rate
- t= time

The findings show that HDI negatively affects short-term stock performance ($\beta = -5.5517, p < 0.01$). The long-term coefficient was not statistically significant. This indicates that human development boosts long-term economic fundamentals but may lead to short-term transitional shocks or uncertainty for investors. Possible reasons include changes in fiscal policies, labor market reforms, and capital movement toward social services during periods of rapid development.

4.2 Discussion

This study aimed to determine whether the Human Development Index influences stock market performance in Kenya. The regression analysis showed that HDI and stock performance in Kenya are negatively correlated and statistically significant in the short term. The coefficient for the first-differenced HDI (DLNHDI) is -5.5517, with a p-value of 0.0000, indicating significance beyond the 1% level. This suggests that sudden or rapid changes in human development are more often associated with short-term declines rather than increases in the Nairobi Securities Exchange (NSE) performance. While this may seem paradoxical, it highlights that abrupt socioeconomic shifts create uncertainties and structural challenges, which can discourage investor confidence in the stock market.

The results partly support the idea from Endogenous Growth Theory that converting human capital leads to long-term economic growth. However, the opposite assumptions of EMH suggest that markets generally should internalize development gains positively. From the perspective of emerging markets like Kenya, a delay in investor sentiment may happen because of structural inefficiencies or limited market literacy, causing sentiments to move opposite to development indicators.

Several empirical studies have highlighted the complex dynamics of these relationships. Drawing on existing literature, although many studies almost consistently leave out any form of transitional dynamics in the financial market, human capital development quite positively affects economic and financial performance over the long run (Romer, 1990; Levine, 2005). Many policy-oriented studies believe that excessive or severely uncoordinated human development will momentarily unsettle the functioning of financial markets if it is not properly matched with institutional and market reform processes (UNDP, 2024; World Bank, 2020). Empirical evidence from Kenya shows that the resolution of capital markets and the expansion of retail consumption rely heavily on inclusive development and deepening of finance (Ngugi et al. 2009). This underscores the importance of communicating that reforms are developmental and implementing them gradually to avoid the perception that a policy change has occurred. Policy-wise, sequencing reforms in education, health, and income assistance can help reduce or prevent shocks to financial markets. For the CMA and Treasury, combining financial literacy initiatives with HDI benchmarks could enhance developmental progress for sustainable growth in equity markets. This study extends regional evidence to show that human development indicators can affect short-term stock market performance, it argues that long-standing structural gains are made for sub-Saharan African economies (King & Levine, 1993; UNDP, 2024).

4.2.1 Results Post-Estimation Diagnostic Tests

Multicollinearity: The test of multicollinearity was done using the variance inflation factor (VIF). The standard VIF cut-off value which indicated that there was no serious multicollinearity found in regression models was below 10 (Gujarati & Porter, 2009; Wooldridge, 2013).

Table 10
Variance Inflation Factors

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
DLNHDI	0.675225	201.2921	1.173047

The findings above show that there is no significant multicollinearity among the independent variables, as no variable has a centered VIF exceeding 10. **Autocorrelation/Serial Correlation Test:** Autocorrelation describes a characteristic of time-series data where error terms are connected across different periods, leading to the error in one period being correlated with another (Gujarati & Porter, 2009). It is also possible that the error of one observation is related to that of a different observation. According to the linear regression error term, the errors were assumed to be



independent of time. The Breusch-Godfrey test was used to detect autocorrelation, which happens when lagged error terms influence current error values.

Table 11
Breusch-Godfrey Serial Correlation LM Test

Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	34.76257	Prob. F (2,54)	0.0989
Obs*R-squared	34.61110	Prob. Chi-Square (2)	0.0693

Table 11 displays the observed R-squared, which corresponds to a Chi-Square value of 0.0693, higher than 0.0500. This leads to accepting the null hypothesis that there is no serial correlation and rejecting the alternative hypothesis. Normality: The Jarque-Bera test evaluates whether the regression residuals follow a normal distribution. The null hypothesis states that the residuals are normally distributed ($p > 0.05$), while the alternative hypothesis suggests they are not ($p < 0.05$). The results of the Jarque-Bera normality test are shown in Figure 1.

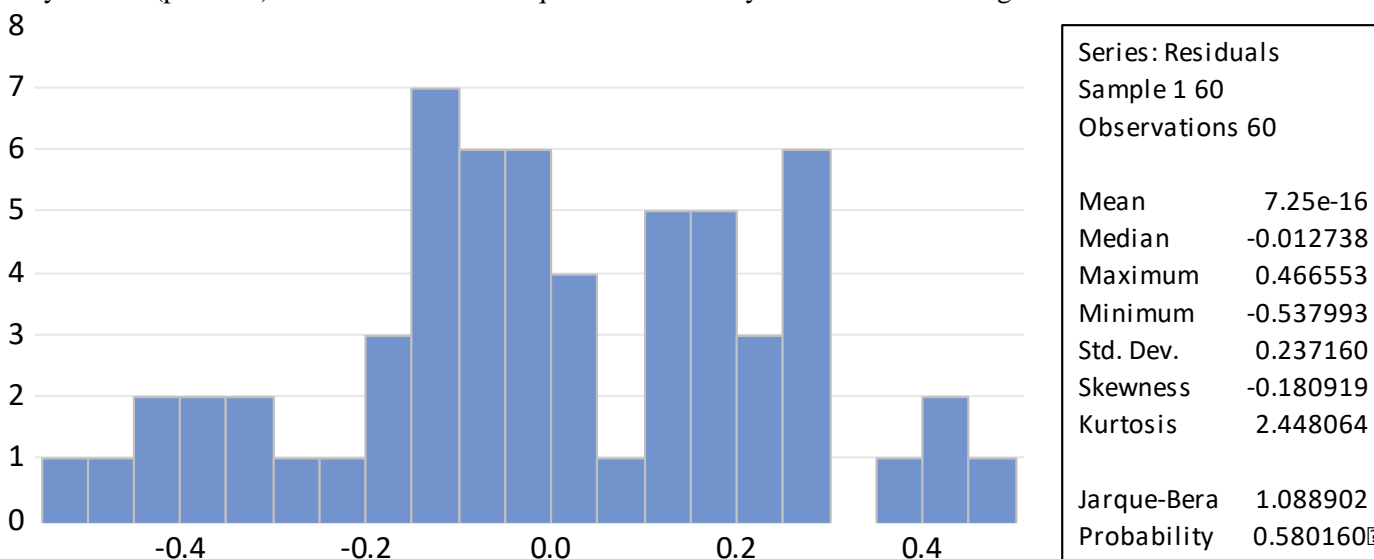


Figure 1
Jarque-Berra Test for Normality

As shown in Figure 1, the probability value from the Jarque-Bera test (0.580160) surpasses the significance level of 0.0500. Therefore, we reject the alternative hypothesis in favor of the null hypothesis based on the evidence from the above calculation; hence, the residuals are normally distributed. Heteroskedasticity: When the variance of the error term changes with different independent variables, it is known as heteroscedasticity. This variance depends on the size of the independent variables, so the error term may differ from one observation to another. Although this makes the OLS estimator inefficient, it does not affect its independence. This is because the OLS estimator has the smallest variance among all unbiased estimators in small samples but becomes asymptotically inefficient for larger samples. The Breusch-Pagan test was used to detect heteroscedasticity. The results are shown in the table.

Table 12
Breusch-Pagan-Godfrey Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
Null hypothesis: Homoskedasticity			
F-statistic	3.541427	Prob. F (3,56)	0.0802
Obs *R-squared	11.15375	Prob. Chi-Square (3)	0.0826
Scaled explained SS	6.920728	Prob. Chi-Square (3)	0.1099

From the above table, it can be concluded that the P chi-square (3) value is 0.0826, which exceeds 0.05. This provides enough evidence of the absence of heteroscedasticity; therefore, the null hypothesis was accepted. Model Stability by Use of the CUSUM Test: The cumulative sum (CUSUM) test was performed to evaluate the structural stability of the regression model over the sample period; the null hypothesis asserts that the parameters remain constant. These diagnostic checks whether the estimated coefficients are stable or have experienced structural shifts, which could



compromise the model's reliability and validity. In Figure 2, we see that all variables remain within the 5% significance level, including both the lower and upper boundaries, indicating that the regression model used in this analysis was properly fitted and deemed stable.

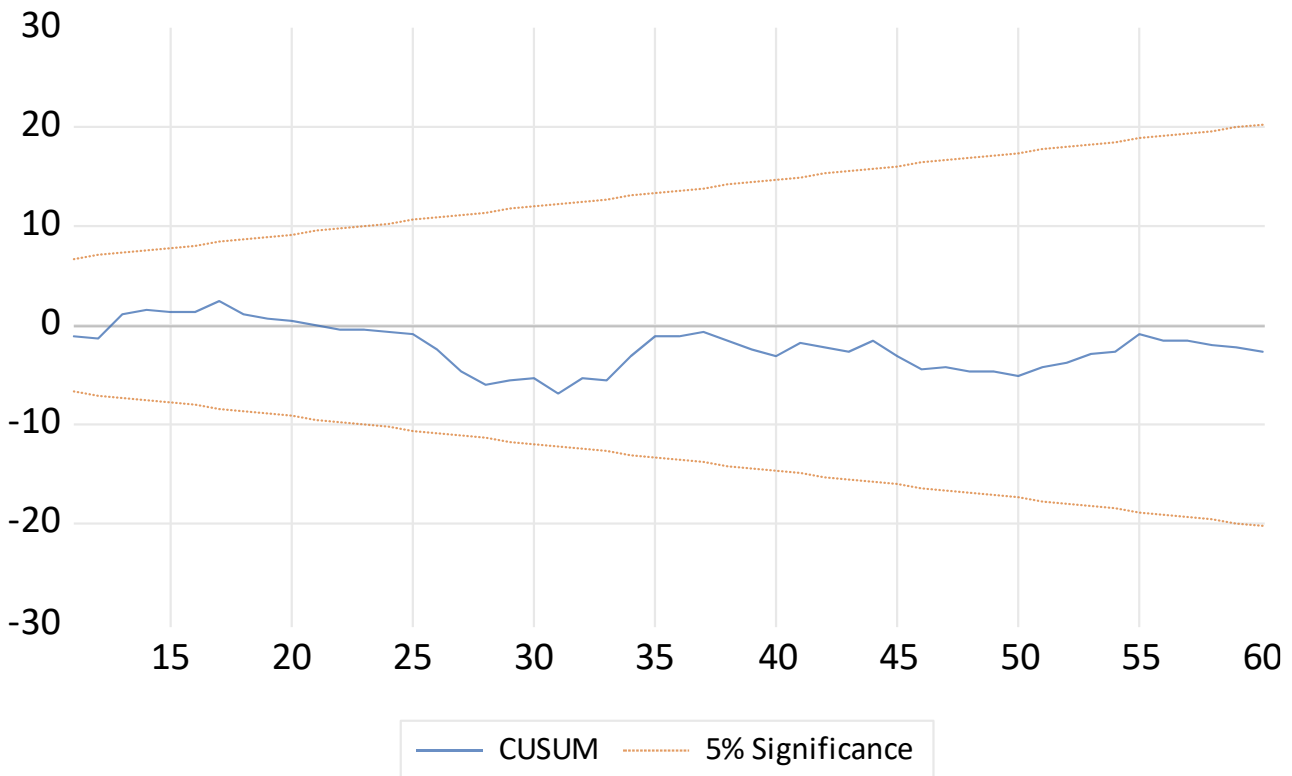


Figure 2
CUSUM Test Stability Output

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusion

Statistical evidence shows that improved human development, as measured by composite HDI scores, has a short-term negative and significant effect on stock PUR performance at the country level. The NSE seems responsive to these micro-level developmental changes, likely due to investor hesitations, capital redistribution, and policy uncertainties.

5.2 Recommendations

Economic policy reform and capital market stabilization should move forward together. The Capital Markets Authority (CMA) can enhance market literacy and provide incentives to encourage interest in long-term investments that align with national development goals. Future research on analyzing HDI components and understanding investor perception mechanisms will help create more effective strategies to strengthen capital market resilience.

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The authors declare no potential conflict of interest with respect to the research, authorship, and publication of this article.

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