Occupational safety and health practices, government policy and performance of small and medium-size enterprises in 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 & Nüñez, 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

$H0_1$: 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÷ (1+1118 (.05∗.05) = 294 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.

$H_0= \beta_1 j= \beta_2 j=----= \beta_{(k-j)\,j} = \beta$ J=1,2 ,,,,,,,,,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
X_1 = Employee Wellness an ordinal variable
X_2 = Work environment an ordinal variable
X_3 = 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 $\beta_k s$ are the coefficient of the k predictor variables in the estimated model and j=1,2,3……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

X_1 = Employee Wellness an ordinal variable

X_2 = Work environment an ordinal variable

X_3 = Ergonomics an ordinal variable

Additionally, let

Z= Government Policy as an ordinal moderating variable

Consider,

$$\text{Logit } P(Y \leq j / X_k) = \alpha_j - (\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 Z X_1 + \beta_5 Z X_2 + \beta_6 Z X_3$$

Where α_j represents the threshold values which values do not depend on the values of the predictor variables and $\beta_k s$ 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:

Ho_1: 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^2value

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 $\chi^2_{(1)} = 6.680, p = 0.010 < 05$) 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<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 Ho: 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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