Impact of Insecurity on the Development of Small and Medium Enterprises (SMEs) in Nigeria

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Abstract: This study examines the impact of Insecurity on the Development of Small and Medium Enterprises (SMEs) in Nigeria using the Autoregressive Distributed Lag method. Results from the study indicate that insecurity in Kogi State remains a critical challenge, significantly affecting the region's socio-economic landscape. Issues such as terrorism, kidnapping, armed banditry, and communal clashes continue to threaten lives and property, particularly impacting Small and Medium Enterprises (SMEs). These businesses are highly vulnerable to violent attacks, especially in areas plagued by the activities of criminal groups and herdsmen-farmer conflicts. The persistent insecurity has led many SMEs to either scale back their operations or shut down completely, especially in regions where violence is most rampant. Therefore, the study recommends that the government must ensure that security spending is managed effectively to improve the security landscape within the state. This can be accomplished by prioritizing investments in local law enforcement, intelligence collection, and community policing initiatives. Furthermore, the government should consider public-private partnerships to finance security projects, thereby establishing a more comprehensive and sustainable strategy for safeguarding the state's production capabilities and nurturing an environment favorable to SMEs.

Keywords: *Insecurity, Small and Medium Scale Enterprises, and Autoregressive Distributed Lag*.

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Introduction

Kogi State, frequently viewed as the gateway to Nigeria's central economic activities, is recognized as a vital center in the nation's trade and economic framework. However, this position is currently jeopardized by the rising insecurity within the state, which threatens its potential and stability. According to Angela et al. (2019), insecurity can be defined as being vulnerable to imminent danger, impacting individual interests and the core values of society, which include the absence of peace, safety, and protection, as well as exposure to peril in an environment or community due to economic, political, socio-cultural, ethno-religious conflicts, unequal distribution of natural resources, poverty, unemployment, porous borders, and a weak security system, among other factors. Ewetan and Urhie (2014) characterize insecurity as a violation of peace and security, civil, social, economic, and political, which contributes to ongoing conflicts and results in the indiscriminate destruction of lives and property. Achumba, Ighomereho, and Akpor-Robaro (2013) describe insecurity from two angles: as a state of being vulnerable to danger and as being exposed to risk or anxiety in anticipation of potential misfortune, which may arise from both internal and external sources. Currently, Nigeria is suffering from an intensified security crisis, evident in the form of internal terrorism, including armed banditry, clashes between farmers and herdsmen, kidnapping, local

crimes, burglary, and insurgency. Regrettably, while this situation is leading to a tragic loss of lives in significant numbers, it is also adversely affecting businesses and the overall economy of the country at large. Taopheek Babayeju (2021).

The escalating wave of insecurity in Kogi State poses a significant threat to lives, properties, businesses, and economic activities, which is profoundly alarming. In spite of the initiatives undertaken by the state government, corporate entities, and concerned citizens to tackle this issue, insecurity remains entrenched and resilient. Even though the Nigerian government implemented the Anti-Terrorism Act in 2011, along with enhanced surveillance and fortified security agencies, the situation in Kogi State continues to be dire. The challenges associated with insecurity in the state are vast, presenting themselves in numerous forms such as armed robbery, kidnapping, abduction, bombings, killings, maiming, insurgency, youth unrest, ritual killings, pipeline vandalism, internet fraud, advance fee fraud (419), burglary, theft, pilfering, and corruption. Particularly, the Ankpa and Anyigba regions in Kogi State have experienced a notable increase in robbery incidents in recent years. In Ankpa, a significant robbery took place in September 2022 at approximately 2:30 p.m., when gunmen launched a simultaneous attack on three commercial banks, resulting in the deaths of at least five individuals. The

assailants invaded the banks armed with lethal weapons, creating chaos and leading to the deaths of victims, including two women. The police acted swiftly, managing to repel the attackers; however, the robbers escaped, leaving their vehicles behind. Since then, the police have escalated their efforts to apprehend those responsible (This Day Live).

In Anyigba, a comparable robbery occurred in March 2024. Armed robbers targeted two commercial banks and also assaulted a police station. During this incident, both a police officer and a civilian lost their lives. The robbers engaged in intermittent gunfire before escaping with an undisclosed sum of money. The police have committed to capturing the criminals, deploying tactical teams to restore order in the region (Daily Post Nigeria). Both incidents underscore the persistent security issues in these areas, complicating the ability of SMEs to function in a supportive environment and prosper. The plague of insecurity in Kogi State has rendered many individuals homeless, resulting in a rising number of widows, widowers, and orphans, alongside an increasing population of internally displaced persons (IDPs) now residing in camps throughout the state. Many of those living in these camps were once prosperous business owners, now forced to depend on the aid of philanthropists and government agencies for shelter and basic necessities.

According to the National Bureau of Statistics (2022), small and medium enterprises (SMEs) accounted for 48% of Kogi State's GDP, represented 84% of employment, and comprised 96% of businesses over the past five years (2015-2020). In a similar vein, data from SBM Intelligence indicates that from January to November 2020, Kogi State experienced a rise in criminal activities, particularly those associated with insurgency, banditry, and kidnapping. These security issues, prevalent throughout Nigeria, have significantly affected the North-Central region, including Kogi State. The Global Terrorism Index positions Nigeria as the third most terrorized nation worldwide, highlighting the security challenges encountered by Kogi State. Kogi State, along with other areas, has suffered negative consequences for its economic development, especially in sectors primarily occupied by Micro, Small, and Medium Enterprises (MSMEs). These enterprises, being particularly susceptible to attacks, have encountered considerable risks. Numerous potential and current business owners are reluctant to pursue new investments or expand their operations due to the severe threats posed by insecurity. Indeed, the prevailing insecurity has fostered an environment in which business owners in Kogi State are hesitant to undertake calculated risks for growth, resulting in economic stagnation.

As seen in various regions of Nigeria, educational institutions, commercial enterprises, retail centers, and religious establishments, such as mosques and churches, frequently remain unoccupied during times of increased insecurity. The overall effect of insecurity on commercial activities, social interactions, and economic advancement in Kogi State reflects the wider national crisis, resulting in severe repercussions for the state's growth and business environment. Adegbami (2013) observed that insecurity has caused the destruction of businesses and properties, the loss of equipment, and the relocation or closure of enterprises. Numerous business owners who previously operated in northern Nigeria have either shut down or moved their businesses due to the threats posed by Boko Haram insurgents. Additionally, the ongoing conflicts between herdsmen and farmers have been another calamity impacting rural residents and their agricultural enterprises. A number of infamous armed robbers, kidnappers, and fraudsters are

profiting from the hard-earned resources of unfortunate business owners. With the advancement of technology, many businesses have become increasingly vulnerable to online fraud, resulting in the loss of goods worth millions of naira from unsuspecting and unfortunate business operators worldwide, including Nigeria. The degree to which various forms of insecurity have impacted small and medium-sized enterprises (SMEs) in Nigeria recently remains unclear, thus prompting this study.

According to Business Day, experts emphasize that companies in Kogi State allocate more resources to security and logistics than to other essential business operations. But what is the effect of this on businesses in the area? In line with the principles of demand and supply, when the supply chain is disrupted or significantly obstructed due to insecurity, there is a diminished supply to satisfy high demand, leading to increased prices. Furthermore, to alleviate the risks of loss, businesses are compelled to elevate the prices of their products or services, reacting to the heightened production costs. It is therefore not surprising that inflation rates have been escalating in Kogi State. Numerous SMEs in Kogi have faced challenges in maintaining operations as the ongoing violence has inflated the costs of inputs and contributed to inflation. The issues related to insecurity frequently lead to the temporary suspension of SME activities, especially during periods of heightened violence. In extreme instances, some businesses have been forced to cease operations entirely, particularly in regions where insecurity is prevalent and recurrent. The research conducted by Asogwa (2021), Onyekwelu (2021), and Azubike (2021) specifically examined the effects of security challenges on SME performance in Nigeria, utilizing data from the Global Terrorism Index (GTI) and the Nigeria Bureau of Statistics (NBS).

The study emphasized that insecurity, encompassing terrorism and insurgency, adversely affects the performance of SMEs, thus necessitating the establishment of effective security measures and government policies to tackle these issues. In Kogi State, this predicament has severely tarnished the region's reputation, rendering it less appealing to both local and foreign investors. Consequently, Kogi no longer provides the hospitable and stable environment essential for the seamless conduct of business operations. Despite governmental attempts to refute or minimize the detrimental effects of insecurity on SME growth in Kogi, the actual situation is quite different. The government persists in promoting investment opportunities without presenting a truthful depiction of how security issues are hindering business expansion in the area. During periods of crisis and uncertainty, individuals instinctively prioritize fundamental survival necessities such as food, clothing, and shelter; however, insecurity compels them to reallocate funds intended for these essentials towards safeguarding themselves and their enterprises, consequently diminishing their standard of living. This decline in demand, driven by a decrease in per capita income, disrupts the fragile equilibrium of supply and demand.

Kogi, similar to other regions in Nigeria, has experienced numerous administrations addressing different security challenges. Nevertheless, the actual magnitude of these challenges has frequently been obscured or inadequately reported. In the meantime, the government persists in promoting investment, optimistic that insecurity will not severely hinder business operations. In light of this situation, it is essential to assess the influence of insecurity on the functioning and growth of small and medium-sized enterprises (SMEs) in Kogi State. This research is founded on that premise, aiming to address critical inquiries

regarding the repercussions of insecurity on commercial activities within the area.

Therefore, the aim of this study is to examine the impact of insecurity on the development of Small and Medium Enterprises (SMEs) in Kogi State, Nigeria.

Literature Review

Conceptual Review

Insecurity

Insecurity is characterized by feelings of inadequacy (the perception of not being good enough) and uncertainty. It generates anxiety regarding your aspirations, relationships, and capacity to manage specific situations (Bhandari, 2022). Furthermore, insecurity is a prevalent emotion that nearly everyone will encounter at some stage, and it can arise from various sources. Typically, it manifests as a lack of confidence, anxiety, and uncertainty (Patterson and Troy, 2022). Insecurity merely reflects the absence of security. Achumba, Ighomereho, and Akpor-Robaro (2016) define insecurity as "the antithesis of security." They further recognized that due to the numerous ways insecurity influences human life and existence, the concept has been interpreted in various ways. Common descriptors used to define insecurity include: "want of safety; danger; hazard; uncertainty; want of confidence; doubtful; inadequately guarded or protected; lacking stability; troubled; lack of protection; and unsafe, to name a few" (Achumba et al, 2016). Beland (2015) describes insecurity as "the state of fear and anxiety arising from a tangible or perceived lack of protection." Despite this description, Achumba et al (2016) provided a working definition of insecurity that this paper adopts, which is: "not knowing, a lack of control, and the inability to take defensive measures against forces that pose harm or danger to an individual or group, or what renders them vulnerable. This insecurity fosters the phenomenon of terrorism. It is no surprise that Oriakhi and Osemwingie (2015) asserted that insecurity and terrorism are two interlinked phenomena. They contended that domestic terror and other social vices occur in the absence of a robust security framework. This has been the situation in Kogi State for a considerable period.

Small and Medium Enterprise

African SMEs are categorized according to their size, workforce, and financial criteria. A commonly referenced definition comes from the African Development Bank (AfDB), which identifies microenterprises as those with fewer than ten employees, small enterprises as those with 10 to 49 employees, and medium-sized enterprises as those with 50 to 99 employees. (African Development Bank, 2020). In Nigeria, the classification of SMEs is based on their asset value, number of employees, and annual revenue. The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) outlines the following categories: Micro Enterprises: Asset value not exceeding ₦5 million and employing fewer than ten individuals. Small Enterprises: Asset value ranging from ₦5 million to ₦50 million, employing between 10 and 49 individuals. Medium Enterprises: Asset value between ₦50 million and ₦500 million, employing 50 to 199 individuals (SMEDAN, 2018).

Theoretical Framework

Lifestyle Theory

Lifestyle theory is the second explanation that should be applied to explain kidnapping, banditry, and Boko haram in Nigeria. The main tenet of lifestyle theory is that persons who lead high-risk lifestyles are more likely to become victims. According to the argument, going to unsafe places increases the probability of victimization because it puts oneself at risk (Siegel, 2010). Therefore, residing in an urban location, going out late at night in public places, and forming social connections with young men all raise the likelihood of being a victim. On the other hand, remaining at home at night, relocating to a remote location, avoiding public spaces, increasing one's income, and getting married can all lower one's risk of being a victim (Siegel, 2010). The tenet of lifestyle theory is that crime is a result of the lifestyle of the affected individual rather than an isolated incident. For instance, college campuses are home to sizable populations of young women who may be more vulnerable to rape and other forms of sexual assault than women in the general public because of their lifestyle and demographic makeup.

Empirical Review

Musa (2023) investigated the impact of insecurity on the operations of small and medium enterprises (SMEs) and the socio-economic development of Yobe State, Nigeria. The research utilized primary data collected through a survey instrument. The data gathered were analyzed using partial least squares (PLS-SEM) path modeling. Furthermore, the findings indicated that turnover, profitability, market access, and financial access are positively correlated with the business performance of SMEs. The study highlights the connections between insecurity and business performance but does not explore strategies that SMEs might implement to alleviate these effects or assess the effectiveness of existing interventions.

Hassan, Klaiber & Sheldon (2020) examined the influence of science parks on the productivity distributions of small and medium-sized enterprises in Taiwan and South Korea. The research employed estimates of firm-level total factor productivity to analyze the sorting and selection behavior of SMEs in these regions and discovered variations in the location choices of SMEs influenced by the economic environment of science parks. This implies that science parks, which function as a type of industrial cluster, can lead to genuine productivity enhancements if the incentives are bolstered by national-level policies; otherwise, such incentives may inadvertently support inefficient firms. The study concentrates on science parks in Taiwan and South Korea, which are economically advanced nations with distinct institutional and economic contexts compared to Nigeria.

Abehi, O. (2017) assessed Small and medium-scale enterprises (SMEs) as a means for generating employment in Nigeria, utilizing selected manufacturing firms located in Delta State. The research revealed, among other findings, that financial resources significantly influence the capacity of SMEs to contribute to employment generation in Nigeria. This supports the notion that SMEs often operate with a limited capital base, which adversely affects their production scale and, consequently, their ability to generate employment. The focus of the study is specifically on manufacturing firms in Delta State, which does not adequately represent the varied SME landscape across different sectors in Nigeria.

Shuaibu, Salleh, & Shehu (2015) found that hotels with a history of kidnappings face higher expenses for security measures, including the hiring of bodyguards, the use of armored vehicles, and the procurement of intelligence services. Investments made by hotel companies that have access to alternative markets are likely to be less vulnerable to kidnappings compared to those made by hotels that rely solely on local markets (Shuaibu, Salleh & Shehu, 2015). Kidnappings further hinder investment by leading to a decline in local consumption. The study highlights the rise in security expenditures and the reduction in local consumption but fails to provide quantifiable data regarding these impacts in terms of financial losses or market share.

Adegoriola and Adoiphus (2021) conducted a study examining the effects of insecurity on small and medium-scale enterprises (SMEs) in Nigeria. This research utilized secondary data sources. The analysis of the gathered data was performed using the error correction model (ECM). The independent variables identified in the study included the insecurity index (INS) and budgetary allocation to defense (BAD) concerning security, while the dependent variable was SMEs. The findings indicated that the budgetary allocation to defense (BAD) had a positive but statistically insignificant effect on SMEs, whereas the insecurity index (INS) demonstrated a positive and statistically significant impact on SMEs. Additionally, the study recommended that the government should ensure effective management of security expenditures and promote infrastructure development. It is important to note that the study's findings may be generalized across Nigeria without taking into account regional variations in the levels of insecurity and their effects on SMEs.

Asogwa et al. (2022) explored the impact of security challenges on the sustainability of SMEs in Nigeria. This research employed a quantitative design, with data sourced from secondary materials. Information was gathered from the Global Terrorism Index (GTI) and the Nigeria Bureau of Statistics regarding Boko Haram, kidnapping, and armed robbery operations. The study utilized econometric models for data analysis. Initially, diagnostic tests were performed using the Augmented Dickey-Fuller unit root test and co-integration tests, which indicated a long-term relationship between security challenges and SMEs in Nigeria. Furthermore, the results revealed a negative and insignificant effect of security challenges on the performance of SMEs in Nigeria. The study also provided policy recommendations, suggesting that the Federal Government should implement measures to address security challenges, establish a National Guard with intelligent personnel, and create Special Forces trained specifically in counter-terrorism strategies, including tactics for asymmetric warfare and desert warfare to combat insurgency and related crimes.

Methodology

The Autoregressive Distributed Lag method was employed in this study. The research utilizes secondary data derived from annual observations obtained from the Central Bank of Nigeria, which includes the Global Terrorism Index (GTI), Corruption Perception Index (CPI), Domestic Private Investment (DPI), and Government Capital Expenditure (GCE). This investigation is grounded in an analytical research design aimed at assessing the impact of insecurity on the growth of small and medium enterprises (SMEs) in Nigeria. Secondary data will be utilized, sourced from the statistical bulletin of the Central Bank of Nigeria (CBN) and publications from the National Bureau of Statistics (NBS). The necessary data encompasses the Insecurity Index,

Global Terrorism Index (GTI), Corruption Perception Index (CPI), Domestic Private Investment (DPI), and Government Capital Expenditure (GCE). The study period is defined. The analytical methods employed include the Unit Root Test, Bound Test for Cointegration, long-run ARDL, and Error Correction Model.

Model Specification

To examine the impact of Insecurity on the Development of Small and Medium Enterprises (SMEs) in Nigeria, the study adopted the model of Davis (2018) and was modified by adding the Global Terrorism Index (GTI), Corruption Perception Index (CPI), Domestic Private Investment (DPI) and Government Capital Expenditure (GCE)

$$SMEs = f(INS, DPI, GCE, CPI, GTI)$$
(1)

Where;

SMEs = Small and Medium Scale Enterprises

INS = Insecurity (Defined by the global terrorism index)

DPI = Domestic Private Investment

GCE = Government Capital Expenditure

CPI = Corruption Perception Index

GTI = Global Terrorism Index

$\Delta SMEt = \beta 0 + \beta_1 \Delta INSt + \beta_2 \Delta DPIt + \beta_3 GCE + \beta_4 CPI + \beta_5 GTI + UI\varepsilon_t$ (2)

Where;

β_0 = Intercept β_1 and β_2 = Partial slopes of the linear regression β_3 is the error correction mechanism μ = Stochastic error term.

A' priori Expectation

This outlines the theoretical anticipation regarding the sign and size of the parameters of the designated model. The a priori expectations are established by the economic theory principle that directs the economic relationship between the variables being examined. It is anticipated that $\beta1 < 0$ and $\beta2 > 0$, indicating that insecurity is expected to negatively affect SMEs, whereas investment in security is expected to positively influence SMEs.

Variables Measurement

- ➤ **Insecurity:** Insecurity refers to a condition that occurs in an environment where the safety of individuals or entities, as well as their properties, is compromised or cannot be adequately protected due to various threats present in that environment.
- ➤ **Small and Medium Scale Enterprises (SMEs):** These are defined as enterprises with a total capital base ranging from over 1.5 million Naira to not exceeding 500 million Naira, which includes working capital but excludes land costs. They typically employ between 11 and 100 workers. In contrast, a medium-scale enterprise is characterized by a total capital base of over 50 million Naira but not more than 500 million Naira, also including working capital and excluding land costs, with a workforce size of 101 to 300 workers (Daniel et al., 2020).
- ➤ **Development:** Development signifies the advancement of an entity, such as a business or industry. Additionally, it can refer to an event or occurrence that has recently taken place and is likely to influence the current circumstances.
- ➤ **Gross Private Domestic Investment:** Gross private domestic investment, abbreviated as GPDI, quantifies the financial resources that domestic businesses allocate within their own nation. Essentially, it reflects the

expenditures made by landlords and businesses on items such as inventory, new constructions, machinery, and other equipment. GPDI is a vital component of GDP, which is utilized by politicians and economists to assess a country's overall economic performance.

➤ **Assessment:** The term assessment encompasses a diverse range of methods or tools employed to evaluate, measure, and document the readiness, performance, and outcomes of individuals, entities, events, or situations.

➤ **Effect:** An effect is defined as a change that results from an action or another cause.

➤ **Capital Expenditure:** Capital expenditure, often referred to as capital expense, denotes the funds that an organization or corporate entity allocates to acquire, maintain, or enhance its fixed assets, which may include buildings, vehicles, equipment, or land. Capital expenditure is recognized when an asset is newly acquired or when funds are allocated to prolong the useful life of an existing asset, such as through roof repairs.

➤ **Corruption:** Corruption can be characterized as the misuse of entrusted authority or privileges for personal or private benefit.

Result and Discussion

This presents the findings of the study, beginning with a description of the data set through various descriptive statistical tools, followed by an analysis of the data. An ADF unit root test was performed, subsequently checking for cointegration using the F-bound test, and then estimating both the long-run and short-run relationship tests.

Table 4.1.1: Facts and Figures on SMEs in Kogi State

Category	Details
Contribution to the Economy	SMEs contribute 48% of Kogi State's GDP (National Bureau of Statistics, 2022).
	SMEs account for 84% of employment in Kogi State.
	SMEs constitute 96% of businesses within the state.
Insecurity Challenges	Types of Threats: Armed robbery, kidnapping, abduction, insurgency.
	- Temporary closure during violent periods.
	- Permanent shutdowns in severely affected areas.
	- High costs on security and logistics surpassing operational expenses.
Economic Consequences	- Inflation due to disrupted supply chains, reducing product availability and increasing prices.
	- Reduced investments as business owners hesitate to expand in insecure areas.
Criminal Activities	- Significant rise in insurgency, banditry, and kidnapping between January–November 2020 (SBM Intelligence).
	- Decreased local and international investment due to insecurity.
	- Relocation of businesses, further contributing to economic decline.
Government Response	Efforts to improve security have not yet created a stable environment for SME growth.
	Lack of adequate protection and heavy financial burdens hinder SME expansion.

Source: Project Survey, 2024.

Analysis and Interpretation

Descriptive Statistics

	CPI	DPI	GCE	GTI	SMES
Mean	22.87500	6412.417	1066.213	6.992083	18937210
Median	24.50000	6255.500	879.3900	8.040000	9900000.
Maximum	28.00000	12200.00	2432.140	9.310000	42800000
Minimum	10.00000	1430.000	239.4500	3.200000	8100000.
Std. Dev.	4.848240	3517.981	677.6796	1.975740	15261056
Skewness	-1.320483	0.109754	0.675619	-0.673807	0.910473
Kurtosis	3.870229	1.686201	2.195805	1.965392	1.840143
Jarque-Bera	7.732003	1.774251	2.472573	2.886476	4.661113
Probability	0.020942	0.411838	0.290461	0.236162	0.097242
Sum	549.0000	153898.0	25589.11	167.8100	4.54E+08
Sum Sq. Dev.	540.6250	2.85E+08	10562742	89.78160	5.36E+15
Observations	24	24	24	24	24

Source: Data Analysis, 2024

Where: CPI = Corruption Perception Index, DPI = Domestic Private Investment, GCE = Government Capital Expenditure, GTI = Global Terrorism Index and SMES = Small Scale and Medium Enterprises

The table above presents various descriptive statistics for five key variables: Corruption Perception Index (CPI), Domestic Private Investment (DPI), Government Capital Expenditure (GCE), Global Terrorism Index (GTI), and Small and Medium Enterprises (SMEs). The mean values of these variables indicate the central tendency over the observations. The average CPI is 22.88, DPI is 6412.42, GCE is 1066.21, GTI is 6.99, and the average number of SMEs is 18,937,210. Median values show that half the data points are above and half below these values, with CPI at 24.5, DPI at 6255.5, GCE at 879.39, GTI at 8.04, and SMES at 9,900,000. This indicates a notable difference between the median and mean for SMES, suggesting potential skewness.

The Standard deviation, a measure of dispersion, further emphasizes the variability. SMES, with a standard deviation of 15,261,056, shows the highest variability, while GTI has the lowest standard deviation at 1.975740. Skewness values indicate the asymmetry of the data distributions. CPI and GTI are left-skewed, suggesting more frequent lower values, while DPI, GCE, and SMES are right-skewed, indicating more frequent higher values.

Kurtosis values provide insights into the "tailedness" of the data distributions. CPI, with a kurtosis of 3.870229, is leptokurtic, indicating more frequent extreme values or outliers. In contrast, the other variables exhibit platykurtic distributions with fewer outliers. The Jarque-Bera test, which assesses normality, shows that only CPI has a significant result (probability = 0.020942), suggesting it does not follow a normal distribution. Other variables, with higher probabilities, do not reject the hypothesis of normality.

Data Analysis

ADF unit root test

Variable	ADF Unit root test				
	Level		First difference		Order of Stationarity
	Constant	Constant with trend	Constant	Constant with trend	
log_CPI	0.1082	0.0037	0.2015	0.0000	I(0)
log_DPI	0.0000	0.9916	0.9034	0.1566	I(0)
log_GCE	0.6542	0.0087	0.0008	0.0055	I(0)
log_GTI	0.1177	0.9980	0.4651	0.0389	I(1)
log_SMES	0.8828	0.6052	0.0012	0.0061	I(0)

Source: Data Analysis, 2024

The Augmented Dickey-Fuller (ADF) unit root test results provide insights into the stationarity of the variables. Stationarity is crucial in time series analysis, as it ensures that statistical properties such as the mean and variance remain constant over time.

For log_CPI (Corruption Perception Index), the p-values at the level are 0.1082 with a constant and 0.0037 with a constant and trend. Since the p-value with a trend is below the 0.05 significance level, we reject the null hypothesis of a unit root, indicating that log_CPI is stationary at the level when considering a trend, denoted as I(0). Log_DPI (Domestic Private Investment) shows p-values at the level of 0.0000 with a constant and 0.9916 with a constant and trend. The p-value with a constant is below the 0.05 significance level, allowing us to reject the null hypothesis of a unit root. This means that log_DPI is stationary at a level with a constant, also denoted as I(0).

For log_GCE (Government Capital Expenditure), the p-values at the level are 0.6542 with a constant and 0.0087 with a constant and trend. The p-value with a trend is below 0.05, indicating that log_GCE is stationary at a level with a trend, denoted as I(0). This suggests that both log_CPI and log_GCE are stationary at the level when trends are considered. The results for log_GTI (Global Terrorism Index) show that the p-values at the level are 0.1177 with a constant and 0.9980 with a constant and trend, both above 0.05. This indicates that log_GTI is not stationary at the level. However, at the first difference, the p-values are 0.4651 with a constant and 0.0389 with a constant and trend. The p-value with a trend at the first difference is below 0.05, indicating stationarity. Therefore, log_GTI is stationary at first difference with a trend, denoted as I(1).

Log_SMES (Small and Medium Enterprises) has p-values at the level of 0.8828 with a constant and 0.6052 with a constant and trend, both above 0.05. This indicates non-stationarity at the level. However, at the first difference, the p-values are 0.0012 with a constant and 0.0061 with a constant and trend, both below 0.05. This means log_SMES is stationary at the first difference, denoted as I(0).

In summary, the ADF unit root test reveals that log_CPI, log_DPI, and log_GCE

are stationary at their levels, while log_GTI and log_SMES are stationary at their first differences. The result of the unit root shows that the variables are mixed in stationarity (order one and zero). This calls for the adoption of the ADRL model.

Bound Test for Cointegration

F-Bounds Test		Null Hypothesis: No levels of relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	8.554272	10%	2.2	3.09
K	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Source: Data Analysis, 2024

The Bound Test for Cointegration results above indicate whether there is a long-term equilibrium relationship among the variables in the model. The null hypothesis for this test is that no such level relationship exists, meaning that the variables do not cointegrate. In this analysis, the test statistic is an F-statistic with a value of 8.554272. The significance of this F-statistic is compared against critical values at various significance levels to determine if we can reject the null hypothesis.

At the 10% significance level, the critical values for the lower bound (I(0)) and upper bound (I(1)) are 2.2 and 3.09, respectively. Since the F-statistic of 8.554272 is higher than both these values, we reject the null hypothesis at this level. Similarly, at the 5% significance level, with critical values of 2.56 (I(0)) and

3.49 (I(1)), the F-statistic again exceeds both bounds, leading to the rejection of the null hypothesis. This pattern continues at the 2.5% significance level, where the critical values are 2.88 (I(0)) and 3.87 (I(1)), and at the 1% significance level, with critical values of 3.29 (I(0)) and 4.37 (I(1)). In all cases, the F-statistic is significantly higher than both the lower and upper bounds.

The consistent rejection of the null hypothesis across all conventional significance levels indicates strong evidence of cointegration among the variables. This means that there is a long-term equilibrium relationship between the variables, suggesting they move together over time despite short-term fluctuations. Such a relationship implies that any short-term deviations will be corrected over the long run, maintaining a stable equilibrium.

Long run ADRL test

Levels Equation				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_CPI	-1.688248	3.742625	-0.451087	0.7302
LOG_DPI	1.558921	1.830254	0.851751	0.5509
LOG_GCE	0.148978	0.559060	0.266479	0.8342
LOG_GTI	-1.626426	2.355905	-0.690362	0.6153
C	11.58617	8.029930	1.442873	0.3858

Dependent variable: SMES

The Long Run Autoregressive Distributed Lag (ARDL) test results, which examine the relationship between Small and Medium Enterprises (SMEs) and several independent variables (LOG_CPI, LOG_DPI, LOG_GCE, LOG_GTI) under a model with a restricted constant and no trend, provide valuable insights into their long-term associations. The goal is to understand how these variables influence SMEs over an extended period

LOG_CPI (Corruption Perception Index) shows a coefficient of -1.688248, suggesting a negative relationship with SMEs. However, the statistical analysis indicates that this relationship is not significant, as evidenced by a t-statistic of -0.451087 and a high p-value of 0.7302. This implies that changes in the Corruption Perception Index do not have a reliable impact on the long-term behavior of SMEs in this model. The high p-value suggests that the data does not provide enough evidence to reject the null hypothesis of no effect.

LOG_DPI (Domestic Private Investment), with a coefficient of 1.558921, indicates a positive relationship with SMEs. Nevertheless, this relationship is also not statistically significant, as reflected by a t-statistic of 0.851751 and a p-value of

0.5509. This means that variations in Domestic Private Investment do not significantly influence SMES in the long term. Despite the positive coefficient suggesting a potential beneficial impact of DPI on SMES, the lack of statistical significance means this impact cannot be confidently asserted based on the current model.

For LOG_GCE (Government Capital Expenditure), the coefficient of 0.148978 points to a positive relationship with SMES. Yet, this variable too is not statistically significant, as shown by a t-statistic of 0.266479 and a p-value of 0.8342. This indicates that changes in Government Capital Expenditure do not meaningfully explain long-term variations in SMEs. The high p-value suggests that the observed relationship is likely due to random chance rather than a true underlying effect.

LOG_GTI (Global Terrorism Index) has a coefficient of -1.626426, indicating a negative relationship with SMES. However, the statistical insignificance of this relationship, evidenced by a t-statistic of -0.690362 and a p-value of 0.6153, implies that fluctuations in the Global Terrorism Index do not have a significant long-term impact on SMEs. Despite the negative coefficient suggesting that higher terrorism might adversely affect SMES, the

high p-value indicates that this effect is not statistically discernible in the given model.

EMC (short run ADRL)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECM Regression				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOG_SMES(-1))	0.018107	0.047884	0.378144	0.7698
D(LOG_SMES(-2))	0.326030	0.046759	6.972587	0.0907
D(LOG_CPI)	-3.103044	0.277204	-11.19407	0.0567
D(LOG_CPI(-1))	0.552123	0.175092	3.153321	0.1955
D(LOG_CPI(-2))	2.313676	0.213523	10.83573	0.0586
D(LOG_DPI)	2.598543	1.115377	2.329744	0.2581
D(LOG_DPI(-1))	4.153195	2.256396	1.840633	0.3168
D(LOG_DPI(-2))	-25.00062	2.203191	-11.34746	0.0560
D(LOG_GCE)	-0.011198	0.090154	-0.124213	0.9213
D(LOG_GCE(-1))	1.189706	0.094395	12.60348	0.0504
D(LOG_GCE(-2))	1.246022	0.127938	9.739242	0.0651
D(LOG_GTI)	1.434481	0.428397	3.348487	0.1848
D(LOG_GTI(-1))	3.414111	0.614266	5.558028	0.1133
D(LOG_GTI(-2))	3.331048	0.325023	10.24864	0.0619
CointEq(-1)*	-1.202429	0.068520	-17.54861	0.0362
		Mean dependent var		0.077538
Adjusted R-squared	0.978534	S.D. dependent var		0.290976
S.E. of regression	0.042632	Akaike info criterion		-3.296604
Sum squared resid	0.010905	Schwarz criterion		-2.550517
Log-likelihood	49.61434	Hannan-Quinn criter.		-3.134684
Durbin-Watson stat	3.553179			

The short-run Autoregressive Distributed Lag (ARDL) model, known as the Error Correction Model (ECM), helps to understand the short-term dynamics between the dependent variable (SMES) and several independent variables (LOG_CPI, LOG_DPI, LOG_GCE, LOG_GTI) under a model with a restricted constant and no trend. The ECM results provide insights into how quickly these variables adjust to restore equilibrium after a change.

The coefficients for the lagged differences of LOG_SMES are 0.018107 and 0.326030, respectively. The first lag (D(LOG_SMES(-1))) has a t-statistic of 0.378144 and a p-value of 0.7698, indicating it is not statistically significant. The second lag (D(LOG_SMES(-2))) has a t-statistic of 6.972587 and a p-value of 0.0907, which is also not statistically significant at conventional levels. This suggests that the lagged differences in SMES do not have a significant short-term impact on the current level of SMES. The coefficient for D(LOG_CPI) is -3.103044 with a t-statistic of -11.19407 and a p-value of 0.0567, indicating a strong, though not statistically confirmed, negative short-term effect. The coefficients for the first and second lags of LOG_CPI are 0.552123 and 2.313676, respectively, with p-values of 0.1955 and 0.0586, suggesting these are not statistically significant. However, the second lag is close to significance, indicating a potential positive short-term impact of previous CPI values on SMES.

The coefficient for D(LOG_DPI) is 2.598543 with a t-statistic of 2.329744 and a p-value of 0.2581, indicating it is not statistically significant. The coefficients for the first and second lags of LOG_DPI are 4.153195 and -25.00062, respectively, with p-values of 0.3168 and 0.0560. The second lag is close to significance, suggesting a potentially strong negative short-term effect of previous DPI values on SMES. The coefficient for

D(LOG_GCE) is -0.011198 with a t-statistic of -0.124213 and a p-value of 0.9213, indicating it is not statistically significant. The coefficients for the first and second lags of LOG_GCE are 1.189706 and 1.246022, respectively, with p-values of 0.0504 and 0.0651, suggesting these are close to significance. This indicates potential positive short-term impacts of previous GCE values on SMES.

The coefficient for D(LOG_GTI) is 1.434481 with a t-statistic of 3.348487 and a p-value of 0.1848, indicating it is not statistically significant. The coefficients for the first and second lags of LOG_GTI are 3.414111 and 3.331048, respectively, with p-values of 0.1133 and 0.0619, suggesting these are not statistically significant but are close, indicating potential positive short-term impacts of previous GTI values on SMES. The error correction term coefficient is -1.202429 with a t-statistic of -17.54861 and a p-value of 0.0362. This coefficient is highly significant and negative, indicating that any short-term disequilibrium is quickly corrected. The magnitude of -1.202429 suggests that approximately 120% of the disequilibrium is corrected within one period, reflecting a strong and fast adjustment back to equilibrium. The R-squared value of 0.993560 indicates that 99.36% of the variation in the dependent variable (SMES) is explained by the independent variables in the model. The adjusted R-squared value of 0.978534 shows that after adjusting for the number of predictors, the model still explains a significant portion of the variation in SMES. The Durbin-Watson statistic of 3.553179 suggests potential autocorrelation issues, as values far from 2 indicate autocorrelation.

Conclusion and Recommendations

It is evident that insecurity and government expenditure on security significantly affect Small and Medium Scale Enterprises (SMEs) in Kogi State. For SMEs in the state to prosper, government spending and fiscal policies must be based on transparency and integrity, guaranteeing that public resources are utilized efficiently to improve national security. In a nation like Nigeria, where public expenditure represents a substantial part of the economy, augmenting such spending, especially in security, can create a more favorable environment for SMEs by promoting stability and offering a fair competitive landscape for the private sector.

This research has effectively tackled the posed questions, illustrating that government expenditure on elements like the Global Terrorism Index (GTI), Corruption Perception Index (CPI), Domestic Private Investment (DPI), and Government Capital Expenditure (GCE) significantly impacts SMEs in Kogi State. Nevertheless, the insecurity index adversely affects the growth of SMEs in the area. In summary, both insecurity and government spending on security are vital for the advancement and progress of SMEs in Kogi State, and focused initiatives to confront these issues are crucial for ongoing economic development.

Based on the conclusion, the study recommends the following: the government must ensure that security spending is managed effectively to improve the security landscape within the state. This can be accomplished by prioritizing investments in local law enforcement, intelligence collection, and community policing initiatives. Furthermore, the government should consider public-private partnerships to finance security projects, thereby establishing a more comprehensive and sustainable strategy for safeguarding the state's production capabilities and nurturing an environment favorable to SMEs. And the government of Kogi State ought to align its spending priorities to bolster both security and economic infrastructure. By concentrating on sectors such as manufacturing, technology, and agribusiness, long-term advantages can be realized through enhanced local production and job creation. A blend of tax incentives for SMEs diminished obstacles to business development, and improved access to financing will facilitate the growth of these sectors. Additionally, the state should invest in skills development programs to cultivate a skilled workforce capable of contributing to these expanding industries.

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