

## Insecurity, Economic Uncertainty and Performance of Micro, Small and Medium Enterprises (MSMEs) in North Central, Nigeria

<sup>1</sup>Ayeni O. A., <sup>2</sup>Eko O. Eko, <sup>3</sup>Abdulganiyu Salami, <sup>4</sup>Sylva Arop, & <sup>5</sup>Hope M. F.

<sup>1</sup>Department of Statistics, Federal University of Lafia

<sup>2&3</sup>Department of Economics, Federal University of Lafia

<sup>4</sup>Department of Sociology, Federal University of Lafia

<sup>5</sup>Department of Computer Science, Federal University of Lafia

### ABSTRACT

This study investigates the impact of insecurity and economic uncertainty on the performance of Micro, Small and Medium Enterprises (MSMEs) in North-Central Nigeria. Utilising survey data from 574 MSMEs in Benue, Plateau and Nasarawa states, the research employs a Structural Equation Modeling (SEM) technique. The findings reveal that the effects of insecurity are not uniform. Terrorism/insurgency and criminal insecurity exert a significant direct negative impact on MSME performance. Conversely, farmer-herder conflict influences performance indirectly by profoundly exacerbating economic uncertainty, which acts as a critical transmission channel. The study concludes that while direct security threats require robust law enforcement, the unique nature of farmer-herder conflict demands policy interventions focused on economic stabilization and predictability. This research provides a unique empirical analysis of the interconnectedness of these variables in the Nigerian context, offering insights for targeted policy formulation.

**Keywords:** Insecurity, Economic Uncertainty, MSMEs, a Structural Equation Modeling

JEL Codes: D74, E32 L26

### 1. Introduction

Micro, Small and Medium Enterprises (MSMEs) play a fundamental role in the structural transformation, as well as economic development of any nation, contributing about 65 per cent to job creation in developed countries and about 70 per cent in emerging countries, accounting for about 55 per cent and 60 per cent of output in advanced and developing countries, respectively (International Finance Corporation [IFC], 2017; World Bank, 2024). It also plays a critical role in the industrial development of a nation, especially through proliferation of cottage industries or agro-allied industries.

MSMEs played a critical role in the East Asian miracle as well as industrial revolution in Britain and thus remains a major growth catalyst in any economy (Tahir & Inuwa, 2019). In Nigeria, MSMEs constitute over 90 per cent of manufacturing companies and account for a significant portion of domestic and national productivity, earnings, output, exports and job creation (National Bureau of Statistics [NBS], 2021).

The performance of MSMEs has a link with the macroeconomic environment in an economy. This macroeconomic environment consists of a plethora of economic policies which affect decision making at the firm level, determines business risk, access to credit, cost of credit, distribution channels, cost of transactions, business expansion and growth. Besides, there are issues of exchange rate volatility and inflation which affect purchase of essential raw materials and machines with diverse implications on production, supply, as well as demand for goods and services. The totality of this economic malaise, which makes it difficult to predict economic outcomes, increases business risk and adverse selection is what constitutes economic uncertainty. The Nigerian business environment is characterized largely by uncertainties like shortage of foreign exchange, skyrocketing inflation and impulsive regulations that exert diverse impacts on businesses in the country.

Apart from the unfavourable macroeconomic environment, the effectiveness and efficiency of MSMEs is hindered by the alarming rate of insecurity in Nigeria. The problem of insecurity in Nigeria manifests in different dimensions like Boko Haram insurgency, terrorism, banditry, herdsmen crises and commercialisation of kidnapping for ransom. These incidences of insecurity affect the flow of businesses or investments in different parts of the country, leading to loss of income to individuals and businesses, loss of revenue to government and strangulation of entrepreneurial development. Several interventions by government have existed side by side with tensions and have failed to achieve peace on a sustainable basis. What remains, however, is to test how renewed security engagements in the region and economic policies promote inclusion or exclusion of MSMEs. Some of these interventions include introduction of microfinance banks and institutions in 2005 to increase access to micro credit and business support, Small and Medium Enterprise Credit Guarantee Scheme (SMECGS) which

provided N200 billion fund in 2010 to complement refinancing and restructuring of bank loans, CBN Creative Industry Fund Initiative (CIFI), amongst others.

Despite the laudable policies and programmes that have been in place by the government to enhance the development of MSMEs in the country, little success rate has been recorded. It is on this note that the current study attempts to critically examine the impact of insecurity and economic uncertainties on MSMEs performance in North Central, Nigeria. The rest of the study is divided into literature review, methodology, analysis of results, conclusion and recommendations.

## **2. Literature Review**

### **2.1 Conceptual Clarification**

The concept of insecurity refers to exposure to hidden and hurtful disruptions in daily activities, at home, office, or community. It is an act of being unsafe and insecure from danger and exposure to chronic threats such as hunger, disease and repression, lack of freedom and fulfillment (United Nations Development programme [UNDP], 1994). In this study, insecurity is considered as the presence of political, socioeconomic and environmental instability that affects human existence and business survival. In this study, the concept of insecurity is disaggregated into three components, namely, criminal insecurity, terrorism and insurgency and farmer–herders’ conflicts. Each of them is captured by a four-statement Linkert scale instrument that explains how the insecurity problems have affected the performance in the selected study centers. The respondents were asked to select appropriate responses that tallies with their opinion about the insecurity questions.

On the other hand, economic uncertainty refers to a situation in which the future economic environment is challenging to predict and there is a high degree of risk or unknowns in the economy (IMF 2023; Baker, Bloom & Davis, 2016). The impact of uncertainty on individuals’ behaviour and decision-making is not limited to people; it has the potential to affect the firm’s performance and, hence, profitability through firm decision-making mechanisms (Bloom, 2014). Given the unpredictability during the period of economic uncertainty, businessmen and women are hesitant to invest in new equipment, expand operations or employ more workers. In this study, the concept of economic

insecurity is also captured by a Linkert scale instrument that has questions about the effect of macroeconomic variables and policies, which are dynamic and uncertain, on the performance of MSMEs.

Lastly, Micro, Small and Medium Scale enterprises can be defined based on certain criteria including, turnover, number of employees, profit, capital employed, available finance, market share and relative size within the industry. In the current study and in line with National Council of Industry (2003), micro scale enterprises have 1 to 10 employees and less than one-million-naira, small-scale enterprises have 11 to 35 employees and running cost of one-to-forty-million-naira, medium scale enterprises have 36 to 100 employees with 40 to 200 million naira, while large scale enterprises have above 100 employees with over 200 million working capital. In this study, the performance of MSMEs is captured by a Linkert scale instrument that contains questions about different measures of performance of MSMEs. The Linkert scale instruments for the three concepts are presented in the appendix of the document.

## **2.2 Theoretical Framework**

The study adopted Economic Theory of Insecurity. The theory explores how individuals and societies experience anxiety and vulnerability due to unpredictable financial futures. It connects economic instability to a range of other factors, including the difficulty of coping with negative economic events, the impact on mental health and how it can hinder overall socio-economic development and political stability. The concept includes but is not limited to vulnerability to adverse events, psychological impact, socio-economic development and drivers of insecurity (Rohde & Tang 2018; Bossert & D'Ambrosio 2013). United Nations Development programme's (UNDP, 1994) introduces and defines the broader notion of human security. This is defined over seven areas: economic, food, health, environment, personal, community and political security. The document states that economic security requires an assured basic income for individuals, usually from productive and remunerative work or, as a last resort, from a publicly financed safety net. The consideration and conceptualisation of the concept of economic security constitutes strong evidence of the degree to which individuals and their governments value a sense of economic safety. The concept is related to this study because it explains the importance of insecurity and its effects on socioeconomic activities of individuals and political actors.

### 2.3 Empirical Review

The extant studies reviewed in this study are divided into two categories. The first is based on the relationship between insecurity and MSMEs performance, while the second is on the relationship between economic uncertainty and MSMEs performance. Available extant studies have found positive relationship between different dimensions of insecurity and MSMEs performance in some parts of Nigeria. While there is ravaging insecurity and poor MSMEs in the affected areas, only few empirical studies have been carried out in the study areas. Musa, Kaigama and Mohammed (2023) examined the degree to which insecurity adversely impacted Small and Medium Scale businesses in Yobe State. Results showed that profitability, turnover, access to finance and market access are positively related to performance of SMEs in the region.

Danjuma, Joseph, Mohammed and Emmanuel (2023) examined the effect of insecurity on small business performance in Nigeria. The study centered on insecurity incidents such as Boko Haram insurgency and armed banditry as it affects performance of SMEs in Nigeria. Adegioriola and Adolphus (2021) examined the impact of insecurity and government spending on small and medium scale enterprises in Nigeria, using Error Correction Model (ECM) as estimation technique. The study found that budgetary allocations to defense have positive impact on SMEs, with the impact being statistically insignificant. The Insecurity Index has a positive and statistically significant impact on SMEs. Jimoh, Dika, Yawai and Tunde (2021) examined how insecurity affected SMEs in Kaduna State. The results showed that the performance of SMEs is significantly impacted negatively by the resurgence of Boko haram, kidnapping and banditry. Oriazowanlan and Erah (2019) examined the effect of insecurity on MSMEs in Benin-City, Edo State Nigeria. The study found that the fear of being attacked by hoodlums and criminals exerts adverse effect on MSMEs. The study further submitted that insecurity could have adverse consequences on business by discouraging business operators from expanding their businesses or making new investments and scare away potential local and foreign investors.

Apart from insecurity, available studies show that economic uncertainty is also a significant determinant of MSMEs' performance globally. Elok-Heniwati and Yunita (2023) examined the relationship between firm performance and stock prices while incorporating the uncertainty due to the COVID-19 pandemic as a control variable, using the period before 2019, and during 2020 of the COVID-19 pandemic, with a sample consisting of all companies of LQ45 index members. Structural

modelling indicated that the profitability, solvency and activity ratios influenced the stock price of LQ45 companies both before and during the COVID-19 pandemic, except the liquidity ratios. Meanwhile, the uncertainty does not influence the stock price of LQ45 companies both before and during the COVID-19 pandemic.

Nestoroaska (2020) examined the effect of economic policy uncertainty on the performance of firms within Czech Republic. The GMM estimation technique indicated that unreliability has significant as well as negative effect on the performance of the company; the interest rate has significant along with positive impact on firm's performance. However, the inflation rate's impact is notable and rare only in the case of net profit margin. Phan, Iyke, Sharma and Affandi, (2020) examined the effect of economic policy uncertainty on the financial stability of 23 states where they concluded that this economic policy uncertainty factor has a gloomy and numerically effective impact on the monetary strength of a state. While the effect is majorly dependent on the predictability of monetary structure. Xu (2020) showed that in the behavioural asset pricing model, the high uncertainty directly generates speculative mispricing and amplifies the behavioural biases under the short-sales constraint. The study further found that such uncertainty enhanced the cost of capital of a firm that directly translates into the lower innovation.

This study is informative and innovative because it covers the major gaps of the previous scholars (like Musa, Kaigama and Mohammed, 2023; Danjuma, Joseph, Mohammed and Emmanuel, 2023; Lawal, Nura and Sadah, 2022; and Adegioriola and Adolphus, 2021) who have investigated the relationship between insecurity and MSMEs in Nigeria. The adoption of Structural Modelling technique and mediating effect of economic uncertainty in checking the relationship between insecurity and MSMEs performance North Central Region of Nigeria is being investigated for the first time. While studies like Elok-Heniwati and Yunita (2023), Nestoroaska (2020), Phan, Iyke, Sharma and Affandi, (2020) and Xu (2020) have examined the relationship between economic uncertainty and MSMEs in many parts of the world, this study will uniquely investigate the interconnectivity between insecurity, economic uncertainty and performance of MSMEs in Nigeria.

### 3. Methodology

#### 3.1 Nature of the Data

The study used survey data collected from three purposively selected states from North-Central Region of Nigeria. Compared to other states in the region, Benue, Nasarawa and Plateau states have a higher frequency of insecurity and are therefore selected for the study. The study adopted multistage sampling, which involves four stages, to collect data from MSMEs owners in the selected stages. The steps and process followed in collecting the data are shown in Figure 1.

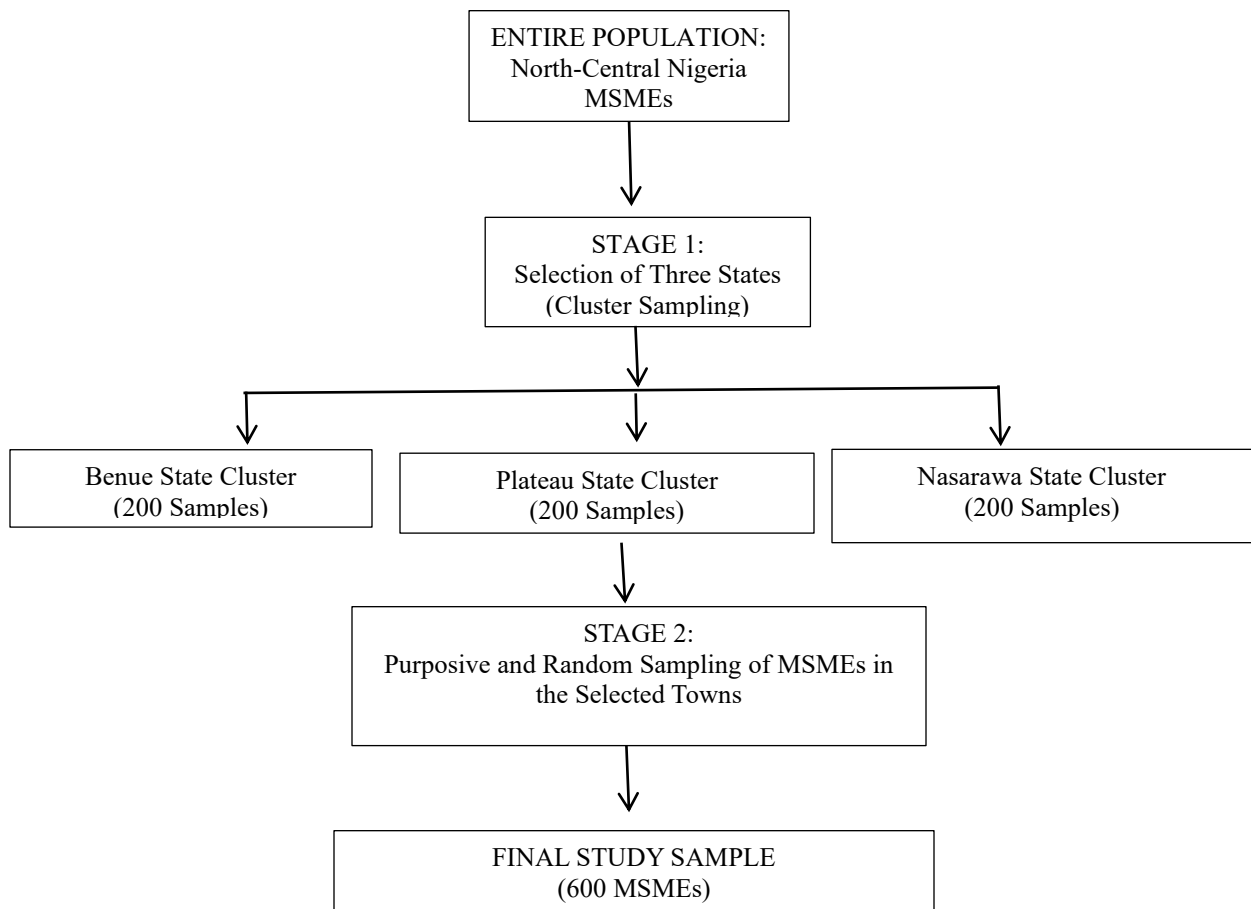


Figure 1: Multistage Sampling Framework for the Study

Source: Authors' Design

As shown in Figure 1, a total of 200 MSMEs owners were randomly selected from three towns from each of the selected states. The towns were selected to reflect the fair distribution of respondents that are needed for the study. In Benue State, Makurdi, Gboko and Otukpo were selected. In Plateau State, Jos, Pankshin and Shendam were selected. In Nasarawa State, Akwanga, Keffi and Lafia were selected. Finally, the Likert-scale questionnaires were administered to the MSMEs in the selected towns.

### 3.2 Model Specification

The study used Structural Equation Model (SEM) technique to investigate the effect of insecurity on the performance of MSMEs in North-Central Region of Nigeria and the mediating role of economic uncertainty in the relationship. In the study, Insecurity was decomposed into 3 components, namely: Criminal Insecurity, Terrorism and Insurgency and Farmer–Herders Conflicts. The baseline model, captured as Model1, for the relationship between insecurity and MSMEs performance is specified in equation 1.

$$MSMEP = f(CRIMIS, TERIN, FAHEC) \dots\dots\dots 1$$

Where MSMEP represents MSMEs’ performance, CRIMIS represents Criminal insecurity, TERIN represents Terrorism and Insurgency, FAHEC represents Farmer–Herders Conflicts. General to specific approach was used in determining the appropriate model for the study. Postestimation tests (Reliability, Validity and Model Fitness tests) were used to choose the appropriate items that are used in the final estimations. To investigate the mediating and passthrough effect of economic uncertainty in the relationship between insecurity and MEMEs performance, the new construct, Economic Uncertainty, was introduced into the model. The structural relationship among the variables is represented in the path diagram in Figure 2.

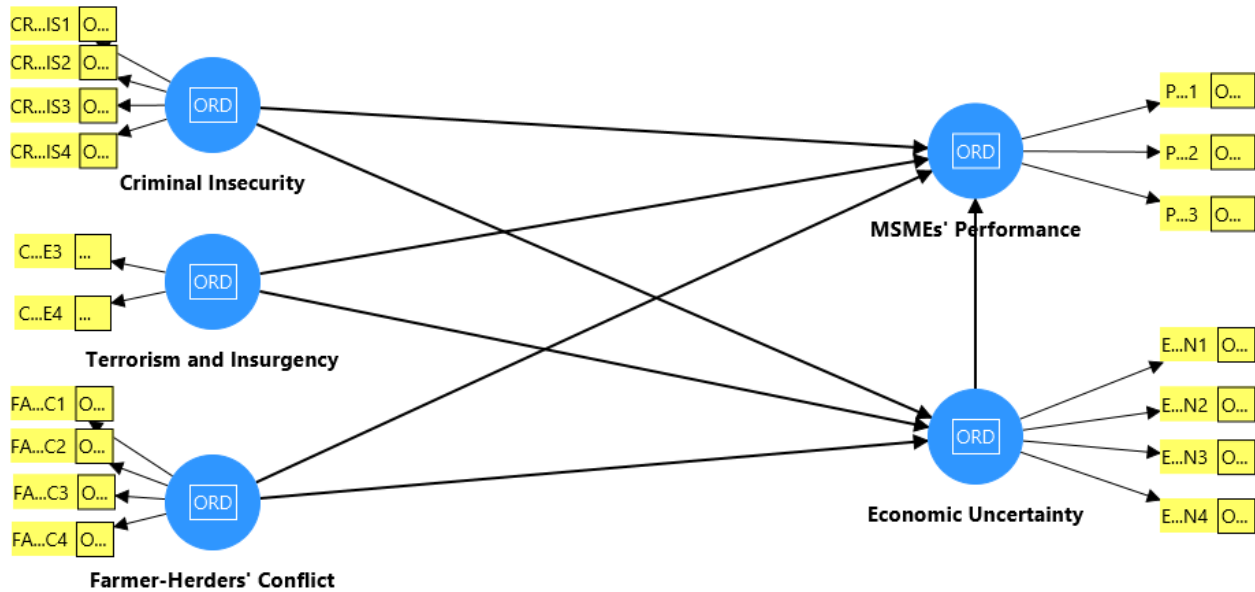


Figure 2: Path Diagram of Relationship among the Variables

From the path diagram in Figure 2, two possible relationships are possible. The first one is the total effect, captured as Model2 in the study. The total effect includes the effects of insecurity constructs on economic uncertainty and their moderated effects on the performance of the MSMEs. The second relationship is the indirect, mediating or passthrough effect of insecurity constructs on the performance of MSMEs, though Economic Uncertainty. This is captured as Model3 in the study. In summary, three major results are expected in the next section. The baseline model, captured as Model1, the total effect, captured as Model2 and the mediating or passthrough model, captured as Model3.

#### 4. Presentation and Analysis of Result

##### 4.1 Distribution and Retrieval of Questionnaires

Table 1 details the survey's execution and data collection efficiency. A total of 600 questionnaires were distributed across the three selected states (Benue, Plateau and Nasarawa), with 574 successfully returned. This yields a very high overall response rate of 96%. The high response rate reduces concerns about non-response bias, implying the data is representative of the targeted MSME population and can be generalised with a good degree of confidence in the high-insecurity states within the North Central

region of the country. This preliminary submission forms a robust foundation for subsequent statistical analyses.

**Table 1: Distribution and Retrieval of Questionnaires**

States	Selected Towns	Number of Questionnaires Distributed	Number of Questionnaires Returned	Number of Questionnaires Lost	Percentage Returned
Benue	Makurdi, Gboko and Otukpo	200	190	10	95
Plateau	Jos, Bukuru and Riyom	200	193	7	97
Nasarawa	Akwanga, Keffi and Lafia	200	191	9	96
Total		600	574	26	96

**Source: Field Survey, 2025**

#### 4.2 Demographic Characteristics of the Respondents

The demographic characteristics presented in Table 2 show that MSMEs are predominantly led by men (72%), indicating a significant gender gap in MSME ownership in the region. Majority of owners are in their prime working age (46-60 years, 61%), suggesting a cohort with significant experience but also potentially more risk-averse to expansion due to insecurity and uncertainty. The economy is largely service and retail-based (45% Services, 21% Retail), with a smaller but significant agricultural sector (11%). This distribution is crucial as different sectors are affected differently by insecurity (e.g., agriculture is directly hit by farmer-herder conflicts). The sample is overwhelmingly composed of Micro-enterprises (72%), with fewer Small (26%) and very few Medium (2%) enterprises. This aligns with the national narrative of MSMEs being predominantly micro in scale and highlights that the study's findings are most representative of the smallest business units. Besides, a significant majority (59%) have been in operation for over 6 years, suggesting that a sample of relatively established businesses, whose performance data is more meaningful for the study was used.

**Table 2: Demographic Characteristics of the Respondents**

	Frequency	Percentage (%)
<b>Gender</b>		
Male	414	72
Female	160	28
<b>Age</b>		
18 – 45 years	190	33
46 – 60 years	350	61
60 years and above	34	6
<b>Level of Education</b>		
No formal education	35	6
Primary Education	91	16
Secondary Education	156	27
Tertiary education	292	51
<b>Business Type</b>		
Agriculture	63	11
Retail Business	120	21
Services	256	45
Education	123	21
Others	12	2
<b>Business Size</b>		
Micro (1-9 employees)	414	72
Small (10-49 employees)	150	26
Medium (50-199 employees)	10	2
<b>Years of Operation</b>		
Less than 1 year	40	7
1–3 years	83	14
4–6 years	113	20
Above 6 years	338	59

**Source: Authors' Computation, 2025.**

#### 4.3 Structural Path Relationships among the Variables

The baseline model shows the direct impact of the three insecurity dimensions on MSME performance, without economic uncertainty. Terrorism-and-Insurgency has a strong, negative and statistically significant impact on MSME performance. This is the most potent insecurity variable in the model.

Criminal Insecurity has a moderate, negative effect that is statistically significant only at the 10% level ( $p < 0.10$ ). This means there is weak evidence of a direct negative relationship and it might be influenced by other factors. Farmer-Herders Conflict shows a positive relationship, which is counter-intuitive and only marginally significant ( $p = 0.090$ ). This surprising result warrants further investigation in the mediation model.

The total effect model introduced economic uncertainty to test both its direct effect and how it changes the relationships from the baseline model. The key insight from this model is the role of Farmer-Herders Conflict. It does not directly affect MSME performance, but it does so indirectly by massively increasing Economic Uncertainty. The initial positive sign in the baseline model was likely a spurious correlation that is clarified once the mediating pathway through ECUN is accounted for. Economic Uncertainty itself does not directly impact performance, acting more as a conduit for the effects of other variables, specifically FAHEC.

The indirect/mediation effect is presented in model 3. This model formally tests the mediation hypothesis, specifically, whether the insecurity variables affect MSME performance through economic uncertainty. For all three insecurity types, the specific indirect pathways through economic uncertainty are statistically insignificant. This means that while the models show that FAHEC influences ECUN, this translated influence (the "pass-through" effect) on MSME performance is not strong enough to be considered a definitive mediating mechanism in this statistical model. The most compelling story is for Farmer-Herders Conflict; while the formal mediation test is insignificant, the dramatic shift in FAHEC's coefficient from Model 1 to Model 2, coupled with its massive impact on ECUN, strongly suggests that Economic Uncertainty acts as a key explanatory channel for how FAHEC affects the business environment, even if the final link to measured performance is not perfectly captured in the mediation test.

**Table 3: Structural Path Relationship among Variables**

Baseline Model Model1		Total Effect Model Model2		Indirect Effect (Mediation Effect) Model3	
Variables	Coefficients	Variables	Coefficients	Variables	Coefficients
CRIMIS -> MSMEP	-0.123* (0.079)	CRIMIS-> ECUN	-0.070** <b>(0.007)</b>	CRIMIS-> ECUN-> MSMEP	-0.002 (0.759)
FAHEC -> MSMEP	0.182* (0.090)	CRIMIS ->4.4 MSMEP	-0.097** <b>(0.028)</b>	FAHEC -> ECUN-> MSMEP	0.027 (0.743)
TERIN -> MSMEP	-0.344** (0.003)	ECUN -> MSMEP	0.034 <b>(0.740)</b>	TERIN -> ECUN-> MSMEP	0.002 (0.848)
		FAHEC -> ECUN	0.812*** <b>(0.000)</b>		
		FAHEC -> MSMEP	0.195 <b>(0.120)</b>		
		TERIN -> ECUN	0.052 <b>(0.473)</b>		
		TERIN -> MSMEP	-0.377*** <b>(0.000)</b>		

Source: Authors' Computation (2025)

#### 4.4 Postestimations

##### 4.4.1 Reliability and Validity Tests

As shown in Table 4, the constructs in the models have reliability values well above the 0.70 threshold. This indicates excellent internal consistency. The questions designed to measure each concept are reliably and adequately internally consistent. With regards to validity test (Average Variance Extracted - AVE), all AVE values are above the 0.50 benchmark, indicating that each construct explains more than half of the variance in its indicators. This confirms convergent validity, meaning the items effectively capture their intended constructs and not something else. It can be confirmed that the measurement model is highly robust and trustworthy. The findings related to these constructs are based on solid and reliable measurements.

**Table 4: Reliability and Validity Tests of the Models**

	Cronbach's alpha		Composite reliability (rho_a)		Composite reliability (rho_c)		Average variance extracted (AVE)	
	MODE1	MODEL2	MODE1	MODEL2	MODE1	MODEL2	MODE1	MODEL2
<b>CRIMIS</b>	0.811	0.811	0.804	0.819	0.853	0.874	0.595	0.635
<b>FAHEC</b>	0.935	0.935	0.976	0.935	0.951	0.954	0.829	0.838
<b>MSMEP</b>	0.758	0.758	0.871	0.932	0.856	0.854	0.667	0.663
<b>TERIN</b>	0.951	0.951	0.954	0.951	0.976	0.976	0.954	0.954
<b>ECUN</b>	-	0.915	-	0.915	-	0.940	-	0.797

**Source: Authors' Computation (2025)**

#### 4.4.2 Model Fitness Tests

As shown in Table 5, both the Saturated and Estimated models for Model1 and Model2 have SRMR values below 0.08 (0.063 and 0.057) as presented in Table 5, which is the standard cutoff for a good fit. This indicates a low discrepancy between the model's predictions and the observed data. The NFI values (0.859 and 0.845) are above 0.80 but below the ideal 0.90. This suggests an acceptable model fitness for the two models. The models are reasonable representation of reality. Therefore, the models have an acceptable fit with the data, meaning the structural relationships depicted in the path diagrams are plausible and supported by empirical evidence. The low SRMR values in the models are a particularly strong positive indicator of robustness of the models.

**Table 5: Model Fitness Tests**

	Model1		Model2	
	Saturated Model	Estimated Model	Saturated Model	Estimated Model
SRMR	0.063	0.063	0.057	0.057
d_ ULS	0.362	0.362	0.503	0.503

d_G	0.228	0.228	0.401	0.401
Chi-square	818.431	818.431	1337.357	1337.357
NFI	0.859	0.859	0.845	0.845

**Source: Authors' Computations (2025)**

#### 4.5. Implications of Findings

The findings of this study carry significant implications for both theory and policy, while also creating a dialogue with the existing body of literature. The results confirm that the relationship between insecurity and MSME performance is not monolithic but varies dramatically by the type of insecurity. A clear area of disagreement with several previous studies emerges. While Musa et al. (2023) and Lawal et al. (2022) found a positive relationship between dimensions of insecurity and SME performance in Yobe and Gombe states, this study establishes a strong, direct negative impact, particularly from Terrorism and Insurgency ( $-0.344, p=0.003$ ) and Criminal Insecurity. This divergence can likely be attributed to contextual and methodological differences. The North-Central region, plagued by multifaceted conflicts, may experience a more debilitating form of insecurity that directly cripples business operations, unlike contexts where businesses might adapt to a persistent, "normalized" level of threat. Furthermore, the use of SEM and distinct constructs for insecurity types allows for a more robust analysis than composite indices might permit.

Conversely, the findings agree with the work of Jimoh et al. (2021) in Kaduna State and Oriazowanlan and Erah (2019) in Benin-City, which reported adverse effects from kidnapping, banditry and general crime. This strengthens the evidence base that rampant criminality and terrorism are unequivocally detrimental to business survival and growth, likely by disrupting supply chains, increasing security costs and deterring customers.

The most critical contribution of this study lies in its introduction and testing of Economic Uncertainty as a mediating variable, a first in the Nigerian context. The finding that Farmer-Herders Conflict (FAHEC) exerts its primary influence by massively fueling economic uncertainty ( $0.812, p=0.000$ ) is groundbreaking. It provides an empirical mechanism for a phenomenon often described anecdotally: this specific conflict does not just destroy farms; it destroys predictability. It disrupts agricultural supply chains, fuels food price volatility and creates a climate of fear that paralyzes

investment decisions. This finding powerfully resonates with the theoretical framework of Knight (1921) and Bernanke (1983), demonstrating that uncertainty creates an "option value for waiting," stalling the expansion and investment plans of MSMEs.

This also explains a potential point of contention with international studies on economic uncertainty. While scholars like Nestoroaska (2020) found a direct negative effect of policy uncertainty on firm performance in the Czech Republic, the current study found its direct effect on MSME performance to be insignificant. The reason is contextual: in a conflict zone, economic uncertainty may not be the final direct shock but rather a transmission channel that amplifies the primary shock of violent conflict, particularly FAHEC. The primary shock for Nigerian MSMEs is the physical threat, with economic uncertainty acting as a debilitating secondary effect.

## **5. Conclusion and Policy Recommendations**

This study conclusively demonstrates that insecurity significantly impedes MSME performance in North-Central Nigeria, but through distinct pathways. Terrorism and criminal insecurity exert a direct, debilitating effect on business operations. In contrast, farmer-herder conflict undermines performance indirectly by creating a pervasive climate of economic uncertainty, which paralyzes investment and planning. This nuanced finding challenges homogenized views of insecurity and underscores the critical role of unpredictability, as theorized by Knight. Based on the empirical findings of this study, the following targeted policy actions are recommended:

- i. The government through its security agencies should deploy robust and coordinated security operations to directly combat terrorism, insurgency and widespread criminality (e.g., banditry, kidnapping). This is paramount to creating a safe environment for MSMEs to operate without immediate physical threats.
- ii. There is a need to design and implement economic intervention programmes specifically for regions affected by farmer-herder conflicts. These should focus on reducing uncertainty by providing predictable access to inputs, credit and market information to mitigate the climate of economic unpredictability.

- iii. Establish reliable systems to provide MSMEs with timely information on security threats and market volatility. Enhanced predictability can help business owners make informed decisions, reducing the "option value of waiting" to invest or expand.
- iv. Prioritize and fund community-based peacebuilding and mediation efforts to address the root causes of farmer-herder conflicts. Sustainable peace is the most effective long-term strategy for reducing the economic uncertainty that stems from this specific conflict.

### Acknowledgement

The authors of this 2025 Institution-Based Research (IBR) hereby thank Tertiary Education Trust Fund (TETFUND) in conjunction with the management of Federal University of Lafia for sponsoring the entire research work from the beginning to the end. We are truly grateful.

### REFERENCES

- Adegoriola, A. E., & Adolphus, A. J. (2021). Impact of insecurity on small and medium scale enterprises in Nigeria. In *Proceedings of 3rd Annual National Conference, Federal University Lafia, Nasarawa State, Nigeria 26th–28th October*.
- Baker, S. R., Bloom, N., & Davis, S. J. (2016). Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, 131(4), 1593–1636. <https://doi.org/10.1093/qje/qjw024>.
- Bernanke, B. S. (1983). Irreversibility, uncertainty and cyclical investment. *The Quarterly Journal of Economics*, 98(1), 85-106.
- Bossert, W. & D'Ambrosio, C. (2013). Measuring economic insecurity. *International Economic Review*;54(3):1017–1030.
- Bloom, N. (2014). Fluctuations in uncertainty. *Journal of Economic Perspectives*, 28(2), 153–176. <https://doi.org/10.1257/jep.28.2.153>.
- Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications and programming* (3rd ed.). Routledge.
- Elok-Heniwati, N. & Yunita, K. (2023). Does uncertainty affect firm performance? Evidence from Indonesia. *Jurnal Ekonomi Bisnis dan Kewirausahaan*, 12(3), 342-357.

- ESCAP (2024). MSME development and the Sustainable Development Goals. Available at: <https://msmepolicy.unescap.org/msme-development-and-sustainable-development-goals>.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- International Finance Corporation. (2017). *MSME Country Indicators 2017*. World Bank Group. <https://www.smefinanceforum.org/sites/default/files/analysis%20note.pdf>
- International Monetary Fund. (2023). *World Economic Outlook: Navigating Global Divergences*. International Monetary Fund. <https://www.imf.org/en/Publications/WEO/Issues/2023/10/10/world-economic-outlook-october-2023>
- Musa, D. I., Kaigama, Y. M. & Mohammed, S. (2023). Effect of insecurity on small and medium enterprises and socio-economic development of Yobe State, Nigeria. *Fane-Fane Int'l Multidisciplinary Journal*, 7(2), 503-510.
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.
- National Bureau of Statistics & Small and Medium Enterprises Development Agency of Nigeria. (2021). *2021 National survey of micro, small and medium enterprises (MSMEs)*. <https://smedan.gov.ng/wp-content/uploads/2022/07/2021-MSME-Survey-Report.pdf>
- Nestoroska, I. (2020). Policy Uncertainty and Firm Performance in the Czech Republic. *Journal of Accounting, Business and Finance Research*, 10(1), 10 – 16.
- Oriazowanlan, A. O. & Erah, D. O. (2019). Effect of insecurity on micro, small and medium enterprises development in Benin-City, Edo State. *International journal of Business Management*, 4(3), 75-86.
- Jimoh, B. A., Dika, M. A., Yawai, G., & Tunde, S. L. (2023). Effect of insecurity on small medium enterprises performance in Kaduna State. *Journal of Management & Organization*, 4(2), 1-16.
- Rohde, N. & Tang, K. (2018). Economic insecurity: theoretical approaches. Retrieved from <https://research-repository.griffith.edu.au/items/9846619f-f237-43ca-b451-87c2c1c457d0>.

Tahir, F. A., & Inuwa, F. U. (2019). Empirical investigation of the factors affecting micro, small and medium scale enterprises performance in Borno State, Nigeria. *International Business Research*, 12(4), 30-39.

United Nations Development programme. (2021). *Assessing the impact of conflict on development in North-East Nigeria*. <https://www.undp.org/nigeria/publications/assessing-impact-conflict-development-north-east-nigeria>.

United Nations Development programme. (1994). *Human development report 1994: New dimensions of human security*. Oxford University Press. <http://hdr.undp.org/en/content/human-development-report-1994>.

World Bank. (2024). *Small and Medium Enterprises (SMEs) Finance*. Retrieved June 25, 2024, from <https://www.worldbank.org/en/topic/smefinance>.

World Bank. (2023). *A better future for all Nigerians: Nigeria poverty assessment 2022*. World Bank Group. <https://openknowledge.worldbank.org/entities/publication/49c9c9cb-6c2a-5c87-ba33-0c5fa4b0a995>.

## APPENDICES

### APPENDIX A: Structural Path Relationships among the Variables

**Table 1: Baseline Model of the Relationship**

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
Criminal Insecurity -> MSMEs' Performance	-0.123	-0.123	0.070	1.755	0.079
Farmer-Herders' Conflict -> MSMEs' Performance	0.182	0.135	0.107	1.694	0.090
Terrorism and Insurgency -> MSMEs' Performance	-0.344	-0.300	0.115	2.992	0.003

**Table 2: Total Effect Among the Variables in the Model**

	<b>Original sample (O)</b>	<b>Sample mean (M)</b>	<b>Standard deviation (STDEV)</b>	<b>T statistics ( O/STDEV )</b>	<b>P values</b>
Criminal Insecurity -> Economic Uncertainty	-0.070	-0.071	0.026	2.679	0.007
Criminal Insecurity -> MSMEs' Performance	-0.100	-0.102	0.045	2.235	0.025
Economic Uncertainty -> MSMEs' Performance	0.034	0.032	0.102	0.332	0.740
Farmer-Herders' Conflict -> Economic Uncertainty	0.812	0.816	0.068	12.015	0.000
Farmer-Herders' Conflict -> MSMEs' Performance	0.223	0.227	0.083	2.687	0.007
Terrorism and Insurgency -> Economic Uncertainty	0.052	0.048	0.073	0.718	0.473
Terrorism and Insurgency -> MSMEs' Performance	-0.375	-0.382	0.083	4.529	0.000

**Table 3: Specific indirect Effects**

	<b>Original sample (O)</b>	<b>Sample mean (M)</b>	<b>Standard deviation (STDEV)</b>	<b>T statistics ( O/STDEV )</b>	<b>P values</b>
Criminal Insecurity -> Economic Uncertainty -> MSMEs' Performance	-0.002	-0.002	0.008	0.307	0.759
Farmer-Herders' Conflict -> Economic Uncertainty -> MSMEs' Performance	0.027	0.026	0.084	0.328	0.743
Terrorism and Insurgency -> Economic Uncertainty -> MSMEs' Performance	0.002	0.002	0.009	0.192	0.848

## APPENDIX B: RELIABILITY AND VALIDITY TESTS

**Table 4: Reliability and Validity Tests for Baseline Model (Model1)**

	<b>Cronbach's alpha</b>	<b>Composite reliability (rho_a)</b>	<b>Composite reliability (rho_c)</b>	<b>Average variance extracted (AVE)</b>

Criminal Insecurity	0.811	0.804	0.853	0.595
Farmer-Herders' Conflict	0.935	0.976	0.951	0.829
MSMEs' Performance	0.758	0.871	0.856	0.667
Terrorism and Insurgency	0.951	0.954	0.976	0.954

**Table 5: Reliability and Validity Tests of the Mediation Model (Model2 and Model3)**

	<b>Cronbach's Alpha</b>	<b>Composite Reliability (rho_a)</b>	<b>Composite Reliability (rho_c)</b>	<b>Average Variance Extracted (AVE)</b>
Criminal Insecurity	0.811	0.819	0.874	0.635
Economic Uncertainty	0.915	0.915	0.940	0.797
Farmer-Herders' Conflict	0.935	0.935	0.954	0.838
MSMEs' Performance	0.758	0.932	0.854	0.663
Terrorism and Insurgency	0.951	0.951	0.976	0.954

### APPENDIX C: LINKERT SCALE INSTRUMENTS FOR THE VARIABLES

#### 1.Performances of the MSMEs

Questions	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
My business revenue has increased steadily in the past three years.					
My business makes a satisfactory level of profit annually					
The cost of operations is effectively managed.					
My business has good access to finance or credit facilities.					
Cash flow management in my business is efficient					

## 2. Criminal Insecurity

Questions	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Cases of armed robbery are common in my community					
Kidnapping for ransom has increased in recent years					
Banditry and violent attacks have affected safety in my area.					
Cultism and gang activities contribute to insecurity locally					

## 3. Farmer–Herders Conflicts

Questions	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Clashes between farmers and herders are common in my region.					
Farmers-herders conflicts lead to loss of farmland, properties and livestock.					
Farmer–herder violence affects food supply and rural livelihoods.					
Government policies to resolve such conflicts are ineffective.					

## 4. Terrorism and Insurgency

Questions	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Insurgency has led to the loss of lives and displacement of people.					
Terrorist activities have disrupted business and economic activities.					
Insecurity hinders survival of business activities					

Government efforts to combat terrorism have been inadequate.					
--	--	--	--	--	--

### 5. Economic Uncertainty

Questions	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
The business environment is unfavourable for long-term investment					
Economic instability reduces investor confidence in small businesses					
Inflation and exchange rate fluctuations discourage new investments.					
Investors are unwilling to support MSMEs due to market uncertainty.					