INSECURITY –ECONOMIC GROWTH AND DEVELOPMENT NEXUS; THE MODERATING ROLE OF GOVERNMENT EXPENDITURE ON SECURITY IN NIGERIA

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ABSTRACT

This study uses quarterly data from 1985Q1 to 2024Q4 to investigate the dynamic relationship between insecurity and economic growth in Nigeria within an ARDL-ECM framework, real GDP was estimated as a function of military expenditure (LMEP), terrorism risk index (LTRI), political stability (LPS), and unemployment (LUEM). Unit-root tests reveal a mix of I(0) and I(1) series, supporting ARDL bounds testing; the bound test provides evidence of co integration. Short-run estimates suggest that increases in military spending and terrorism risk have a negative impact on GDP. Long-run estimates indicate a positive but statistically weak relationship between military spending and GDP, as well as an adverse effect of political instability, highlighting the complex, time-varying channels through which insecurity affects growth. As a result, the study recommends shifting security spending towards targeted, transparent, performance-based interventions that stabilize local economies, address root causes of youth unemployment and rural underdevelopment, and protect key productive sectors while diversifying the revenue base. These policies, when combined with fiscal buffers, will reduce the short-run crowding-out effect of security shocks while also creating conditions for Nigeria's long-term growth and development.

KEYWORDS

ARDL, Economic Growth, Economic Development, Insecurity, Nigeria.

1. INTRODUCTION

Global insecurity, particularly in Nigeria, has severely harmed the country's economic and business climate, reducing human capital development and security ratings from 62.69% in 2007 to 49.49% in 2010, and 38.4% in 2018 (Mbasua, Muhammad, & Abia, 2016). This is evident in investors's keptical investment decisions in a capital inflow-depleted economy, which has shifted government focus from productive sectors to economic and business environment security. Boko Haram's anti-economic and human capital development activities in the North, militancy in the Niger Delta, and Fulani herders in the Middle Belt, among other Security challenges in Nigeria, resulted in the loss of more than N1.4 billion-N1.6 billion in economic and business assets between 2015-2018, as well as a drop in daily oil production from 2.2 million-1.7 million barrels per day in 2018 (Ben, et al., 2019). This reinforces the importance of security in promoting economic growth and development.

According to a World Bank report and an Office of Disarmament Affairs (ODA) report, funds allocated for security purposes globally average $4.7 billion per day, with 21% available to drive economic growth and human capital development, implying a disregard for indicators of growth

and development and other sectors of the economy (International Peace Bureau, 2012). As a result, security is a multifaceted concept that includes both traditional, state-centric concerns and modern, human centric dimensions, defined as a state's or entity's ability to protect its interests, values, and citizens from various threats, such as physical, economic, and social vulnerabilities (Omede, 2018). This broader understanding emphasize the importance of integrated approaches that promote physical safety, economic stability, and social well-being, allowing individuals to feel secure and empowered in society. In contrast, insecurity is characterized by fear, instability, and insufficient protection, which is frequently caused by poverty, unemployment, poor governance, and systemic inequality (Achumba et al., 2013; Ewetan and Urhie, 2014). Such challenges impede societal cohesion and long-term development, especially in countries like Nigeria, where insecurity discourages investment and advancement.

Economic growth is the sustained increase in an economy's ability to produce goods and services, which raises the standard of living. It is based on the effective management of land, labour, capital, and entrepreneurship, and is commonly measured by the increase in real GDP, which is adjusted for inflation to better reflect actual expansion. Growth in per capita production aligns with population trends, resulting in higher living standards (Jhingan, 2006), while labour force expansion and increased trade volume boost productivity and global integration (Magaji, 2022). Sustainable growth is also supported by technological advancements, capital accumulation, and institutional development (Magaji, 2022). According to the IMF (2012) and the World Bank (1993), growth is defined as rising real GDP and productivity, which reflect not only economic output but also structural and social advances that contribute to long-term development. Adewale et al., 2025.

Several scholars have evaluated insecurity relations in an attempt to prescribe policies that would mitigate the negative impact of insecurity on economic growth and development. (Ben et al., 2019; Omede 2018; Arefat and Hadhek, 2018; Achumba, 2018; among others).Furthermore, the results of their studies were mixed, with differing findings. Some argue that insecurity has a significant impact on economic growth and development (Arefat and Hadhek, 2018; Musa, 2024; Adewale et al., 2025; Akindoyin and Obafemi, 2025; Reginald et al., 2025). Others discovered that insecurity had no impact on economic growth (Njoroge, 2024; Stanlet et al., 2022).

The importance of this study for policy formulation, particularly in countries facing insecurity challenges such as Nigeria, cannot be overstated because it will assist policymakers and government officials in anticipating the likely effects of insecurity on economic growth and development in the country. It would also provide them with proper policy prescriptions to control any emerging insecurity crisis in the country. The study will also be useful for academics who want to understand insecurity and economic growth/development relationships. To accomplish the aforementioned goal, the paper is divided into five sections. The first section includes an introduction. The following section examines existing literature on the impact of insecurity on economic growth and development. Section three describes the methodology. Section four discusses the findings and discussion, while section five presents the conclusion and policy implications.

2. LITERATURE REVIEW

This section presents both a theoretical and an empirical review of literature.

2.1. Theoretical Framework

The study was guided by social conflict theory, which emphasize the ongoing class struggles and societal inequalities that have accompanied capitalism's rise, drawing on German philosophy, English political economics, and French socialism to investigate concepts such as dialectical and historical materialism, class conflict, and the pursuit of a classless society (Marx & Engels, 1848). It explains how tensions between social classes and between state and non-state actors stem from competing efforts to protect one's own interests, with class struggles historically shaping societies and fuelling social unrest, inequality, and threats to national security and economic stability (Adebakin & Raimi, 2014). According to the theory, groups compete for control of societal resources, which leads to the establishment of political, economic, and legal institutions as expressions of power, exacerbating the conflicts. When tensions between dominant and exploited groups are not addressed, they can escalate into widespread conflict, disrupting social harmony and economic progress (Adebakin & Raimi, 2012). Social conflict theory highlights the importance of addressing systemic inequalities in order to promote peace, cohesion, and sustainable development.

2.2. Empirical Review of Literature

2.2.1. Relationship Between Insecurity And Economic Growth

A number of empirical studies on the relationship between insecurity and economic growth have been conducted, using either time series or panel data approaches; some of these studies are discussed in this section of the paper.

The World Bank (2024) investigates the impact of insecurity on economic growth in the Horn of Africa, emphasizing the growing concern about food insecurity in Sub-Saharan Africa (SSA), particularly in understudied peri-urban settings, a cross-sectional survey was conducted among 300 randomly selected farm households in Jimma City's peri-urban area, supplemented by key informant interviews (KIIs) and focus group discussions (FGDs). The study created a food insecurity index based on twelve indicators across four dimensions of food insecurity, using a structured questionnaire for quantitative data and unstructured questionnaire for qualitative input. The most significant indicators were identified using Principal Component Analysis (PCA), and an ordered probit regression model revealed that 46% of households were food insecure due to factors such as human capital, physical assets, risk aversion, and institutional challenges.

Arafet (2018) investigated the impact of terrorism on economic growth and the mechanism by which that effect is transmitted. Between 2008 and 2015, they used simultaneous equation models on panel data from eleven countries (six developing and five developed). Their findings revealed a positive effect of terrorism on economic growth for both developed and developing countries for the entire sample, and a negative effect of economic growth on terrorism for the total sample and the case of developing countries.

Njoroge (2024) looks into how insecurity has impacted education and economic development in Kenya. The study used a descriptive research design and targeted 420 stakeholders, including civil society organizations, human rights groups, security agencies, and counter-terrorism units. A sample of 150 participants was drawn from this population using a two-stage purposive sampling method, and data was collected via questionnaires and interviews. Quantitative and qualitative data was examined thematically using content analysis. Tables, charts, and bar graphs were used to illustrate the results that were presented narrative. From 1998 to 2020, the Kenyan government implemented a variety of counterterrorism measures, including arrests, detentions, prosecutions, multi-agency collaboration, public awareness campaigns, economic empowerment initiatives,

legislation such as the antiterrorism act, financial transaction monitoring, and media regulation. However, the study found that the majority of these strategies have failed to completely eliminate terrorism in Kenya.

Adewale et al. (2025) used the Autoregressive distributed lag (ARDL) approach to investigate the impact of insecurity on economic growth in Nigeria for annual time series data spanning 1990 to 2023. The findings show a significant negative relationship between insecurity and economic growth. Increased insecurity discourages investment, reduces productivity, and raises economic uncertainty, ultimately impeding economic development. Furthermore, the study emphasizes the negative impact of unemployment, poverty, and inflation on economic growth.

Stanley et al., (2022) conducted ex-post factor research on annual time series data from 2009 to 2022 to investigate Nigeria's insecurity challenges and implications for business activities, economic growth, and economic development. The findings show that insecurity impedes Business Activities (BA) but has no significant influence on Nigeria's Economic Growth (EG) and Economic Development (ED), concluding that national insecurity must be taken seriously because business activities flourish in a secure environment, ensuring long-term economic growth and development.

Ndubuaku et al. (2020) used the ARDL bounds test and the Error Correction Model (ECM) on quarterly time-series data from January 2010 to December 2018 to determine whether security expenditure was economically beneficial or detrimental to human capital development and economic growth in Nigeria. The findings of the results show that security spending contributes to the economy, in the long run a positive and significant impact on economic growth and human capital development, whereas in the short run, a negative relationship.

2.2.2. Relationship between insecurity and Economic Development

Akindoyin and Obafemi (2025) assess the impact of insecurity on Nigeria's national development, looking at the relationship between ongoing security challenges and the country's socioeconomic progress. According to the study, some of the economic and socio-political effects of insecurity on Nigerian national development include increased public spending on security, weakening of state institutions, and a loss of public trust in governance. As a result, it concludes that in order to mitigate the effects of insecurity on national development, it is critical to address the root causes of discontent, such as poverty, inequality, and ineffective government in Nigeria. Reginald et al. (2025) used a historical research approach to examine the impact of insecurity on Rivers State's economic development from 2000 to 2015. They used both primary and secondary data sources. The findings revealed that insecurity had a negative impact on Rivers State's economic growth during the study period, resulting in business relocations, increased tax evasion, and a decrease in revenue collection efficiency. Furthermore, insecurity hampered economic activity and reduced tax revenue in the state.

Ya'u et al. (2023) use a structural vector autoregressive (SVAR) model to examine the impact of insecurity on economic development in Nigeria between 1996 and 2021. The results of the SVAR model's impulse response functions and variance decomposition show that the response of insecurity to a one-unit standard deviation shock to economic development is negative and thus insignificant; the variance decomposition results show that insecurity accounts for more than half of the variation in economic development in Nigeria.

This study differs from previous studies in some significant ways, as detailed below.

First, it uses quarterly time-series data (1985-2024), which provides more detailed insights into short- and long-run dynamics that annual studies frequently overlook. Second, it takes into account multiple dimensions of insecurity, such as military expenditure, terrorism risk, political stability, and unemployment, providing a more comprehensive picture of Nigeria's security-growth nexus. Third, it employs the Autoregressive Distributed Lag (ARDL) model, which effectively handles mixed integration orders while capturing both short-term shocks and long-term equilibrium relationships. Fourth, unlike previous studies that only used descriptive trends or cross-sectional analysis, this study includes diagnostic and stability tests to ensure model robustness. Finally, it applies the findings to policy, making practical recommendations for combating insecurity and promoting long-term economic growth and development in Nigeria.

3. METHODOLOGY

3.1. Data Source

The study used quarterly time series data ranging from 1985Q1 to 2024Q4. Data for the variables were obtained online from World Development Indicators, while data on Terrorism Risk Index were sourced from Global Terrorism Index. This time frame was chosen to capture the independent effects of military spending, terrorism index, political stability, and unemployment on Nigerian economic growth and development in the context of global economic crises, Niger Delta crises, Boko Haram insurgency, and banditry which the country has been experiencing since the 1990s.

3.2. Model Specification

The study's model is described in functional form as follows:

$LGDP_t = f(LMEP_t, LTRI_t, LPS_t, LUEM_t)$…… (3.1)

Thus, the model's econometric specification can be expressed as follows:

$LGDP_t = \beta_0 + \beta_1 LMEP_t + \beta_2 LTRI_t + \beta_3 LPS_t + \beta_4 LUEM_t + \mu$…….. (3.2)

Where;

GDP = Gross Domestic Product as proxy for economic growth and development used as dependent variable

LMEP= Log of Military expenditure as percentage in GDP

LTRI= Log of Terrorism Risk index

LPS = Log Political Stability/ absent of violence

UEM= Unemployment

β_0, is constant while, β_1, to β_4, are Parameters of the variables captured in the model,

μ= Error Term and t represents Time Trend

The study adopts Autoregressive Distributed Lag (ARDL) approach developed by Pesaran et al (2001) to estimate equation (3.2). The choice of the ARDL is based on the following reasons: first, the model can be applied irrespective of whether the series under investigation are stationary at I (0) or I (1) or mixture of both. Second, it provides robust and high quality result even if sample size is small or large. Finally, it takes into account the error correction model. The analysis of error correction and autoregressive lags fully covers both long-run and short-run relationships of the variable under study (Pesaran et al; 2001 and Villavicencio and Bara; 2008). Following the work of Pesaran et al (2001), the ARDL model of equation (3.3) is given as:

$$\Delta LGDP_t = \beta_0 + \sum_{i=1}^{m} \beta_1 \Delta LMEP_{t-i} + \sum_{i=1}^{m} \beta_2 \Delta LTRI_{t-1} + \sum_{i=1}^{m} \beta_3 \Delta LPS_{t-i} + \sum_{i=1}^{m} \beta_4 \Delta UEM_{t-i} + \alpha_1 LMEP_{t-1} + \alpha_2 LTRI_{t-1} + \alpha_3 LPS_{t-i} + \alpha_4 UEM_{t-i} + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.3)$$

where m is the optimum lag length will be determine using Akaike Information Criteria (AIC) and Schwartz Information Criteria (SIC), Δ is difference operator, while β_1 to $\beta_4$are vectors of the coefficient of the first difference lagged values of the variables captured in the model

Thus the short run equation and error correction model is expressed as follows:

$$\Delta LGDP_t = \theta_0 + \sum_{i=1}^{m} \theta_1 \Delta L\,MEP_{t-i} \sum_{i=1}^{m} \theta_2 \Delta LTRI_{t-1} + \sum_{i=1}^{m} \theta_3 \Delta LPS_{t-i} + \sum_{i=1}^{m} \theta_4 \Delta UEM_{t-i} + \theta_5 ECM_{t-1} + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.4)$$

Where, θ_0 is the coefficient of constant term, θ_1 to$\theta_4$is the coefficient of short run variables, ECM is the Error correction model of one period lag estimated from equation. The ARDL model's first part (β_1 to β_4) represents short-run dynamics, while coefficients (α_1 to α_4) represent long-run dynamics. The null hypothesis (H_0: $\alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = 0$) implies no long-run relationship among variables, so rejecting H_0 indicates evidence of a long-run relationship. The study will begin by conducting co-integration test of a bound testing approach for finding the evidence of long run relationship. To do that, the calculated F- statistics would be compared with two critical values (lower and upper bound); the null hypothesis of no relationship would be rejected if the calculated F- statistics is greater than the upper bound critical value, whereas if it falls below the lower critical values, the null hypothesis of no relationship cannot be rejected.

3.3. Justification for the Inclusion of Variables

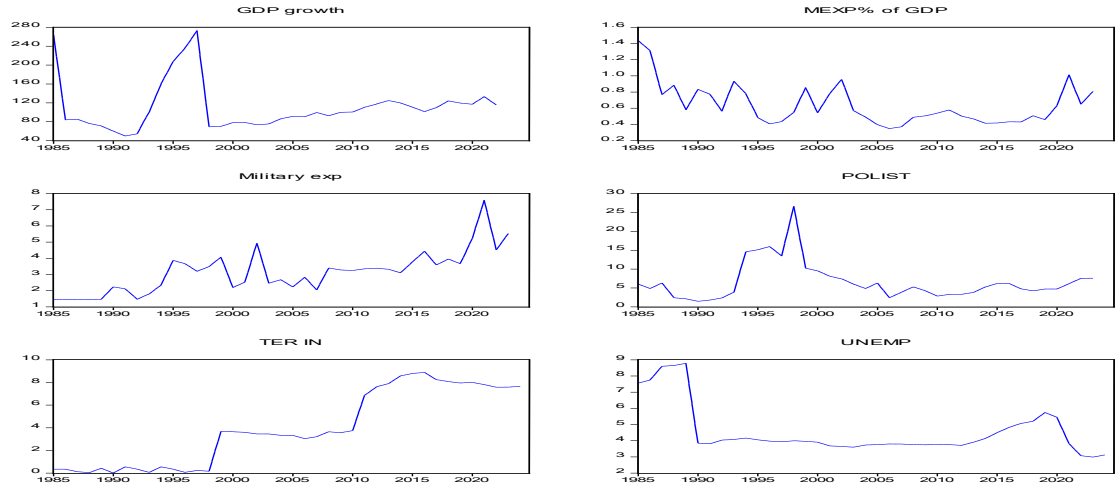
The theory and empirical evidence support the inclusion of the selected independent variables Military Expenditure (MEP), Terrorism Index (TRI), Political Stability (PS), and Unemployment (UEM) in explaining Economic Growth (GDP).
Military Expenditure (MEP) is included because defense spending affects both national security and economic performance. While adequate security boosts investor confidence and protects productive assets, excessive or misallocated spending can stymie investment in other critical sectors, affecting growth.

The Terrorism Index (TRI) assesses the impact of terrorism and violent conflict on the economy. Terrorism discourages foreign investment, disrupts production, and raises business costs, all of which slow economic growth and development.
Political stability (PS) measures the effectiveness of governance and institutional strength. Stable political environments encourage policy consistency, attract domestic and foreign investment, and stimulate economic growth. In contrast, instability increases uncertainty and lowers economic performance.

Unemployment (UEM) is an important macroeconomic indicator that influences aggregate demand and social welfare. Persistent unemployment not only reduces output growth, but it also increases poverty and insecurity, undermining development efforts. As a result, including these variables creates a comprehensive framework for understanding how insecurity, governance, and labour market conditions all influence Nigeria's economic growth and development.

4. RESULTS AND DISCUSSION OF FINDINGS

Figure 1 depicts the historical movements of the key variables Gross Domestic Product (GDP), Military Expenditure (MEP), Terrorism Index (TRI), Political Stability (PS), and Unemployment (UEM) from 1985 to 2024.



Gross Domestic Product (GDP) is generally rising, indicating long-term economic growth driven by oil revenues, structural reforms, and service sector expansion. However, several notable declines coincide with periods of insecurity and macroeconomic shocks, including the political crises of the early 1990s, the global financial crisis of 2008-2009, and the Boko Haram insurgency from 2010 to 2016. These incidents disrupted production, investment, and trade, resulting in temporary output declines.

Military Expenditure (MEP) fluctuates over time, with sharp increases during times of increased insecurity, particularly in the early 2000s when insurgency, militancy, and banditry increased. This increased security spending reflects the government's response to threats while also indicating the fiscal burden of defense expenditures.
The Terrorism Index (TRI) is low in the 1980s and 1990s but rises sharply after 2009, coinciding with the escalation of Boko Haram and later banditry in the Northwest. The rise in TRI reflects the deteriorating security situation and coincides with periods of slower GDP growth.

Political stability (PS) fluctuates cyclically, declining during periods of military rule and post-election tensions while improving during democratic consolidation. The trend indicates that prolonged instability undermines policy consistency and investor confidence, affecting economic growth. Unemployment (UEM) has been steadily rising, particularly since 2015, when the recession and rising insecurity slowed job creation. High unemployment, in turn, exacerbates social tensions and insecurity, creating a vicious cycle that limits growth. Overall, the graph shows that peaks in insecurity variables (TRI, MEP) coincide with GDP declines, whereas periods of greater stability correspond with improved economic performance. This lends support to empirical findings indicating that insecurity has both direct and indirect negative effects on Nigeria's economic growth.

Table 1: Descriptive Statistics result

	GDP	MEP	TRI	PS	UEM
Mean	109.8061	0.625904	3.723286	6.527935	4.607389

Median	100.2519	0.549230	3.456000	5.148315	3.966000
Maximum	273.0126	1.436786	8.890000	26.59575	8.784000
Minimum	49.77684	0.348375	0.004500	1.470257	3.074000
Std. Dev.	49.77684	0.348375	0.004500	1.470257	3.074000
Skew ness	46.52015	0.224583	3.212131	4.683719	1.466905
Kurtosis	1.723373	1.395068	0.334411	1.854149	1.865671
Jarque-Bera	124.3273	77.70922	14.73930	158.5503	116.0514
Probability	0.000000	0.000000	0.000630	0.000000	0.000000
Sum	16361.10	93.25977	554.7696	972.6623	686.5010
Sum Sq. Dev	320290.4	7.464761	1527.033	3246.709	318.4681
Observations	149	149	149	149	149

Source: Authors Computation Using Eviews Version 10 (2025)

Table 1 show that GDP has higher mean, maximum, and minimum values, as well as a higher standard deviation, than the other variables. This is because, unlike other variables, GDP is expressed in millions. Political stability (PS) was ranked second. Furthermore, the positive skewness of all variables indicates that the distribution has a large right tail, implying that the variable distributions are rightward skewed. Furthermore, all variables have kurtosis values less than 3, indicating that their distributions are not peaked than the normal distribution. The Jarque-Bera test results show that all of the series are not normally distributed, implying that they are statistically significant at the 1% probability level, rejecting the null hypothesis for GDP, MEP, TRI, PS, TMEP, and UEM distributions. As a result, the variables cannot be characterized as normally distributed.

Table 2: Result of Unit root test

Table 2 shows the results of both the Augmented Dickey Fuller and Phillip Perron Unit root tests.

	ADF Unit root test		**PP Unit root test**	
Variables	**Trend & Intercept**		**Trend & Intercept**	
	Level I (0)	**1st diff I(1)**	**level I(0)**	**1st diff I(1)**
GDP	-3.579**	-3.303	-4.414**	-4.527
MEP	-2.906	-3.368**	-3.786**	-4.150
TRI	-2.820	-3.786**	-4.059*	-3.842
PS	-3.181*	-2.245	-15.391***	-4.234
UEM	-4.587***	-3.406	-2.641	-5.807***

Note: *, **,* Denoted the series are stationary at 1%, 5%& 10% probability levels.**

Source: Authors Computation Using Eviews Version 10 (2025)

According to Table 2, GDP, PS, and UEM are stationary at the level, whereas MEP and TRI are stationary at the first difference under ADF. However, PP has shown that all of the variables are stationary at level, with the exception of UEM, which is stationary at first difference with trend and intercept. As a result, we have a set of variables that includes both I (0) and I (1). This

enables the use of the ARDL model to determine the co integration relationship between the series discovered to have a different order of integration.

Table 3: Presents the ARDL Bound test result

Test statistics	Value	K	Significance level	I (0) Lower Bound	I (1) Upper Bound
F- statistics	6.66	5	10%	2.75	3.79
			5%	3.12	4.25
			1%	3.39	5.23

Source: Authors Computation Using Eviews Version 10 (2025)

Table 3 shows that the calculated F statistic of 6.66 exceeds both the lower and upper critical values for the (1%) significance level, which are 3.39 and 5.23, respectively. This means that, over time, all of the variables are co integrated.

The optimal lag-lengths for estimating the relationship between the variables are (1, 4, 4, 4, 4, 4), as determined by the Akaike Information Criterion (AIC). Table 4 summarizes the estimated long-run relationship.

Table 4: Result of Long Run Coefficients of ARDL

Dependent Variable: LDGP			
Variables	**Coefficient**	**t- statistic**	**P- Value**
C	22.025	2.853	0.005**
MEP	8.732	1.440	0.152
TRI	-3.370	-0.460	0.646
PS	-6.918	-5.067	0.000***
UEM	-6.918	-0.974	0.331

Note: *, &** indicate significance at 1 and 5 percent level respectively.**

Source: Authors Computation Using Eviews output Version 10 (2025)

According to the results in Table 4 above, there is a long-run insignificant positive relationship between military expenditure (MEP) and economic growth in Nigeria, implying that a 1% increase in military expenditure would increase economic growth by approximately 8.732%. The findings supported those of (Ayange et al., 2020) and (Ndubuaku et al., 2020), who discovered a positive relationship between security expenditure and Nigerian economic growth, but contradicted those of Adewale, (2025), who discovered a negative relationship. On the other hand, the coefficient of the terrorism index shows an insignificant negative relationship with economic growth, indicating that a 1% change in the terrorism index will negatively affect economic growth in Nigeria by decreasing it to (-3.370). The finding support that of Arafet(2018), Reginald et al(2025), and Adewale., et al (2025), who discovered negative relationship between insecurity and economic growth in Nigeria and other developing countries. At 1% probability level, the coefficient of political stability, which is a proxy for the absence of violence, has a significant negative relationship with economic growth and development, implying that a 1% change in political stability will result in a decrease in economic growth of (-6.918). During the period under review, Nigeria's unemployment rate has an insignificant negative relationship with economic growth.

Table 5: Short Run Coefficients of ARDL and Error Correction Mechanism result

Dependent Variable: LDGP			
Variables	**Coefficient**	**t- statistic**	**P- Value**
Δ(LMEP)	-60.024	-1.950	0.053**
Δ(LMEP(-1)	-0.525	-0.013	0.989
Δ(L MEP(-2)	-0.525	-0.013	0.989
Δ(L MEP(-3)	20.321	0.640	0.522
Δ(LTRI)	-3.370	-0.479	0.632
Δ(LTRI(-1)	0.768	0.085	0.931
Δ(LTRI(-2)	0.768	0.085	0.931
Δ(LTRI(-3)	-4.987	-7.221	0.471
Δ(LPS)	-6.918	-5.465	0.000***
Δ(LPS(-1)	1.008	0.682	0.496
Δ(LPS(-2)	1.008	0.682	0.496
Δ(LPS(-3)	0.395	0.322	0.747
Δ(UEM)	-6.553	-1.055	0.293
Δ(UEM(-1)	1.963	0.243	0.807
Δ(UEM(-2)	1.963	0.243	0.807
Δ(UEM(-3)	11.184	1.755	0.081*
ECM (-1)	-0.072	-6.457	0.000***
R^2 = 0.37, Adj R^2 = 0.25, D.W = 0.62, F statistic= 3.27 (0.000)***,			

Note: *, ** &* indicate significance at 1, 5 and 10 percent level respectively.**

Source: Authors Computation Using Eviews output Version 10 (2025)

The short run estimates presented in Table 5 show a significant negative relationship of military expenditure with economic growth and development at the 5% probability level, implying that a 1% increase in military expenditure resulted in a decrease in economic growth and development by roughly (-60.024). Similarly, the coefficients of military expenditure at lag 1 and 2 show insignificant negative relationships with economic growth and development, while lag 3 shows insignificant positive effect. Furthermore, the Terrorism Rate Index has an insignificant negative relationship with economic growth and development, implying that a 1% increase in TRI reduces economic growth by (-3.370), lag 1 and 2 of the TRI show an insignificant positive relationship, while lag 3 shows an insignificant negative relationship with economic growth. Furthermore, the coefficient of political stability has a significant negative relationship with economic growth and development at t 1% probability level, implying that a 1% increase (decrease) in political stability will result in a decrease in economic growth and development by(-6.918), whereas lags 1, 2, and 3 of political stability have an insignificant positive relationship with economic growth and development. The results also show that unemployment has an insignificant negative relationship with economic growth and development, implying that a percentage increase in unemployment will result in a (-6.553) decrease in economic growth, in contrast to lags 1 and 2 of unemployment, which show an insignificant positive relationship, while lag 3 indicates a significant positive relationship between unemployment and economic growth.

The error correction term, as expected, is less than one with a negative sign (-0.072) and statistically significant at 1% (0.000). This suggests that in the event of a downturn in economic growth and development, the system may correct itself at a rate of about 72% per quarter. As a result, an F-statistic of 3.27 with a probability value of (0.000) indicates that, while some coefficients may not be statistically significant individually, but they are significant when combined to predict GDP variation during the study period.

Table 6 Diagnostic test Result

Test	LM version	F. Statistics
Normality (Jarque Bera Test Statistics)	JQ= 536.553 [0.000]	Not applicable
Serial Correlation (Breusch Godfrey LM Test)	CHSQ (2) =57.989 [0.000]	F(2,115) = 38.321 [0.000]
Heteroscedasticity (Breusch pagan Godfrey)	CHSQ (27) =61.103 [0.000]	F (27,117) = 3.156 [0.000]

Source: Authors Computation Using Eviews Version 10 (2025)
Note: values in parenthesis are p-values

The series were discovered to be non-normally distributed, as JQ demonstrated statistical significance. As a result, we reject the null hypothesis of normal distribution in favor of the alternative hypothesis that the series' frequency distributions are not normal. The Breusch-Godfrey serial correlation test showed that both the F and LM versions were significant, implying that the series are serially correlated. This also implies that the error terms are independent, meaning that the error term in one period influences the error term in another. As a result, we can say that there is autocorrelation at the 5% level. The Breusch-Pagan-Godfrey test is a Lagrange multiplier that examines the null hypothesis of no heteroscedasticity. The heteroscedasticity test resulted in a large p-value, indicating that it is statistically significant. This means we reject the null hypothesis and conclude that the residual variance is not constant (heteroscedasticity). A stability analysis was performed to confirm the structural break, using graphs depicting the cumulative sum of recursive residuals and the cumulative sum of squared residuals (see figures 2a and 2b below).

Figure 2a

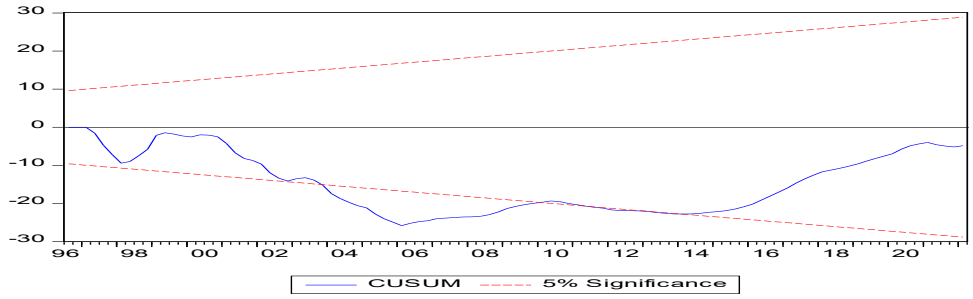
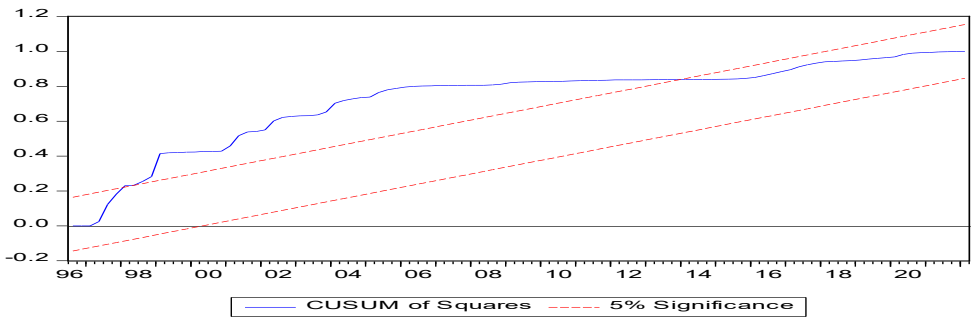


Figure 2b



The CUSUM and CUSUMQ test graphs demonstrate that the models are unstable during the observation period, with the red line occasionally exceeding the (5%) critical upper and lower

limits. This instability may be linked to periods of global economic crisis, as well as political unrest and security concerns in the country.

6. CONCLUSIONS AND POLICY IMPLICATIONS

The study uses quarterly data from 1985Q1 to 2024Q4 and an Autotoregressive Distributed Lag (ARDL) approach to investigate the moderating effect of insecurity on economic growth and development in Nigeria. The analysis revealed evidence of a co integration relationship between these variables of interest. The study discovered that insecurity-related variables have a significant but mixed impact on Nigeria's GDP. In the short run, increases in military/security spending and terrorism risk lead to negative GDP responses crowding-out and output losses. In the long run, military/security expenditure has a positive but statistically weak relationship with GDP, implying that while security spending can slow growth in the short term, some security investments may create conditions for recovery over time. Political stability demonstrates a statistically significant relationship.

Policy recommendations.

[1] Targeted security spending and transparency: Rather than a general military buildup, prioritise well-targeted security investments in community policing, intelligence, and rapid response. As a result, to prevent productive spending from being crowded out, security budgets should be accompanied by transparency and performance metrics. This justifies MEP, which has a short-run negative effect on GDP but may have a long-term benefit if properly targeted.

[2] Address underlying socioeconomic drivers such as jobs and rural development; invest in youth employment, rural infrastructure, and agrarian support programmes in conflict zones to reduce insurgent recruitment pools, as unemployment interacts with insecurity, resulting in feedback loops.

[3] To restore trust and strengthen institutions and political governance, improve the rule of law, reduce corruption, and decentralise conflict resolution resources to local governments. Strong institutions mitigate the economic effects of security shocks, as political stability is a key variable associated with growth.

[4] Protect productive sectors while diversifying revenue: protect oil and agricultural value chains that are critical to foreign receipts and livelihoods, while also accelerating diversification away from oil dependence to reduce growth volatility caused by security-related oil shocks.

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REFERENCES

[1] Achumba, I. C., Ighomereho, O. S., & Akpor-Robaro, M. O. M. (2013). Security Challenges in Nigeria andthe Implications for Business Activities and Sustainable Development. *Journal of Economics and Sustainable Development,* 4(2), 79-99.

[2] Adekoya A . A, Magaji .S & Ismail .Y (2025).Impact of Insecurity on Economic Growth in Nigeria: 1990-2023. *International Journal of research and scientific innovation (IJRSI*), 12(4), 1258-1271.

[3] Akindoyin, D. I & Obafemi. A.O, (2025). Evaluating the Impact of Insecurity on Nigeria's National Development since the Fourth Republic. *African Journal of Stability & Development,* 17(1), 91-107.

[4] Amana, S.A, Aigbedion, I. Marvelous,& Zubair, A. Z (2020). Impact of Government security expenditure on economic growth in Nigeria. *International Journal of Innovative Research in Social Sciences and Strategic Management Techniques*, 7(1), 2467-8155.
[5] Ayange. A ,Emmanuel U. S. , Ishaku A. P, & Ndubuaku. V (2020). Security Expenditure on Economic Growth in Nigeria. *Humanities & Social Sciences Reviews*, 8(3), 553-561.
[6] Ben, E. U., Abner, P. I., Udo, E. S.& Kelvin-Iioafu, L. E. (2019). Insecurity, Economic and Business Climate; Empirical Evidence from Nigeria. *International Journal of Supply and Operations Management,*6(2), 182-187.
[7] Ewetan, O. O., & Urhie, E. (2014). Insecurity and Socio-Economic Development In Nigeria. *Journal Of Sustainable Development Studies*, 5(1), 40-63.
[8] Igwe, G. U., Magaji, S., & Darma, N. A. (2021). Analysis ofthe Impact of Financial Development Indicators ofthe Banking Insurance and Pension Sectors on Economic Growth in Nigeria. International Monetary Fund IMF.
[9] International Peace Bureau, (2012). Disarmament for Sustainable Development. Available from http://www.ipb.org/.
[10] Jhingan, M. L. (2006). *The Economics of Development and Planning,* Delhi: Virnda PublicationLimited.
[11] Louis Sevitenyi Nkwatoh & Hiikyaa A. Nathaniel (2018) Effect of insecurity on economic growth in Nigeria. *Journal of Economics and Management Sciences*,1(2),2576-3016.
[12] Magaji, S., Musa, I., & Salisu, A., (2022) Impact of Insecurity on Youth Unemployment in Nigeria; Ordinary Lead Square Estimation (OLS) technique. *Indiana Journal of Economics and Business Management,*2(1), 4-9.
[13] Mbasua, A. Y., Muhammad, M. B., and Abia, F. K. (2016). Implications of Boko Haram Insurgency on Small and Medium Enterprises in Borno State, Nigeria: A Review. Sahel Analyst. *Journal of Management Sciences*, 14(1), 96-108.
[14] Musa, I (2024). Analysis of the impact of insecurity on youth unemployment force; *focus on research in contemporary economics*, 4(2), 525-542.
[15] Njoroge, L. K. (2024). The Impact of Regional Integration on Economic Growth: Empirical Evidence From Comesa, Eac, And Sadc.*American Journal of Social and Management Sciences*, 1(2), 150-163.
[16] Omede, A. J. (2018). The Dynamics of Security ina Changing World. *Global Journal of Social Sciences,* 17(1), 23-36.
[17] Reginald. O. C, Amugo .F &Independent. C E, (2024). The Impact of Insecurity on Economic Development in Rivers State. *Journal of Research in Humanities and Social Science,* 12(7), 210-223.
[18] World Bank. (2024). Impact of Insecurity on Economic Growth inthe Horn of Africa. Food Insecurity in Peri-Urban Areas and Coping Strategies.
[19] World Bank (WDI World Development Indicator- World Bank), 2019. Available from http://databank.worldbank.org/data/home.aspx.
[20] Stanley A.N, Chukwudi M.D. & Ugochukwu N. C, (2022). Impact of Insecurity on Nigerian Economic Growth and Development. *International Journal of Development and Economic Sustainability,*10(5), 1-13.
[21] Tahar, L., Arafet, H., & Zouhaier, H. (2018). Terrorism and Economic Growth. *International Journal of Economics and Financial Issues,* 8(1), 175-178.
[22] Ya'u S. H, Wambai A. A & Mamman. T (2023). Insecurity and Economic Development in Nigeria. *Journal of Economics and Allied Research*, 8(1), 283-295.

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