Re-Examining the Long-Run Relationship between Military Spending and Economic Growth in Nigeria: An Autoregressive Distributed Lag Approach

Akunya Lasbery I., Nwosu Chinedu A., Nwaogwugwu Chika S., Kalu Sunday Agwu

Department of Economics, Alvan Ikoku Federal University of Education, Owerri

DOI: https://doi.org/10.47772/IJRISS.2026.100700969

Received: 06 August 2026; Accepted: 11 August 2026; Published: 18 August 2026

ABSTRACT

In recent times, Nigerian military expenditure has continued to increase owing to multiple insecurity challenges which has affected economic activities. Rising military spending is justified because no meaning economic development can be attained in the presence of insecurity. Thus, this study re-examines the longrun relationship between military spending and economic growth in Nigeria. The study utilized data on Real Gross Domestic Product (RGDP), Military Spending as a percentage of GDP (MGDP), Gross Fixed Capital Formation (GFCF), Exchange Rate (EXCH) and Balance of Trade (BOT) sourced from the World Development Indicators and CBN statistical bulletin. The study period covers from 1981 to 2024 while an Autoregressive Distributed Lag (ARDL) bounds test was estimated within a mixed order of integration. The result shows the existence of longrun relationship between RGDP and MGDP with a 4.72 percent error correction mechanism. The longrun model result shows that military spending exerts a positive and statistically significant longrun effect on economic growth. This suggest that security spending contributes to economic growth through security enhancement which spills over to the productive sectors. However, exchange rate is nonlinearly related to economic growth by having a lag effect while Gross Fixed Capital Formation drives growth in the shortrun. The study recommends caution while reducing military spending as a costless route to freeing fiscal space for other developmental priorities. A reduction in military spending that allows insecurity rise depresses long-run output. There is need to evaluate the composition and targeting of military spending rather than its aggregate level alone. This will concentrate resources on interventions with the most direct security-restoring and growth-stimulating effect.

INTRODUCTION

The relationship between military expenditure and economic growth has occupied a persistent place in the development economics discourse. Following the seminal study of Benoit (1978), scholarly debates have remain substantially divided about the impact of military spending on economic growth. The Keynesian demand-side argument support a growth-stimulating relationship of military expenditure through its role in increasing aggregate demand while idle capacity is absorbed which creates output-raising multiplier effects. Contrarily, the neoclassical economists suggest a crowding-out effect of military spending where the productive private and social investments are deprived of resources with adverse consequences for long-run growth (Deger & Smith, 1983; Dunne et al., 2005). Subsequent studies have largely been inconclusive on the actual direction of the relationship which lends the underlying relationship to further empirical investigation.

The growing insecurity in Nigeria offers a typical scenario to further examine the security spending and economic growth nexus. Widespread insurgency in the Northeast, banditry in the Northwest, and kidnapping for ransom orchestrated a huge defense and internal security allocation in the federal government budget. This affected budgets on capital projects, education, health and other developmental priorities. Evidence showed substantial increases in military and internal security expenditure in recent years. For instance, the 2026 defense and security budget stood at ₦5.41 trillion which represents approximately 9.3 percent of the total budget. This exceeded the allocations to infrastructure (₦3.56 trillion), education (₦3.52 trillion) and health (₦2.48 trillion). This pattern of rising security expenditure has been sustained in previous years, with the 2023 defense budget standing at ₦3.2 trillion, 2024 at ₦3.25 trillion, and 2025 at ₦4.91 trillion (NBS, 2026)

The debate on whether allocation of public resources toward security is detrimental to long-run output growth or otherwise remained a question of direct relevance to fiscal policy. However, Nigerian empirical studies remain undecided on relationship between security spending and economic growth. Eduoku and Musa (2023) found evidence of a long-run relationship between military spending and growth without a clear direction of causality. Adama et al., (2022) reported a positive and statistically significant long-run effect once internal security and political stability are controlled for. Dada et al., (2024) documented asymmetric effects in which positive spending shocks impedes growth in the short run but enhances growth in the long run. Contrarily, Ajefu (2015) found a negative and growth-retarding defense burden once health and education spending are accounted for. The objective of this study therefore is to re-examine the longrun relationship between military spending and economic growth in Nigeria while controlling for gross fixed capital formation, exchange rate and balance of trade in Nigeria.

The remainder of the paper is organized as follows. section 2 reviews the literature, section 3 dwelt on methodology, section 4 presents the empirical result, section 5 discusses the findings, while section 6 draws out the policy implications and concludes the paper.

LITERATURE REVIEW

Conceptual Framework

Real gross domestic product denotes the value of final goods and services produced within a country and serves as the proxy for economic growth of this study. Military expenditure as a share of GDP captures government spending on defense forces and internal security operations. This conceptualization is consistent with its treatment in the Nigerian security-development literature as spending directed at safeguarding territorial integrity and internal stability in the face of insurgency, banditry, and communal violence (Nwosu et al., 2026). Gross fixed capital formation measures the net addition to the economy's physical capital stock, machinery, structures and equipment, and represents the domestic investment channel through which military spending may crowd in or crowd out productive capacity. The exchange rate is included to capture Nigeria's exposure to the competing revenue and cost effects of currency depreciation identified in prior Nigerian fiscal-macro literature (Nwosu et al., 2026). Balance of trade captures the net position of exports over imports and represents the external sector channel through which military spending, via its effect on import demand for arms and equipment or on domestic productive capacity, may transmit to overall output.

Theoretical Framework

This study anchors on Keynesian public expenditure, Neoclassical crowding-out and Security-development nexus theoretical perspectives. According to Keynesian public expenditure theory, military spending as a proportion of government spending, constitute a key component of aggregate demand. Government spending generates multiplier effects on output which raises labour employment and income. Consequently, idle resources are employed which raises production of goods and services leading to economic growth (Nwosu et al., 2026). Neoclassical crowding-out theorists argue that military expenditure diverts resources away from private and public investments. This portends adverse effects for capital accumulation and economic growth. Thus, military spending indirectly impedes growth through its impact on reducing investment opportunities leading to increase in unemployment and low income (Deger and Smith (1983). The Security-development nexus argues that security and development are complementary. In conflict affected areas, military spending restores territorial control and public safety which enables productive activities to thrive (Stewart, 2004).

Empirical Literature

Several Nigerian empirical studies examined the security-spending-growth nexus based on different time periods and models. The findings of these studies are split into three major strands. Some studies found positive relationship between military spending and growth, others found negative relationship while others found mixed results. Adama et al. (2022), for instance, employed an ARDL model on data from 1986 to 2021 and revealed that defense expenditure and internal security spending exert positive and statistically significant long-run effects on real GDP. Dada et al. (2024) utilized nonlinear ARDL and dynamic threshold autoregressive methods on

data spanning 1981 to 2020 and found that positive military spending is growth-retarding in the short run but growth-enhancing in the long run. The study further revealed a growth-optimizing military expenditure threshold of approximately 0.579 percent of GDP, beyond which additional spending ceases to be growth-enhancing. Raifu (2022) examined the investment channel of military spending over 1970 to 2019 period. Using ARDL and VAR models, they concluded evidence of crowding out of private investment in the short run but crowding in the long run. This implies a plausible transmission mechanism for a long-run positive growth effect. Nwosu et al. (2026), used an Engle-Granger two-step cointegration approach on 1981–2024 Nigerian data linking military expenditure, education spending and school enrollment. Their result showed that military expenditure exerts a positive and statistically significant long-run effect on growth. Further findings of this study showed that the effect of military spending exceeds the corresponding effect of education spending. Musa (2024) employed ARDL and nonlinear ARDL (NARDL) cointegration tests on data spanning 1960 to 2019 while controlling for regime type and insurgency. They found that military expenditure and civilian governance both positively influence economic growth while military regimes and Boko Haram terrorist activity retard growth. This finding underscored that governance and security conditions determine the direction of the relationship. Gbadebo et al. (2024) used asymmetric Toda–Yamamoto and asymmetric Hatemi-J causality tests on data between 1960 to 2021 and found a unidirectional causality running from defense spending to GDP per capita growth. It further showed that positive shocks to defense spending generate a positive shock on growth.

Other studies documented negative relationships between military spending and economic growth.

Using data on defense spending and real GDP while controlling for health and education expenditure, Ajefu (2015) applied the Johansen cointegration on 1988–2008 data. Their result showed that an increased defense burden is harmful to growth in both the short and long run, crowding out private and social sector investment. Aminu and Bakar (2016) estimated an ARDL model on data spanning 1984 to 2014. They found that the interaction between defense expenditure and arms importation exerts a negative effect on growth. This finding was attributed to the fiscal drain associated with importing military hardware instead of domestically producing them. Lawal et al. (2024) estimated combined models of ARDL wavelet coherence analysis over a period of 1960 to 2018. They reported that military expenditure leads to growth temporarily and that military regime exert a negative long-run effect on growth. This further imply that the governance context within which spending occurs may matter as much as its magnitude.

Other strands of empirical literature documented either statistically insignificant effects or cointegration without directional causality. For instance, Eduoku and Musa (2023) employed Johansen cointegration and Granger causality tests on 1987 to 2022 data and found that military spending and growth are cointegrated in the long run but that no significant Granger-causal relationship runs in either direction. This finding was interpreted as evidence that factors outside the bivariate model drive the two series. Also, Ebenyi et al. (2023) applied an ARDL bounds approach within a production-function framework that controls for capital formation, labour, and trade openness over 1981 and 2021 period. Their result indicate that military expenditure carries a positive but statistically insignificant coefficient which was attributed to mismanagement and diversion of military funds rather than to an absence of any underlying effect. Ouseibai and Tombofa (2024) employed ARDL approach on 1981 to 2021 data for a disaggregated spending of recurrent and capital expenditures. They found that recurrent government defense and internal security expenditures exert a negative but statistically insignificant effect on growth while capital expenditure exert a positive but insignificant effect.

Given the literature review of Nigerian studies, the following gap was established. None of the reviewed Nigerian studies jointly modeled military spending together with domestic capital formation, the exchange rate and the balance of trade within a single ARDL bounds-testing framework. This leaves a gap on the domestic investment channel and the external sector channel identified in the theoretical literature (Dunne et al., 2005; Raifu, 2022). This implies that domestic investment and the external sector have not been assessed simultaneously in Nigeria. This study addresses these gaps by estimating an ARDL model of real GDP as a function of military expenditure, gross fixed capital formation, the exchange rate and the balance of trade. This distinguishes long-run elasticities from short-run error-correction dynamics and subjecting the model to a comprehensive diagnostic and stability assessment.

METHODOLOGY

Data Sources and Description

Annual data on real gross domestic product, military expenditure as a share of GDP, gross fixed capital formation, the exchange rate, and the balance of trade were used. Table 1 presents the description and sources of the variables.

Table 1: Description and Sources of Data

Variables	Description	Sources
RGDP	Real Gross Domestic Product	WDI (2024)
MGDP	Military Expenditure as share of GDP	WDI (2024)
GFCF	Gross Fixed Capital Formation	CBN (2024)
EXCH	Exchange Rate	WDI (2024)
BOT	Balance of Trade	CBN (2024)

Model Specification

Following Pesaran et al. (2001), real GDP is specified as a function of military expenditure, capital formation, exchange rate and balance of trade:

$$RGDP_t = \alpha + \alpha_1 RGDP_{t-1} + \sum_{i=0}^{q} \beta_{1,i} MGDP_{t-i} + \sum_{i=0}^{q} \beta_{2,i} GFCF_{t-i} + \sum_{i=0}^{q} \beta_{3,i} EXCH_{t-i} + \sum_{i=0}^{q} \beta_{4,i} BOT_{t-i} + \varepsilon_t \quad (1)$$

While the error correction form is expressed in equation (2)

$$\Delta RGDP_t = \phi_0 + \lambda\left(RGDP_{t-1} - \delta_1 MGDP_{t-1} - \delta_2 GFCF_{t-1} - \delta_3 EXCH_{t-1} - \delta_4 BOT_{t-1}\right) + \sum_{j=1}^{p-1} \varphi_j \Delta RGDP_{t-j} + \ldots \sum_{i=0}^{q-1} \gamma_{1,i} \Delta MGDP_{t-i} + \sum_{i=0}^{q-1} \gamma_{2,i} \Delta GFCF_{t-i} + \sum_{i=0}^{q-1} \gamma_{3,i} \Delta EXCH_{t-i} + \sum_{i=0}^{q-1} \gamma_{4,i} \Delta BOT_{t-i} + u_t \quad (2)$$

Where λ denote the error correction term that captures the speed of adjustment. The model that captures the long-run cointegrating relationship is expressed in equation (3)

$$RGDP_t = \delta_1 MGDP_t + \delta_2 GFCF_t + \delta_3 EXCH_t + \delta_4 BOT_t + \xi_t \quad (3)$$

Following Pesaran et al. (2001), the ARDL model was estimated using the lag structure selected by the Akaike Information Criterion (AIC). The selected specification was ARDL (1,2,4,3,2) and the long-run relationship was obtained from the normalized levels equation. Short-run dynamics were separately estimated within the error-correction representation.

RESULTS

Unit Root Test

Table 2 reports the Augmented Dickey-Fuller unit root test results. Military expenditure (MGDP) is stationary at level, I(0), while real GDP, gross fixed capital formation, exchange rate and balance of trade are non-stationary at level but stationary after first differencing, I(1), at the 5 percent significance level. Because the series exhibit

a mixture of I(0) and I(1) orders of integration with no variable integrated of order two, the ARDL bounds-testing procedure is appropriate for estimating the long-run relationship.

Table 2: Unit Root Test

Augmented Dickey-Fuller		
Variables	Level	First Difference
RGDP	-0.301 (0.9161)	-4.145*(0.0022)
MGDP	-4.797 *(0.0003)	-
GFCF	-1.892 (0.3325)	-5.364* (0.0001)
EXCH	-1.281 (0.6298)	-5.022*(0.0002)
BOT	-2.156 (0.2248)	-8.566*(0.000)

(* = stationarity, probability values in parentheses)

ARDL Bounds Test for Cointegration

Table 3 reports the ARDL bounds test for cointegration. The decision rule is to uphold the null hypothesis of no cointegration if the computed F-statistic falls below the lower critical bound, to reject the null hypothesis of no cointegration if the F-statistic exceeds the upper critical bound. The computed F-statistic of 12.06 exceeds the upper bound critical value at the 1, 5, and 10 percent significance levels. Thus, the null hypothesis of no cointegration is rejected. This confirms the existence of a stable long-run relationship among the variables.

Table 3: Bound Test to Cointegration

Model	F-Statistic	Lower Bound I(0)	Upper Bound I(1)	Significant Level	Conclusion
	12.06*	3.967	5.455	1%	Existence of Cointegration
RGDP=f(MGDP,GFCF,EXCH,BOT)		2.893	4.000	5%	
		2.427	3.395	10%	

Note: * indicates significance at the 1% level; the null hypothesis of no cointegration is rejected.

The lag structure for the ARDL model was selected using the Akaike Information Criterion, which provided the best fit among the candidate models while preserving parsimony. The selected ARDL specification was used to estimate the normalized long-run coefficients and the associated error-correction form. Accordingly, the long-run coefficients reported in Table 4 represent equilibrium elasticities, whereas Table 5 reports short-run adjustment dynamics. This distinction is important because the sign and significance of a lagged variable in the short-run model do not necessarily correspond to its long-run equilibrium effect.

Long-Run ARDL Result

Table 4 presents the estimated long-run ARDL model. The coefficient on the first lag of RGDP (0.953) is positive and statistically significant. This showed a strong persistence in Nigeria's real output, as roughly 95 percent of the previous period's economic performance helps to determine current output. Military expenditure (MGDP) shares a positive and statistically significant relationship with economic growth at the 10 percent level, while its second lag (MGDPt-2) is positive and statistically significant at the 1 percent significant level. The first lag

(MGDPt-1), though positive, is not statistically significant. The consistently positive sign across the current and lagged coefficients indicate that military spending shares a long-run positive relationship with real GDP in Nigeria. The effect materializes with a delay of approximately two years which is consistent with the time required for security spending to translate into infrastructural development, improved security conditions and spillovers to the productive sectors of the economy.

Exchange rate exerts a mixed and apparently non-linear effect. The third lag (EXCHt-3) is positive and statistically significant while the fourth lag (EXCHt-4) is negative and statistically significant while the remaining coefficients are insignificant. This pattern is consistent with Nigeria's dual exposure as an oil-exporting but import-dependent economy, to exchange rate depreciation, which raises the naira value of dollar-denominated export earnings while simultaneously raising the cost of imported inputs and capital goods. Gross fixed capital formation carries a positive but statistically insignificant current-period coefficient, while its first and third lags (GFCFt-1 and GFCFt-3) are negative and significant at the 10 percent level. This points to weak and delayed capital formation dynamics consistent with inefficiencies in investment allocation. The balance of trade enters positively and significantly at the 1 percent level, both contemporaneously and at first lag. This indicates that an improving trade position, through stronger export performance and a narrower trade deficit, contributes positively to long-run growth.

Table 4: Normalized Long-Run ARDL Coefficients for RGDP

Variable	Coefficient	t-Statistic	Prob.*
RGDPt-1	0.95277	36.544	0.0000*
MGDP	0.06883	2.011	0.0561***
MGDPt-1	0.06102	1.668	0.1088
MGDPt-2	0.11752	3.458	0.0021*
EXCH	-0.01084	-0.643	0.5266
EXCHt-1	0.02292	0.988	0.3335
EXCHt-2	-0.01617	-0.626	0.5376
EXCHt-3	0.05917	2.251	0.0342**
EXCHt-4	-0.05199	-2.655	0.0141**
GFCF	0.07067	0.949	0.3526
GFCFt-1	-0.10717	-1.807	0.0839***
GFCFt-2	-0.06741	-1.170	0.2541
GFCFt-3	-0.10721	-1.781	0.0882***
BOT	0.00975	1.423	0.1682
BOTt-1	0.02486	3.510	0.0019*
BOTt-2	0.00916	1.524	0.1411

Note: *, **, *** denote significance at the 1%, 5%, and 10% levels, respectively.

Short-Run Error Correction Model

Table 5 presents the short-run error-correction model, estimated using the stationary first differences of the variables. The error-correction term (ECMt-1) is negative (-0.0472) and statistically significant which satisfied the Granger Representation Theorem requirement for convergence. The magnitude indicates that approximately 4.72 percent of any short-run deviation from long-run equilibrium is corrected within one year. This implies a comparatively slow speed of adjustment. The coefficient on the current change in military spending (ΔMGDP) is positive and statistically significant, while its first lag (ΔMGDPt-1) is negative and statistically significant. This indicate that an increase in military spending boosts growth contemporaneously but that this effect partially reverses in the following period, plausibly reflecting short-run fiscal pressure associated with financing the initial spending increase. The third lag of the exchange rate (ΔEXCHt-3) is positive and significant, corroborating the non-linear long-run exchange rate pattern reported in Table 4. The first and second lags of capital formation (ΔGFCFt-1 and ΔGFCFt-2) are positive and significant, implying that investment exerts a strong short-run growth effect, but only after a gestation period of one to two years. The first lag of the balance of trade (ΔBOTt-1) is positive and significant at the 10 percent level, while its second lag (ΔBOTt-2) is negative and significant at the 10 percent level.

Table 5: Short-Run ARDL Error-Correction Model

Variable	Coefficient	t-Statistic	Prob.
ΔMGDP	0.06883	2.715	0.0112**
ΔMGDPt-1	-0.11752	-4.708	0.0001*
ΔEXCH	-0.01084	-0.873	0.3901
ΔEXCHt-1	0.00899	0.648	0.5220
ΔEXCHt-2	-0.00718	-0.497	0.6229
ΔEXCHt-3	0.05199	3.667	0.0010*
ΔGFCF	0.07067	1.658	0.1085
ΔGFCFt-1	0.17461	4.924	0.0000*
ΔGFCFt-2	0.10721	2.737	0.0107**
ΔBOT	0.00975	1.857	0.0739***
ΔBOTt-1	-0.00916	-1.865	0.0727***
ECMt-1	-0.04720	-9.387	0.0000*

Note: *, **, *** denote significance at the 1%, 5%, and 10% levels, respectively.

Diagnostic Tests

Table 6 reports the post-estimation diagnostic tests. The probability values of all four tests exceed the 1, 5, and 10 percent significance thresholds. The null hypotheses of no serial correlation in the Breusch-Godfrey LM test, homoscedasticity in the Breusch-Pagan-Godfrey test and the Jarque-Bera null hypothesis of normally distributed residuals cannot be rejected. The Ramsey RESET test confirms that the model is correctly specified in functional form. Taken together, these results indicate that the estimated ARDL model is statistically well behaved and free of the specification problems that would undermine the reliability of the reported coefficients.

Table 6: Diagnostic Tests

Diagnosis	Test Type	Result	P-value
Functional Form	Ramsey RESET	1.54	0.1478
Normality	Jarque-Bera	1.77	0.4122
Serial Correlation	Breusch-Godfrey LM	0.15	0.8555
Heteroscedasticity	Breusch-Pagan-Godfrey	1.03	0.4585

Stability Test

The CUSUM (Figure 1) and CUSUM of squares (Figure 2) tests were applied to the recursive residuals of the short-run model to assess the stability of the estimated coefficients over the sample period. In both cases, the plotted statistics remained within the 5 percent critical bounds throughout the sample, indicating that the estimated ARDL model is structurally stable and that no significant parameter instability affects the reported long-run and short-run coefficients.

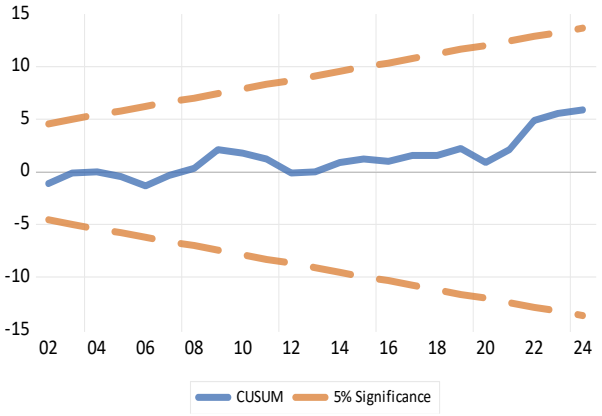

Figure 1: CUSUM

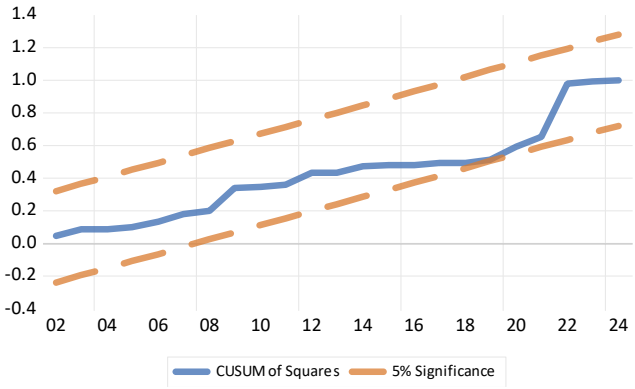

Figure 2: CUSUMQ

DISCUSSION OF FINDINGS

The central finding of this study, that military expenditure exerts a positive and statistically significant long-run effect on real GDP in Nigeria situates this paper within the strand of Nigerian evidence that finds military spending to be growth-enhancing rather than growth-retarding. The result aligns most directly with Adama et al. (2022) who found a positive and significant long-run effect of both defense and internal security spending on Nigerian growth. It also aligns with Nwosu et al. (2026), whose Engle-Granger evidence similarly finds that

military expenditure carries a larger long-run coefficient than education spending which was linked to security functioning as the binding constraint on productive and social participation in an insecurity-affected economy. However, the finding contradicts other Nigerian evidence that reported a negative or fiscally costly relationship. Ajefu (2015) found that the defense burden is harmful to growth while Aminu and Bakar (2016) found that the interaction between defense spending and arms importation depresses growth. The mixed and apparently non-linear response of growth to exchange rate movements is consistent with the dual exposure of Nigeria's oil-exporting, import-dependent economy where naira depreciation raises the domestic-currency value of dollar-denominated export earnings while simultaneously raising the cost of imported capital goods and consumption items (Nwosu et al., 2026). The negative and significant lagged coefficients on gross fixed capital formation point to weak, inefficient and delayed capital formation dynamics in Nigeria. This pattern qualifies Raifu's (2022) finding that military spending eventually crowds in private investment in the long run. The results suggest that even where military spending itself is growth-enhancing, the broader capital formation process in Nigeria remains a source of drag on long-run output.

Finally, the slow error-correction speed of adjustment estimated of 4.72 percent annually indicate that, although Nigeria's economy returns to its long-run equilibrium path following a shock, it does so gradually. A slow speed of adjustment implies that fiscal or security shocks affecting the military spending-growth relationship in Nigeria have persistent effects that take several years to fully dissipate.

Policy Implications

The finding that military expenditure exerts a positive long-run effect on Nigerian output, while gross fixed capital formation exhibits negative and inefficient dynamics, carries several implications for fiscal and security policy. Firstly, the results caution against treating reductions in military spending as a costless route to freeing fiscal space for other developmental priorities. A reduction in security spending that allows insurgency, banditry or kidnapping to intensify could depress rather than enhance long-run output. Secondly, the delayed materialization of the positive military spending effect suggests that Nigerian policymakers would benefit from evaluating the composition and targeting of military spending rather than its aggregate level alone. This approach concentrates resources on interventions with the most direct security-restoring and growth-stimulating effect.

Thirdly, the persistently negative and significant lagged coefficients on gross fixed capital formation indicate that weaknesses in Nigeria's investment process rather than military spending constitute an independent setback on long-run growth. Fourth, the mixed exchange rate results imply that currency management decisions cannot be evaluated for their growth effects in isolation from Nigeria's twin exposure as an oil exporter and an import-dependent economy. Exchange rate policy affecting the cost of imported military hardware and the naira value of export earnings should be coordinated together. Finally, the slow speed of adjustment to long-run equilibrium implies that the growth consequences of security-related fiscal shocks in Nigeria persist over several years, underscoring the importance of medium-term rather than purely annual budgetary planning for the security sector.

CONCLUSION

This study examined the long-run and short-run relationship between military expenditure and economic growth in Nigeria using an ARDL bounds-testing approach that jointly incorporates gross fixed capital formation, the exchange rate, and the balance of trade. The unit root tests confirm a mixture of I(0) and I(1) series appropriate for ARDL estimation while the bounds test confirms the existence of a stable long-run cointegrating relationship among the variables. Military expenditure exerts a positive and statistically significant long-run effect on real GDP. The short-run effect is contemporaneously positive but partially reverses at the first lag. Capital formation exhibits negative and delayed long-run effects, the exchange rate exhibits a non-linear pattern consistent with Nigeria's dual exposure as an oil exporter and import-dependent economy. Balance of trade exerts a robust positive long-run effect. The error-correction term confirms convergence to long-run equilibrium at a slow annual pace of 4.72 percent. These findings position Nigeria within the strand of the empirical literature that finds military spending to be growth-enhancing rather than growth-retarding.

REFERENCES

1. Adama, I. J., Abu, S. I., & Christian, L. (2022). Defense expenditure and economic growth in Nigeria. UMYU Journal of Accounting and Finance Research, 4(2), 1–15. https://doi.org/10.61143/umyu-jafr.4(2)2022.006
2. Ajefu, J. B. (2015). Impact of defence spending on economic growth in Africa: The Nigerian case. Journal of Developing Areas, 49(4), 227–244.
3. Aminu, M. U., & Bakar, A. S. (2016). The interactional impact of defense expenditure and arms importation on economic growth in Nigeria: An autoregressive approach. International Journal of Economics and Financial Issues, 6(2), 538–543.
4. Benoit, E. (1978). Growth and defense in LDCs. Economic Development and Cultural Change, 26(2), 271–280.
5. Dada, J. T., Sharimakin, A., Al-Faryan, M. A. S., Tabash, M. I., & Adeiza, A. (2024). Asymmetric and threshold effect of military expenditure on economic growth: Insight from an emerging market. Peace Economics, Peace Science, and Public Policy, 30(4), 477–503. https://doi.org/10.1515/peps-2023-0067
6. Deger, S., & Smith, R. (1983). Military expenditure and growth in less developed countries. Journal of Conflict Resolution, 27(2), 335–353.
7. Dunne, J. P., Smith, R. P., & Willenbockel, D. (2005). Models of military expenditure and growth: A critical review. Defence and Peace Economics, 16(6), 449–461. https://doi.org/10.1080/10242690500167791
8. Ebenyi, G. O., Ezenekwe, U., Obi, K., Kalu, C., Okpara, O. L., Odo, S. S., & Alochukwu, C. N. (2023). Relationship between military expenditure and economic growth in Nigeria. Renaissance University Journal of Management and Social Sciences, 9(1), 112–124.
9. Eduoku, J. J., & Musa, M. (2023). An empirical assessment of long run cointegration and Granger causality between military expenditure and economic growth in Nigeria (1987–2022). POLAC Economics and Management Science Journals, 3(2). 77 - 85
10. Gbadebo, A., Bekun, F., Akande, J., & Adekunle, A. O. (2024). Defence spending and real growth in an asymmetric environment: Accessing evidence from a developing economy. International Journal of Finance & Economics. https://doi.org/10.1002/ijfe.2966
11. Lawal, E. O., Musa, D. C., Kwarbai, J. D., Okedina, I. M., Oloyede, B. B., Ebere, C. E., & Osundina, O. A. (2024). Revisiting military expenditure and economic growth nexus in Nigeria: A wavelet approach. Journal of Ecohumanism, 3(4), 1215–1227.
12. Musa, D. C. (2024). Asymmetric defense expenditure and economic growth in Nigeria. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4836128
13. NBS (2026). National Bureau of Statistics
14. Nwosu, C. A., Uwaleke, L. N., Duruchukwu, F., Ihemeje, E. O., & Obiukwu, N. J. (2026). Military spending, government education expenditure and school enrollment in Nigeria: Engle-Granger two step cointegration approach. International Journal of African Research and Sustainability Studies, 11(2), 153–170. https://doi.org/10.70382/caijarss.v11i2.050
15. Ouseibai, S., & Tombofa, S. (2024). National defence expenditures, internal security expenditures and real economic growth. Ekonomik Yaklasim. https://doi.org/10.5455/ey.41005
16. Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. Journal of Applied Econometrics, 16(3), 289–326.
17. Raifu, I. A. (2022). Effect of military spending on private investment in Nigeria: Does a crowding-out effect exist? European Journal of Government and Economics, 11(2), 167–192. https://doi.org/10.17979/ejge.2022.11.2.8758
18. Stewart, F. (2004). Development and security. Conflict, Security & Development, 4(3), 261–288.