

Tax Revenue Mobilisation and National Security Funding in Nigeria

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Article DOI: 10.48028/ijprds/ijcsird.v11.i1.22

Abstract

The study examines the effect of tax revenue mobilisation on national security funding in Nigeria using annual time series data spanning 1990 to 2024. Anchored on the Benefit Theory of Taxation, Public Goods Theory, and Revenue-Effort Theory, the study employs the Autoregressive Distributed Lag (ARDL) bounds testing approach developed by Pesaran, Shin and Smith (2001) to estimate both long-run and short-run dynamics among the variables. The findings from the bounds test confirm the existence of a stable long-run cointegrating relationship among tax revenue mobilisation, GDP growth, inflation, corruption, public debt, and national security funding. The long-run estimates reveal that tax revenue mobilisation exerts a positive and significant effect on national security funding, while corruption and public debt exert significant negative effects. GDP growth also exerts a significant negative effect, contrary to a priori expectations, while inflation exerts a positive but modest influence. The error correction term confirms a valid adjustment mechanism toward long-run equilibrium. The study concludes that strengthening domestic revenue mobilisation, combating corruption, and prudent debt management are essential for ensuring sustainable national security financing in Nigeria.

Keywords: *Tax revenue mobilisation, National security funding, ARDL bounds test, Corruption, public debt, Nigeria*

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Background to the Study

Taxation remains one of the most important instruments of public finance and a major source of revenue for governments across the world. Through taxation, governments mobilise resources required for the provision of public goods and services, including infrastructure, healthcare, education, and security. Beyond revenue generation, taxation contributes to macroeconomic stability, income redistribution, and efficient resource allocation (Yashim et al., 2021). In developing economies, effective tax revenue mobilisation has become increasingly important due to rising public expenditure obligations, growing fiscal deficits, and the need to reduce dependence on external borrowing and volatile natural resource revenues (Achanya & Mamman, 2024). Consequently, domestic revenue mobilisation has emerged as a critical component of fiscal sustainability and state capacity.

The importance of tax revenue mobilisation has become particularly evident in Nigeria, where government finances have historically depended on oil revenues. While oil receipts have contributed significantly to public revenue over the years, fluctuations in global oil prices, declining production levels, and recurrent disruptions in the petroleum sector have exposed the vulnerability of this revenue structure. These challenges have intensified calls for increased non-oil revenue mobilisation through improved tax administration, broader tax bases, and enhanced compliance. Strengthening tax revenue generation has therefore become a strategic priority for government in its efforts to finance increasing expenditure demands and maintain fiscal stability.

At the same time, Nigeria continues to face complex and evolving security challenges that threaten national stability and socio-economic development. The country has witnessed persistent incidents of insurgency, terrorism, banditry, kidnapping, communal conflicts, separatist agitations, and organised criminal activities. These security threats have resulted in loss of lives and property, displacement of populations, disruption of economic activities, and declining investor confidence. According to Ikyase et al. (2025), national security extends beyond military defence to include the protection of citizens, institutions, and national interests against diverse threats. Similarly, Yusuf and Mohd (2022) argue that insecurity imposes substantial economic costs by reducing investment opportunities, disrupting production, and diverting resources away from productive sectors. Consequently, national security has become a critical policy concern requiring substantial and sustained financial commitments.

National security funding refers to government expenditure directed towards defence, policing, intelligence gathering, border security, and other activities aimed at safeguarding lives, property, and national sovereignty. The effectiveness of security institutions depends largely on the adequacy and sustainability of available funding. Globally, increasing security threats have resulted in growing expenditure on security operations, personnel, equipment, and technological infrastructure (SIPRI, 2024). In Nigeria, rising security challenges have similarly increased pressure on public finances, making the availability of reliable revenue sources crucial for sustaining security expenditure. Given that national security is widely recognised as a public good, taxation remains a primary mechanism through which government mobilises resources for its provision (Raji et al., 2025).

Empirical evidence suggests that tax revenue plays a significant role in shaping public expenditure patterns and strengthening government capacity. Studies by Gnanngnon (2022), Gurdal et al. (2021), Tashevska et al. (2020), Alim et al. (2021), and Arvin et al. (2021) found that improved tax revenue generation positively influences government expenditure and fiscal performance. Similarly, Afonso et al. (2021) reported that effective revenue mobilisation enhances public expenditure efficiency and service delivery. Although a few studies such as Adegbite et al. (2021) and Bayson (2025) have examined the relationship between taxation and security financing, the existing literature remains limited. Most studies have focused on taxation and economic growth, taxation and public expenditure, or security expenditure and economic development, with relatively little attention devoted to understanding how tax revenue mobilisation affects national security funding, particularly in Nigeria.

This gap is important because Nigeria's increasing security expenditure requirements coexist with persistent fiscal constraints and growing concerns about revenue adequacy. Despite efforts to improve tax administration and expand the tax base, questions remain regarding whether enhanced tax revenue mobilisation translates into improved funding for national security. Consequently, the relationship between tax revenue mobilisation and national security funding remains insufficiently understood within the Nigerian context. Against this backdrop, the objective of this study is to examine the effect of tax revenue mobilisation on national security funding in Nigeria.

Literature Review

Conceptual Review

Taxation and Tax Revenue Mobilisation

Taxation is a fundamental instrument of public finance through which governments generate revenue for the provision of public goods and services while promoting resource allocation, income redistribution, and macroeconomic stability (Yashim et al., 2021). Tax revenue mobilisation refers to the process of enhancing revenue generation through effective tax policies, efficient administration, improved compliance, and the expansion of the tax base (Achanya & Mamman, 2024). In other words, taxation has to do with the policy design consisting of what to tax, how much, and who pays the tax while tax revenue mobilization focuses on how much is actually collected in taxes. In developing economies, strong tax mobilisation is increasingly viewed as a means of achieving fiscal sustainability and reducing dependence on external financing. In Nigeria, the volatility of oil revenues has intensified efforts to strengthen non-oil tax revenue sources, making tax mobilisation a critical factor in government's capacity to finance essential services, including national security.

National Security

National security refers to the protection of a state's sovereignty, territorial integrity, institutions, citizens, and strategic interests from internal and external threats. While traditionally associated with military defence, contemporary perspectives recognise national security as a multidimensional concept encompassing threats such as terrorism, insurgency, organised crime, cybercrime, political instability, and economic vulnerabilities (Ikyase et al. (2025). National security is widely regarded as a prerequisite for economic growth and

sustainable development because insecurity disrupts productive activities, discourages investment, and weakens social cohesion (Magaji et al., 2024). In Nigeria, persistent security challenges including insurgency, banditry, kidnapping, and communal conflicts have elevated national security to a major public policy concern.

National Security Funding

National security funding refers to the financial resources allocated by government to defence, policing, intelligence gathering, border protection, and other security-related activities aimed at maintaining peace, order, and national stability. The effectiveness of security institutions depends significantly on the adequacy, sustainability, and efficiency of such funding arrangements. Rising security threats across the world have increased the demand for greater expenditure on security operations, personnel, equipment, and technological infrastructure (SIPRI, 2024). Increasing security challenges have placed considerable pressure on public finances in Nigeria, making the availability of stable revenue sources particularly important for sustaining national security expenditure and strengthening security institutions.

Taxation and Public Goods Provision

The relationship between taxation and public goods provision is rooted in the need for government intervention to finance goods and services that private markets cannot efficiently provide. Public goods are characterised by non-rivalry and non-excludability, meaning that individuals cannot be excluded from enjoying their benefits and one person's consumption does not reduce availability to others (Raji et al., 2025). National security is a classic example of a public good because its benefits extend to all citizens irrespective of their individual contributions. Consequently, taxation serves as the primary mechanism through which governments mobilise resources for the provision of security and other collective services. Effective tax revenue mobilisation therefore enhances government's capacity to finance national security, while weak tax systems may undermine the provision of this essential public good and hinder socio-economic development.

Theoretical review

The relationship between tax revenue mobilisation and national security funding can be explained through theories that justify government taxation and expenditure on public services. This study is anchored on the Benefit Theory of Taxation and the Public Goods Theory supported by the Revenue-Effort theory. These theories provide a suitable framework for understanding how tax revenues support the provision and financing of national security.

The Benefit Theory of Taxation

The Benefit Theory of Taxation originated from the works of classical economists, particularly Adam Smith (1776) and David Ricardo (1817), and was later refined by Knut Wicksell (1896) and Erik Lindahl (1919). The theory posits that individuals should contribute to government revenue according to the benefits they derive from public services. Taxation is therefore viewed as an exchange relationship in which citizens pay taxes in return for services provided by the state (Prichard, 2010). The theory assumes that those who benefit more from government services should bear a greater share of the tax burden. The theory is relevant to

this study because national security constitutes one of the primary services provided by government. Citizens and businesses rely on government for the protection of lives, property, and economic activities, and taxes serve as a major source of financing for these services. Consequently, improved tax revenue mobilisation enhances government's fiscal capacity to fund defence, policing, intelligence, and other security operations. Although the theory has been criticised for the difficulty of measuring individual benefits from public services, it remains useful in explaining the connection between taxation and national security funding.

The Public Goods Theory

The Public Goods Theory was propounded by Paul Samuelson in 1954. The theory argues that certain goods and services possess the characteristics of non-rivalry and non-excludability, meaning that one person's consumption does not reduce availability to others and individuals cannot easily be excluded from enjoying their benefits. These characteristics create market failure because private markets lack sufficient incentives to provide such goods efficiently, thereby necessitating government intervention. National security is widely recognised as a classic public good because its benefits extend to all citizens irrespective of their individual contributions towards its financing. The theory therefore justifies government expenditure on defence and security and identifies taxation as the principal mechanism for mobilising resources for such expenditure. In developing countries such as Nigeria, where security challenges continue to intensify amidst fiscal constraints, the ability of government to generate adequate tax revenue becomes crucial for sustaining national security funding. Public Goods Theory thus reinforces the argument that effective tax revenue mobilisation is essential for the provision and maintenance of national security.

Revenue-Effort Theory

The Revenue-Effort Theory draws from the foundational contributions of Richard Bird (1964) and was later advanced by scholars including Lotz and Morss (1967), Bahl (1971), Stotsky and Wolde Mariam (1997). The theory posits that a government's actual tax collection relative to its taxable capacity, commonly referred to as tax effort, determines the extent to which the state can finance its expenditure obligations, including the provision of public goods and services. The theory assumes that countries with low tax effort relative to their economic potential consistently underfinance critical public expenditures, creating structural gaps between fiscal needs and available resources. The theory is relevant to this study because Nigeria's persistently low tax-to-GDP ratio, represents a fundamental constraint on the government's capacity to finance national security. Despite the magnitude of security challenges confronting Nigeria, including insurgency in the Northeast, banditry in the Northwest, and separatist agitation in the South, the revenue base available to finance defence, policing, and intelligence operations remains structurally inadequate. Revenue-Effort Theory therefore provides a compelling framework for understanding why security underfunding in Nigeria is not merely a function of misallocation or corruption, but reflects a deeper structural failure to mobilise available taxable capacity. Although the theory has been criticised for its reliance on cross-country comparisons that may not adequately capture country-specific institutional contexts, it remains a powerful analytical tool for examining the fiscal determinants of national security expenditure in developing economies.

Empirical Review

The relationship between taxation, government expenditure, and economic development has received considerable attention in public finance literature. Existing empirical studies generally acknowledge taxation as a critical source of government revenue and an important determinant of public expenditure decisions. However, the extent to which tax revenue mobilisation contributes specifically to the financing of national security remains relatively underexplored, particularly within developing economies where fiscal constraints and security challenges often coexist.

Empirical literature has consistently demonstrated the importance of tax revenue in shaping government expenditure patterns. Using data from 113 developing countries between 1980 and 2019, Gnangnon (2022) found that instability in tax revenue adversely affects the composition and sustainability of public expenditure. The study revealed that fluctuations in tax receipts create fiscal uncertainties that undermine governments' ability to maintain consistent expenditure levels, particularly in sectors requiring sustained financial commitments. This finding suggests that effective tax mobilisation is essential for ensuring the stability of government spending and reducing fiscal vulnerabilities. Similarly, studies examining the revenue-expenditure nexus have largely reported a positive relationship between tax revenue and public expenditure. Using data from Turkey, Gurdal et al. (2021) found evidence supporting the tax-spend hypothesis, indicating that increases in tax revenue significantly influence government expenditure decisions. Comparable findings were reported by Tashevska et al. (2020), where a long-run relationship between tax revenues and public spending was observed across selected European economies. The findings suggest that government expenditure tends to respond positively to changes in revenue generation, thereby highlighting the importance of taxation in sustaining public sector activities.

Further evidence was provided by Alim et al. (2021), the study revealed that tax revenue plays a significant role in determining the level and structure of public expenditure. The authors argued that effective tax mobilisation enhances fiscal capacity and provides governments with greater flexibility in addressing developmental priorities. Likewise, Arvin et al. (2021) reported that improved revenue generation contributes to stronger fiscal performance and enables governments to undertake expenditure programmes that support economic and social development. Collectively, these studies reinforce the argument that taxation constitutes a fundamental pillar of public finance and remains central to government expenditure management.

Beyond its influence on aggregate expenditure, taxation has also been linked to public spending efficiency. Afonso et al. (2021) examined the relationship between taxation and public expenditure efficiency and found that improvements in revenue mobilisation can enhance government's capacity to deliver public services effectively. The study argued that stronger tax systems not only increase revenue availability but also improve fiscal accountability and resource allocation. These findings suggest that the benefits of tax mobilisation extend beyond revenue generation to encompass broader improvements in public sector performance.

Within the Nigerian context, studies have increasingly focused on the role of taxation in financing government activities amidst declining oil revenues and growing expenditure demands. The growing importance of domestic revenue mobilisation reflects concerns regarding fiscal sustainability and the need to diversify government revenue sources. As security challenges intensify and expenditure obligations increase, tax revenue has become an increasingly important component of government financing strategies. The relationship between taxation and national security has received comparatively less attention in empirical research. One of the few studies directly addressing this nexus was conducted by Adegbite et al. (2021), who examined the contribution of direct taxes to internal security financing in Nigeria. The study reported that direct tax revenues exert a positive and significant influence on government capacity to finance security-related activities. The authors argued that strengthening tax administration and improving compliance could enhance the availability of resources required for maintaining internal security. This finding stresses the strategic importance of taxation in supporting government responses to security challenges.

In a related study, Bayson (2025) investigated the role of taxation in promoting national security and institutional stability. The study found that efficient tax systems contribute not only to revenue generation but also to improved state capacity and effective public service delivery. Likewise, that sustained revenue mobilisation enables governments to finance critical sectors such as defence, policing, and intelligence services, thereby strengthening national security architecture. These findings support the argument that taxation plays a dual role as both a fiscal instrument and a mechanism for enhancing state effectiveness. Existing literature also highlights the growing significance of sustainable financing mechanisms for defence and security expenditures. Adrian (2025) examined contemporary approaches to defence financing and emphasised the importance of stable domestic revenue sources in supporting long-term security objectives. The study observed that overreliance on debt financing may compromise fiscal sustainability and create vulnerabilities in national security funding. Consequently, strengthening domestic revenue mobilisation through taxation was identified as a more sustainable approach to financing defence and security operations.

A substantial body of empirical evidence has further examined the broader implications of security expenditure for economic performance and development outcomes. The literature generally recognises security as a prerequisite for sustainable economic growth because insecurity undermines investment, disrupts productive activities, and increases economic uncertainty. Consequently, governments often allocate significant resources to defence and security institutions in order to preserve stability and support economic development. Dudzevičiūtė et al. (2021) found that security expenditure contributes positively to economic stability when efficiently managed and appropriately targeted. The findings suggest that investments in security can create an enabling environment for economic activities by reducing uncertainty and protecting productive assets. Similarly, Saeed (2025) argued that adequate defence spending remains essential for maintaining political stability and safeguarding development gains, particularly in countries experiencing persistent security threats.

Evidence from developing economies also suggests that the effectiveness of security expenditure depends largely on the availability and sustainability of financing mechanisms. Dauda and Elegu (2026) observed that inadequate and inconsistent funding often constrains the operational effectiveness of security institutions. The study emphasised the importance of reliable revenue sources in ensuring the continuity of security operations and institutional preparedness. Relatedly, Duruibe et al. (2020) reported that countries facing significant security challenges often experience increasing pressure on public finances as governments attempt to balance security needs with other developmental priorities.

While the literature provides valuable insights into the relationships among taxation, public expenditure, security spending, and economic development, important gaps remain. Existing studies have largely focused on the effect of taxation on economic growth, public expenditure, fiscal performance, and development outcomes. Similarly, studies on security expenditure have predominantly examined its implications for economic growth, investment, and macroeconomic stability. Although a few studies have explored the relationship between taxation and security financing, empirical evidence remains limited and fragmented. More importantly, previous studies have generally examined taxation and security expenditure as separate areas of inquiry rather than as interconnected components of a broader fiscal framework. Consequently, limited attention has been devoted to understanding how improvements in tax revenue mobilisation influence national security funding, particularly within the Nigerian context where security challenges continue to intensify amidst persistent fiscal constraints.

Accordingly, a significant gap exists in the literature regarding the effect of tax revenue mobilisation on national security funding in Nigeria. This study seeks to fill this gap by examining whether improvements in tax revenue mobilisation enhance government's capacity to allocate resources towards national security funding, using Nigeria as a case study. In doing so, the study contributes to the emerging discourse on fiscal sustainability, domestic revenue mobilisation, and the financing of national security in developing economies.

Methodology

Research Design

This study relies on historical macroeconomic data that cannot be manipulated by the researcher; hence the ex-post facto design suits the nature of the study. This design is also widely used in public finance and macroeconomic studies because it facilitates the examination of relationships among economic variables using already existing data. The design is particularly suitable for investigating the effect of tax revenue mobilisation on national security funding in Nigeria over time.

Estimation Technique and Model Specification

The study is anchored on the Benefit Theory of Taxation and the Public Goods Theory. These theories provide complementary explanations for the relationship between tax revenue mobilisation and national security funding. While the Benefit Theory emphasises the reciprocal relationship between taxpayers and government through the provision of security

services, the Public Goods Theory highlights the collective nature of security and the necessity of government intervention in its provision. Together, the theories establish taxation as a critical instrument for financing security-related expenditure. The Autoregressive Distributed Lag (ARDL) modelling approach developed by Pesaran et al. (2001) was employed in the study. The ARDL technique is appropriate because it accommodates variables integrated of order zero, $I(0)$, and order one, $I(1)$. The ARDL approach performs efficiently in small sample sizes, distinguishes between short-run and long-run relationships, and provides robust estimates even when explanatory variables exhibit different orders of integration.

The model for this study is adapted from the public finance framework adopted by Adegbite et al. (2021) and modified to capture the relationship between tax revenue mobilisation and national security funding in Nigeria. Thus, the functional relationship between tax mobilization and national security funding is expressed as follows:

$$NSF = f(TTR, GDPGR, INFL, COR, DEBT)$$

Transforming TTR into logarithmic form to reduce skewness and minimise heteroskedasticity, the econometric form is given as:

$$NSF_t = \beta_0 + \beta_1 LNTTR_t + \beta_2 GDPgr_t + \beta_3 INFL_t + \beta_4 COR_t + \beta_5 DEBT_t + \mu_t$$

Where:

NSF_t = National Security Funding proxied by Military expenditure (% of general government expenditure)

$LNTTR_t$ = Log of total tax revenue.

$GDPgr_t$ = GDP Growth Rate.

$INFL_t$ = Inflation rate.

COR_t = Corruption Index proxied by Control of Corruption - Governance score (0-100).

$DEBT_t$ = Public Debt proxied by Gross debt, General government, Percent of GDP.

μ_t = Error term capturing unmeasured factors.

$\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are parameters to be estimated.

A priori expectation $\beta_1 > 0, \beta_2 > 0, \beta_3 < 0, \beta_4 < 0$ and $\beta_5 < 0$.

The ARDL equation is specified as follows:

$$\begin{aligned} \Delta NSF_t = & a_{01} + \sum_{j=1}^p a_{1j} \Delta NSF_{t-j} + \sum_{j=1}^{q1} a_{2j} \Delta LNTTR_{t-j} + \sum_{j=1}^{q2} a_{3j} \Delta GDPGR_{t-j} \\ & + \sum_{j=1}^{q3} a_{4j} \Delta INFL_{t-j} + \sum_{j=1}^{q4} a_{5j} \Delta COR_{t-j} + \sum_{j=1}^{q5} a_{6j} \Delta DEBT_{t-j} + U_{1t} \end{aligned}$$

Where;

p = lag length of the model

Δ = first operator difference

U_t = error term of white noise disturbance

a_i = the long-run coefficient multipliers

The ECM shows the short-run dynamics, that is, the speed of correction to long-run equilibrium after certain short-run disturbances. The ECM is illustrated as follows:

$$\Delta NSF_t = \beta_o + \beta_1 \sum_{i=1}^q \Delta NSF_{t-1} + \beta_2 \sum_{i=1}^q \Delta LNTTR_{t-1} + \beta_3 \sum_{i=1}^q \Delta GDPGR_{t-1} + \beta_4 \sum_{i=1}^q \Delta INFL_{t-1} + \beta_5 \sum_{i=1}^q \Delta COR_{t-1} + \beta_6 \sum_{i=1}^q \Delta DEBT_{t-1} + \delta ECM_{t-1} + U_t$$

Where;

ECM_{t-1} = one lag period of error correction term

δ = the ECM coefficient

β_i = the short-run coefficients to be estimated

Analysis and Discussion of Results

Descriptive Statistics

Table 1: Descriptive Statistics

	COR	DEBT	GDPGR	INFL	LNTTR	NSF
Mean	23.15158	25.05966	4.081118	18.70559	6.613605	3.421882
Median	24.33592	21.44000	4.230061	13.00697	7.142511	3.320592
Maximum	26.74680	53.23200	15.32916	72.83550	8.980243	8.063681
Minimum	13.67989	5.167000	-6.368898	5.388008	2.908277	1.470257
Std. Dev.	2.945320	14.48600	4.151732	15.86930	1.830862	1.292304
Skewness	-1.606457	0.473938	0.106535	2.071452	-0.588310	1.502071
Kurtosis	5.041807	2.089362	3.822567	6.495683	2.183796	6.305824
Jarque-Bera	21.13386	2.519605	1.052939	42.85088	2.990494	29.09862
Probability	0.000026	0.283710	0.590687	0.000000	0.224193	0.000000
Sum	810.3054	877.0880	142.8391	654.6957	231.4762	119.7659
Sum Sq. Dev.	294.9469	7134.707	586.0539	8562.376	113.9699	56.78165
Observations	35	35	35	35	35	35

Source: Computation by the author, 2026 using E-view 10

Table 1 presents the descriptive statistical properties of all variables employed in the study over the 35-year sample period from 1990 to 2024. The National Security Funding (NSF) recorded a mean value of 3.42 with a minimum of 1.47 and a maximum of 8.06, indicating considerable variation in Nigeria's commitment to security financing over the study period. The positive skewness of 1.50 and high kurtosis of 6.31 suggest that the distribution of security funding is asymmetric and leptokurtic, with episodes of unusually high security expenditure pulling the distribution rightward, consistent with Nigeria's documented surge in defence appropriations during periods of heightened insurgency.

The log of total tax revenue (LNTTR) averaged 6.61 with a standard deviation of 1.83, reflecting the moderate but volatile growth of Nigeria's tax base over the period. Its negative skewness of -0.59 indicates that extremely low tax revenue episodes were more pronounced than high revenue episodes, consistent with the oil price collapse periods of 1986, 2016, and 2020. GDP growth rate (GDPGR) averaged 4.08% over the period, ranging from a contraction of -6.37% to a peak of 15.33%. The near-zero skewness of 0.11 and kurtosis of 3.82 indicate an approximately normal distribution, suggesting that GDP growth fluctuations were relatively symmetric around the mean. Inflation (INFL) averaged 18.71% with a very high standard deviation of 15.87, confirming the chronic and volatile inflation environment that has characterised Nigeria's macroeconomy. The extreme positive skewness of 2.07 and kurtosis of 6.50 reflect the hyperinflationary episodes of the early 1990s and the post-2022 inflation surge following fuel subsidy removal and naira devaluation.

The Corruption Index (COR) averaged 23.15 on a scale of 0 to 100, with a maximum of 26.75 and minimum of 13.68. These consistently low scores confirm Nigeria's persistent ranking in the bottom quartile of global governance indicators throughout the sample period. The negative skewness of -1.61 indicates that extremely low scores, reflecting severe corruption, were more frequent than high scores. Public debt (DEBT) averaged 25.06% of GDP, ranging from a minimum of 5.17% to a maximum of 53.23%. The moderate positive skewness of 0.47 reflects the gradual accumulation of debt in recent years following the post-2006 Paris Club debt relief, which temporarily reduced the debt-to-GDP ratio dramatically before it began rising again after 2015.

Correlation Analysis

Table 2: Correlation Matrix 1990 to 2024

	COR	DEBT	GDPGR	INFL	LNTTR	NSF
COR	1.0000					
DEBT	-0.2499	1				
GDPGR	-0.4401	-0.1792	1			
INFL	0.1765	0.3765	-0.3735	1		
LNTTR	0.1927	-0.5446	-0.0033	-0.3964	1	
NSF	0.0896	-0.1566	-0.2121	-0.1227	0.5737	1

Source: Computation by the author, 2026 using E-view 10

The correlation matrix presented in Table 2 examines the pairwise linear associations among all variables prior to formal estimation. LNTTR exhibits the strongest positive correlation with NSF ($r = 0.5737$), indicating that higher tax revenue mobilisation is associated with greater national security funding, consistent with the revenue-effort theoretical framework and the a priori expectation of a positive relationship. This is the most important bivariate relationship in the model and provides early supporting evidence for the central hypothesis of the study. DEBT exhibits a negative correlation with NSF ($r = -0.1566$), suggesting that higher public

debt burdens are associated with lower security funding, consistent with the crowding-out hypothesis. DEBT also shows a strong negative correlation with LNTTR ($r = -0.5446$), indicating that periods of higher debt correspond with lower tax revenue, likely reflecting the fiscal compression that accompanies debt overhang in Nigeria's budgetary architecture.

GDPGR shows a negative correlation with NSF ($r = -0.2121$), which is contrary to the a priori expectation. This preliminary finding may reflect the fact that Nigeria's GDP growth has historically been driven by oil sector expansion rather than broad-based economic development that expands the formal tax base and security financing capacity. COR shows a weak positive correlation with NSF ($r = 0.0896$), which is counter-intuitive but not uncommon in preliminary bivariate analysis where third-variable confounding is present. The multivariate regression controls for this and produces the expected negative relationship. INFL shows a weak negative correlation with NSF ($r = -0.1227$), directionally consistent with the a priori expectation, though the relationship is weak in bivariate form. Importantly, no pair of independent variables exhibits a correlation coefficient above 0.60 in absolute value, suggesting that severe multicollinearity is not a concern in this model. The highest inter-regressor correlation is between DEBT and LNTTR ($r = -0.5446$), which is below the commonly cited threshold of 0.80 beyond which multicollinearity becomes problematic (Vatcheva et al. 2016).

Unit Root Test Results

Table 3: Unit root test result using Augmented Dickey-Fuller (ADF)

Variables	ADF at Level	ADF at first Difference	Order of Integration
NSFE	-4.635236 (0.0039)	N/E	I(0)
LNTTR	-1.673508 (0.7404)	-8.580045 (0.0000)	I(1)
GDPGR	-3.681964 (0.0375)	N/E	I(0)
INFL	-2.915617 (0.1708)	-4.579521 (0.0046)	I(1)
COR	-2.401957 (0.3719)	-4.144925 (0.0132)	I(1)
DEBT	-1.213999 (0.8915)	-5.102402 (0.0012)	I(1)
<i>N/E = not estimated, because the individual unit root test results were stationary at level at five percent confidence level</i> <i>() = values in parentheses are the corresponding probability values.</i>			

Source: Author's computation using Eviews 10. (2026)

The results of the Augmented Dickey-Fuller (ADF) unit root test presented in Table 3 reveal a mixture of integration orders among the study variables, which provides the necessary statistical justification for the application of the ARDL bounds testing approach. NSF and

GDPGR are stationary at level, integrated of order zero, $I(0)$, with ADF statistics of -4.635 ($p = 0.0039$) and -3.682 ($p = 0.0375$) respectively at the 5% level of significance. This indicates that national security funding and real GDP growth fluctuate around a stable long-run mean without exhibiting a persistent drift, which is theoretically consistent given that both are expressed as ratios or growth rates rather than trending level variables.

LNTTR, INFL, COR, and DEBT are non-stationary at level but achieve stationarity upon first differencing, integrated of order one, $I(1)$. Their ADF statistics at first difference are -8.580 ($p = 0.0000$), -4.580 ($p = 0.0046$), -4.145 ($p = 0.0132$), and -5.102 ($p = 0.0012$) respectively, all strongly rejecting the null hypothesis of a unit root. This pattern is consistent with the expectation that level variables such as tax revenue, inflation, corruption scores, and debt ratios tend to exhibit trending behaviour in developing economies like Nigeria. Crucially, no variable is integrated of order two, $I(2)$, which is a prerequisite condition for the validity of the ARDL bounds testing procedure. The mix of $I(0)$ and $I(1)$ variables confirms that the ARDL approach of Pesaran, et al. (2001) is the most appropriate estimation technique for this study.

Bounds test results for cointegration

Table 4: Bound Test Results for Long run Relationships among the Study's Variables

Test Statistic	Value	K
F-statistic	8.556302	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.08	3
5%	2.39	3.38
2.5%	2.7	3.73
1%	3.06	4.15

Source: computation by the author, 2026 using E-view 10.

The ARDL bounds test results presented in Table 4 provide strong evidence of a long-run cointegrating relationship among the study variables. The computed F-statistic of 8.5563 substantially exceeds the upper critical bound of 4.15 at the 1% significance level under the asymptotic distribution. The null hypothesis of no long-run levels relationship is therefore decisively rejected at the 1% significance level. This finding confirms that despite the short-run fluctuations and structural shocks Nigeria experienced over the 1990–2024 period, including the 2006 Paris Club debt relief, the 2009 oil price crash, the 2016 recession, and the 2020 COVID-19 shock, national security funding, tax revenue mobilisation, GDP growth, inflation, corruption, and public debt maintain a stable long-run equilibrium relationship.

Short-Run ARDL Results of Estimated

Table 5: Short run ARDL and error Correction Results

Dependent variable: D(NSF)				
Variable	Coefficient	Standard Error	t-Statistic	Probability
D(LNTTR)	-0.840646	0.435453	-1.930508	0.0672
D(GDPGR)	0.009742	0.042738	0.227952	0.8219
D(COR)	-0.056106	0.104501	-0.536896	0.5970
D(COR(-1))	-0.132987	0.089070	-1.493059	0.1503
D(DEBT)	0.030242	0.020321	1.488258	0.1515
CointEq(-1)*	-1.050493	0.119710	-8.775347	0.0000
Diagnostic tests				
Adjusted R-squared	0.696357			
Breusch-Godfrey Serial Correlation LM Test:	0.313014 (0.7349)	Jarque-Bera test		4.672849 (0.096673)
Heteroskedasticity Test: Breusch Pagan-Godfrey	1.117493 (0.3958)	Durbin-Watson statistic		1.916

Source: Computation by the Author, 2026 with the aid of E-view 10.

The short-run dynamics and speed of adjustment toward long-run equilibrium are presented in Table 5. In the short run, none of the differenced regressors, D(LNTTR), D(GDPGR), D(COR), D(COR(-1)), and D(DEBT), are statistically significant at the conventional 5% level. This indicates that the contemporaneous and lagged short-run changes in tax revenue, GDP growth, corruption, and public debt do not produce immediate statistically significant responses in national security funding within the same year. This finding is theoretically plausible, security budget allocations in Nigeria are determined through an annual appropriation process and are therefore relatively insensitive to within-year macroeconomic fluctuations, adjusting instead over the medium to long run.

The error correction term, CointEq(-1), carries a coefficient of -1.0505 and is statistically significant at the 5 percent level ($t = -8.7753$, $p = 0.0000$). The negative sign confirms the existence of a valid long-run equilibrium relationship and validates the bounds test finding. The magnitude of -1.0505 indicates that approximately 105% of any deviation from the long-run equilibrium path is corrected within one year. This slight overshooting beyond unity suggests that the adjustment mechanism is characterised by mild oscillatory convergence, the system corrects past the equilibrium point before settling, which is consistent with the discretionary and politically driven nature of Nigeria's security budget appropriations that tend to overreact to security shocks before stabilising.

The adjusted R-squared of 0.6964 indicates that the short-run model explains approximately 69.64% of the variation in the first difference of national security funding. The Durbin-Watson statistic of 1.916 is close to 2, providing further confirmation of the absence of serial correlation in the residuals. The Breusch-Godfrey Serial Correlation LM test statistic of 0.313 ($p = 0.7349$) fails to reject the null hypothesis of no serial correlation, confirming that the model residuals are serially uncorrelated. The Breusch-Pagan-Godfrey heteroskedasticity test

statistic of 1.117 ($p = 0.3958$) similarly fails to reject the null hypothesis of homoskedasticity, confirming that the residual variance is constant across the sample period. Both diagnostic results confirm that the short-run model is statistically well-specified and that coefficient estimates are efficient and unbiased.

The Jarque-Bera test statistic of 4.6728 with a corresponding probability value of 0.0967 fails to reject the null hypothesis of normal distribution at the 5 percent significance level, confirming that the model residuals are normally distributed.

Long-Run ARDL Results

Table 6: Long run ARDL results

Variable	Coefficient	Standard Error	t-Statistic	Probability
LNTTR	0.485041	0.117033	4.144494	0.0005
GDPGR	-0.247624	0.069346	-3.570841	0.0018
INFL	0.048386	0.021889	2.210487	0.0383
COR	-0.274575	0.108495	-2.530752	0.0194
DEBT	-0.058304	0.026919	-2.165905	0.0420
C	8.178710	3.001814	2.724589	0.0127

Source: Computation by the Author, 2026 using E-view 10.

The long-run coefficients presented in Table 6 constitute the substantive empirical findings of this study and are interpreted in the context of the theoretical framework and a priori expectations. The log of total tax revenue (LNTTR) exerts a positive and statistically significant effect (coefficient = 0.4850, $p = 0.0005$) on national security funding at the 5 percent significance level. A 1 percent increase in tax revenue mobilisation is associated with a 0.4850% increase in the national security funding index in the long run, holding all other variables constant. This finding confirms the a priori expectation and is consistent with Revenue-Effort Theory, which posits that a government's capacity to deliver public goods, including security, is fundamentally constrained by its tax collection effort. The result implies that expanding Nigeria's tax base and improving collection efficiency are prerequisites for sustainable security financing. It also validates the Benefit Principle, as greater revenue mobilisation strengthens the fiscal basis of the security social contract between the state and its citizens.

GDP growth (GDPGR) exerts a negative and statistically significant effect (coefficient = -0.2476 , $p = 0.0018$) on national security funding at the 5 percent significance level, contrary to the positive a priori expectation. A 1 percentage point increase in GDP growth is associated with a 0.2476% decrease in the national security funding index in the long run. This unexpected finding may be explained by the structure of Nigeria's economic growth, which has historically been concentrated in the oil and gas sector and, more recently, in telecommunications and financial services, sectors that are capital intensive and generate limited formal employment and taxable economic activity. Consequently, periods of strong GDP growth in Nigeria have not necessarily translated into proportionate expansions of the

security budget. Additionally, high growth periods may coincide with relative security stability, reducing the perceived urgency of security appropriations. This finding is consistent with the resource curse argument that oil-driven growth weakens rather than strengthens the fiscal-security nexus (Idemudia, 2012).

Inflation (INFL) exerts a positive and statistically significant effect (coefficient = 0.0484, $p = 0.0383$) on national security funding at the 5 percent significance level, contrary to the a priori expectation of a negative relationship. A 1 percentage point increase in inflation is associated with a 0.0484% increase in the national security funding index in the long run. While this result appears counterintuitive, it may reflect the fact that Nigeria's government tends to increase nominal security appropriations during high inflation periods to partially compensate for the erosion of real purchasing power, even though the real value of those appropriations remains lower. The result may also capture the well-documented relationship in Nigeria between inflationary periods, which tend to coincide with fiscal expansion, oil revenue booms, and depreciation-driven government spending increases, and higher nominal budget allocations to security agencies. The coefficient is small in magnitude (0.048), suggesting that the inflationary offset to nominal security spending is partial and incomplete.

The Corruption Index (COR) exerts a negative and statistically significant effect (coefficient = -0.2746 , $p = 0.0194$) on national security funding at the 5 percent significance level, confirming the a priori expectation. A one-unit increase in the corruption score, indicating worsening corruption, is associated with a 0.2746% decrease in the national security funding index in the long run. This finding is consistent with the theoretical prediction that higher corruption reduces the efficiency of public expenditure allocation, weakens revenue mobilisation capacity, and distorts the appropriation process in ways that divert resources away from productive public goods such as security. In the Nigerian context, this result corroborates the well-documented phenomenon of ghost workers in security agencies, inflated procurement contracts, and the diversion of security votes to personal use by political officeholders, all of which reduce the effective resource available for genuine security provision even when nominal allocations are maintained.

Public debt as a percentage of GDP (DEBT) exerts a negative and statistically significant effect (coefficient = -0.0583 , $p = 0.0420$) on national security funding at the 5 percent significance level, confirming the a priori expectation. A 1 percentage point increase in DEBT is associated with a 0.0583% decrease in the national security funding index in the long run. This result confirms the crowding-out hypothesis, as public debt obligations consume an increasing share of government revenue through debt service payments, the residual fiscal space available for security appropriations contracts. This finding has particularly strong policy relevance for contemporary Nigeria, where debt service consumed approximately 96% of federally collected revenue in 2022 (Tunji, 2023), leaving virtually no discretionary fiscal space for expanding security expenditure in response to the escalating threats from kidnappers, bandits, and separatist movements.

Test of Stability

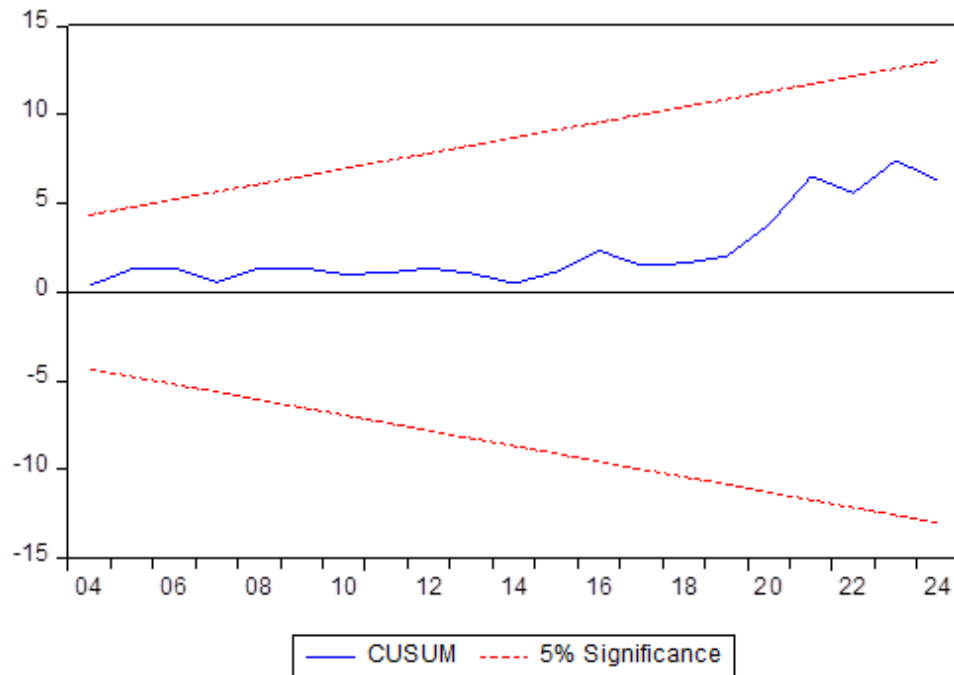


Figure 1: CUSUM stability test graph

The CUSUM stability test graph presented in Figure 1 shows that the cumulative sum of recursive residuals represented by the blue line remains well within the two red dashed critical boundary lines at the 5 percent significance level throughout the entire sample period from 1990 to 2024. The blue line fluctuates close to zero during the earlier part of the sample and rises gradually toward the latter period but does not breach either the upper or lower critical bound at any point in time. This confirms that the estimated parameters of the ARDL (1, 1, 1, 0, 2, 1) model are structurally stable and do not exhibit systematic instability or structural breaks over the study period. The stability of coefficients across the full sample, which spans multiple political transitions, oil price cycles, security crises, and macroeconomic shocks, strengthens confidence in the reliability and consistency of the long-run estimates.

Discussion of Findings

The findings of this study reveal that tax revenue mobilisation exerts a positive and statistically significant effect on national security funding in Nigeria in the long run. This result implies that improvements in tax revenue generation enhance government's capacity to allocate resources towards defence and security related expenditures. The finding is consistent with the propositions of the Benefit Theory of Taxation, which argues that taxes represent citizens' contributions towards the provision of essential public services, including security. It also supports the Public Goods Theory, which identifies national security as a public good that requires government financing through tax revenues. Empirically, the result corroborates the findings of Adegbite et al. (2021) and Bayson (2025), who reported the significance of efficient

tax systems in strengthening state capacity and national security provision. The result is further in line with Gnanon (2022), Gurdal et al. (2021), Alim et al. (2021), and Arvin et al. (2021), who established that improved tax mobilisation enhances government expenditure capacity and fiscal sustainability.

Furthermore, corruption and public debt were found to exert significant negative effects on national security funding. The negative effect of corruption suggests that inefficiencies, leakages, and misappropriation of public resources weaken government's ability to channel adequate funds towards security related activities. This finding supports the argument of Afonso et al. (2021) that effective revenue mobilisation must be accompanied by efficient public expenditure management to achieve desired outcomes. Similarly, the negative impact of public debt indicates that rising debt obligations constrain fiscal space and reduce resources available for security financing. This finding aligns with Adrian (2025), who argued that excessive reliance on debt financing can undermine the sustainability of defence and security expenditure. On the other hand, the positive relationship between inflation and national security funding may reflect the increased cost of security operations, equipment procurement, and personnel maintenance during inflationary periods, thereby necessitating larger budgetary allocations to the security sector.

The result also shows that economic growth exerts a significant negative effect on national security funding, suggesting that periods of economic expansion may reduce the relative share of government expenditure allocated to security as greater emphasis is placed on productive and developmental sectors. Although this finding contrasts with conventional expectations, it reflects the possibility that improvements in economic conditions reduce the urgency for additional security spending relative to other competing expenditure priorities. Overall, the existence of a stable long-run relationship among the variables and the significant error correction mechanism confirm that tax revenue mobilisation remains an important determinant of national security funding in Nigeria. The findings therefore support the growing body of literature emphasising the importance of domestic revenue mobilisation as a sustainable mechanism for financing public goods and addressing contemporary security challenges in developing economies.

Conclusion

The study examined the effect of tax revenue mobilisation on national security funding in Nigeria using annual data spanning 1990 to 2024 and the ARDL estimation technique. The findings revealed the existence of a stable long-run relationship between tax revenue mobilisation and national security funding. Specifically, tax revenue mobilisation was found to exert a positive and significant effect on national security funding, indicating that improved domestic revenue generation enhances government's capacity to finance defence and security operations. The study further found that inflation positively influences national security funding, while corruption, public debt, and economic growth exert significant negative effects. These findings lend support to the Benefit Theory of Taxation and the Public Goods Theory by demonstrating that taxation remains a critical mechanism through which government mobilises resources for the provision of national security. The study therefore concludes that

strengthening tax revenue mobilisation is essential for ensuring sustainable national security funding and enhancing government's ability to address Nigeria's growing security challenges.

Policy Recommendations

Based on the findings of the study, the following policy recommendations are proposed:

1. Given the positive and significant effect of tax revenue mobilization (LNTTR) on national security funding, the Federal Government should strengthen domestic revenue mobilisation through broadening the tax base by improving the Federal Inland Revenue Service (FIRS) administrative capacity and further digitalizing tax collection to enhance compliance and reduce tax evasion and avoidance.
2. In view of the significant negative effect of corruption on national security funding, government should strengthen transparency, accountability, and oversight mechanisms in revenue collection and public expenditure management. Anti-corruption institutions such as Independent Corrupt Practices and Other Related Offences Commission (ICPC) and Economic and Financial Crimes Commission (EFCC) should be strengthened, subject security vote to legislative scrutiny, and enforce ICPC and EFCC mandates on security procurement.
3. Given the significant negative impact of public debt on national security funding, government should adopt a more prudent debt management strategy that reduces excessive borrowing and debt servicing pressures. Greater emphasis should be placed on increasing internally generated revenues through taxation rather than financing recurrent expenditure through debt accumulation. The federal government could also establish a fiscal rule limiting debt service to a maximum percentage of revenue.
4. Since economic growth was found to have a significant negative relationship with national security funding, the federal government should ensure that periods of economic expansion do not lead to reduced attention to security financing. Likewise, government could carry out a structural transformation of growth away from oil dependency toward a broader, more taxable formal economy.
5. Considering the positive and significant influence of inflation on national security funding, government should review and implement better macroeconomic policies aimed at maintaining price stability. While inflation appears to increase security allocations, it also raises the cost of military equipment, logistics, personnel welfare, and security operations. Therefore, controlling inflation will improve the purchasing power and efficiency of security expenditure, enabling government to achieve better security outcomes with available resources.

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