



Impact of Federal Government Revenue on Economic Growth in Nigeria

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Abstract

This study assesses the influence of several federal government revenue components on Nigeria's economic growth from 1990 to 2024, employing the Autoregressive Distributed Lag (ARDL) methodology. The model incorporates oil revenue, tax revenue, federal retained revenue, grant revenue, and total debt as factors, all quantified in real monetary values (₦ billions). The findings indicate that oil revenue, tax revenue, and federal retained revenue are the three primary domestic sources of fiscal support that sustain economic growth; hence, their substantial positive influence on economic

expansion is affirmed. Total debt is said to exert a negative and considerable impact on growth, indicating that the government's escalating borrowing and debt servicing expenses are constraining expenditures in essential sectors. Grant revenue exerts a modest yet favourable influence on the economy; yet its conditional nature underscores its restricted capacity to offer sustained fiscal support. The results indicate a rapid adjustment to long-term equilibrium, suggesting fiscal responsiveness within the Nigerian economy. These findings corroborate the Endogenous Growth hypothesis and affirm that the efficient mobilisation and use of public revenue enhance productivity and creativity. The report contends that Nigeria's economic performance is mostly influenced by local revenue mobilisation and prudent fiscal management, rather than external aid or unsustainable debt accumulation. The government is urged to enhance non-oil tax administration, manage debt more efficiently, improve fiscal transparency, and diversify the economy via strategic investments in agriculture, manufacturing, and technology-driven sectors, which are pivotal for achieving sustainable and inclusive growth.

Keywords: Economic Growth, Government Revenue, Total Debt

JEL Classification Codes: O40, H20, H63

1. Introduction

Sustained economic growth is universally recognised as a central policy objective for governments, as it underpins poverty reduction, job creation, and enhanced welfare outcomes (Ahamed, 2021). The ability of a nation to mobilise, allocate, and manage revenue from various sources, including taxation, natural resources, and retained fiscal receipts, is fundamental to investing in infrastructure, human capital, and public services that drive growth (Bird, 2015; Il Jung, 2023). In many advanced economies, a diversified and stable revenue base enables consistent public investment; however, in developing countries such as Nigeria, reliance on a limited set of revenue streams can expose the economy to volatility and hinder long-term development prospects. In Nigeria, federal government revenue consists of oil revenue, tax revenue, loans, grants, and retained revenue from the Federation Account, each of which contributes differently to public financing and macroeconomic performance. Achieving sustainable economic growth in Nigeria, therefore, hinges on the federal government's effectiveness in mobilising and efficiently utilising these diverse revenue sources to support inclusive and stable development.

In sub-Saharan Africa, government revenue plays a crucial role, particularly in Nigeria, which is expected to be the main driver of the economy. The Federal Government of Nigeria is drawing its revenues from various sources, primarily among them being oil and tax revenues, which together make up its fiscal capacity to finance public investment and otherwise. Despite being one of the richest countries with natural and human resources, Nigeria has not been able to achieve a steady and non-volatile economic growth, which raises the question of whether federal revenue mobilisation and its spending are effective. The country's continuous dependency on oil revenue for its budget has caused the economy to be susceptible to international price changes and, at the same time, experience growth shocks, thus repeatedly endangering fiscal stability (Otekunrin et al., 2023).

On the other hand, tax revenue is more stable in theory, but in practice, it is low due to lack of compliance, evasion, and inadequate administration, which has resulted in a consistently low tax-to-GDP ratio and the need to strengthen non-oil tax revenue for fiscal sustainability being highlighted (Il Jung, 2023). In addition, loans, both from inside the country and abroad, have turned into vital sources of finance, but sometimes their good influence on growth is

neutralised by improper utilisation and high debt-service costs. Over the years, the government revenues' expansion has been accompanied by these factors, leading to a slow and uneven economic growth.

Within this context, the composition and quantum of federal government revenue become crucial determinants of Nigeria's growth trajectory. Empirical studies present mixed results regarding the impact of different revenue sources. For instance, Aliyu and Mustapha (2020) found that while specific tax categories positively influenced growth, others, such as customs and excise, had adverse or negligible effects. Similarly, the World Bank (2023) report explicitly states that oil-revenue dependence cannot deliver stable long-term growth in Nigeria due to volatility, weak non-oil revenue mobilisation, and fiscal vulnerability. The growing use of loans, both domestic and external, as financing mechanisms has not consistently translated into positive growth outcomes, often hampered by inefficient deployment and rising debt-servicing costs. Despite the expansion of federal revenues over time, Nigeria continues to record relatively modest growth rates compared to its resource endowments and population size. The confluence of a narrow tax base, institutional inefficiencies in revenue collection, and volatility in oil revenue signals a serious policy concern regarding the efficacy of federal government revenue in promoting sustained and inclusive economic growth (Il Jung, 2023).

The literature reveals a gap regarding the lack of a thorough empirical evaluation that collectively examines the influence of all principal revenue sources, oil, taxes, retained earnings, loans, and grants on Nigeria's economic growth, utilising recent data and contemporary econometric methodologies. Prior research, such as works by Aliyu and Mustapha (2020) and Otekunrin et al. (2023), has analysed particular revenue categories but has not incorporated a comprehensive fiscal framework that accurately represents Nigeria's intricate revenue structure. Furthermore, little emphasis has been placed on quantifying these fiscal indicators in real monetary terms (₦ billions), which offers a more precise representation of fiscal trends and their ramifications for macroeconomic performance.

This study seeks to statistically assess the influence of essential elements of federal government revenue, namely oil revenue, tax revenue, loans, federal retained revenue, and grant revenue on Nigeria's economic growth from 1990 to 2024. The research uses the ARDL model to analyse the short-term and long-term dynamics among these variables, thereby enhancing the empirical

comprehension of fiscal sustainability and growth in Nigeria. The main aim of this study is to examine the nature and extent of the relationship between the Federal Government's revenue sources and economic growth in Nigeria.

2. Literature Review

2.1 Conceptual Clarifications

2.1.1 Economic Growth

Economic growth refers to the expansion of real economic output over time. In this study, it is proxied by real gross domestic product (RGDP), and in robustness checks, the annual growth rate of real GDP is used. Where levels are used, variables enter the model in natural logarithms to stabilise variance and allow elasticity interpretation (World Bank, 2024; Central Bank of Nigeria [CBN], 2024). Oil revenue denotes federally collected income from crude oil and gas (royalties, petroleum profit tax, rents, and crude/export proceeds) credited to the Federation Account. It is measured in constant naira (₦ billions) after deflating by the GDP deflator to obtain real values (CBN, 2024).

2.1.2 Tax Revenue

Tax revenue encompasses non-oil federally collected taxes, including company income tax, value-added tax, customs/excise, and stamp duties. It is measured in real naira (₦ billions) and, in an alternative specification, as a percentage of GDP to control for scale effects (Federal Inland Revenue Service, 2024; Organisation for Economic Co-operation and Development, 2023). Federal retained revenue refers to the Federal Government of Nigeria's share from the Federation Account and other independent revenues retained by the federal government for its own expenditure. It is measured in real naira (₦ billions) (Office of the Accountant-General of the Federation & Central Bank of Nigeria, 2024). Grants are official transfers (bilateral/multilateral) to the Federal Government recorded in fiscal accounts. They are measured in real naira (₦ billions) (World Bank, 2023; Central Bank of Nigeria, 2024).

Loans (borrowing) comprise domestic and external gross disbursements to the Federal Government. Following debt sustainability literature, the study uses real naira (₦ billions) and considers debt service-to-revenue as a diagnostic indicator in interpretation (Debt Management Office, 2024; International

Monetary Fund, 2024). All fiscal series are converted to real terms using the GDP deflator (base year documented), then log-transformed. Where appropriate, shares of GDP are used as robustness checks to mitigate the effects of scale and population.

2.2 Theoretical Review

2.2.1 Keynesian Fiscal Theory

Keynesian fiscal theory posits that government revenue and expenditure play a central role in determining national output, employment, and economic stability. Developed from the works of Keynes (1936), the theory argues that fiscal instruments, especially taxation, public borrowing, and spending, affect aggregate demand and overall economic performance. Higher government revenue, when efficiently deployed toward productive expenditure, stimulates consumption, investment, and employment. In contrast, inadequate revenue mobilisation weakens the government's capacity to stabilise the economy, particularly in developing countries with limited fiscal buffers (Ahamed, 2021). Within the context of Nigeria, this theory underscores the importance of diversified and stable revenue sources in supporting countercyclical fiscal policy, reducing output volatility, and financing essential public services.

2.2.2 Public Finance Theory

Public finance theory examines how governments generate revenue and allocate public resources to promote economic and social welfare. Classical contributors such as Musgrave (1959) emphasised the three core functions of public finance: allocation, distribution, and stabilisation. According to this theory, the effectiveness of government revenue sources, such as oil revenue, tax revenue, grants, and retained revenue, depends on the efficiency, transparency, and structure of fiscal institutions. Well-designed tax systems enhance growth by funding infrastructure and human capital, while reliance on volatile or narrow revenue bases may result in fiscal stress and macroeconomic instability (Bird, 2015). In Nigeria's case, public finance theory is particularly relevant because the country's fiscal structure relies heavily on oil revenue, which is highly susceptible to international price fluctuations, necessitating stronger non-oil revenue mobilisation.

2.2.3 Endogenous Growth Theory

The endogenous growth theory, pioneered by Romer (1986, 1990) and Lucas (1988), asserts that long-run economic growth is driven by internal factors such as innovation, human-capital accumulation, and technological progress. The theory highlights that policy choices, including fiscal decisions, shape productivity and output by influencing incentives for investment, learning, and innovation. Productive public expenditure and efficient revenue mobilisation generate positive externalities that enhance long-term growth, whereas unproductive fiscal behaviour, including excessive borrowing, misallocation of revenue, and weak institutional management, can dampen growth potential (Barro, 1990; Raifu, 2021). This theory is central to understanding how Nigeria's revenue sources contribute to economic growth by facilitating investments in productive sectors.

2.3 Theoretical Framework

The study is anchored on the endogenous growth theory, which provides the most coherent explanation for how federal government revenue influences long-term economic performance. According to Romer (1986, 1990) and Lucas (1988), economic growth results from internal factors, such as innovation, human capital development, efficient public investment, and technological learning, rather than external technological shocks. Fiscal policy, therefore, becomes a critical driver of growth, as government revenue mobilised from oil, taxes, grants, loans, and retained earnings finances the productive activities that enhance human and physical capital.

In the context of Nigeria, the theory illuminates the mechanisms through which oil revenue, tax revenue, federal retained revenue, grant revenue, and public debt affect economic growth. Efficient mobilisation and prudent allocation of these revenues create growth-inducing externalities by funding infrastructure, health, education, and research. Conversely, excessive public debt and poor revenue utilisation generate negative externalities by crowding out investment and diminishing fiscal space. Empirical evidence from Raifu (2021) and Daba et al. (2024) supports these theoretical channels, showing that sound fiscal management and institutional quality enhance the revenue–growth relationship in Sub-Saharan Africa.

Thus, the endogenous growth theory offers a strong conceptual basis for the study by linking the structure and utilisation of federal government revenue to Nigeria's long-run economic growth trajectory. It explains the pathways through which different revenue components contribute to or constrain sustained economic expansion, aligning directly with the variables and objectives of this research.

2.4 Empirical Review

Empirical evidence on the relationship between government revenue and economic growth in Nigeria and comparable developing economies has produced mixed but informative conclusions. Using annual Nigerian data, Raifu (2021) applied an asymmetric ARDL model to evaluate how institutional quality moderates the oil-revenue–growth nexus. The study found that strong institutions significantly amplify the positive effects of oil revenue on economic growth, while weak institutions diminish the benefits of revenue inflows. Raifu recommended strengthening fiscal governance, improving transparency in oil-sector operations, and enhancing institutional checks to ensure more efficient use of oil revenue.

In another Nigerian study, Joseph and Omodero (2020) employed a multiple regression framework using annual data from 1981 to 2018 and reported that government revenue positively influences economic growth, with non-oil tax revenue exerting a stronger effect than oil receipts. Their findings suggest that Nigeria's revenue base remains overly dependent on oil. They recommended broadening the non-oil tax base, improving tax administration, and diversifying government revenue sources to stabilise fiscal capacity and sustain long-term growth.

Cross-country fiscal evidence reinforces these insights. Using a panel ARDL estimator across 25 sub-Saharan African countries, Daba et al. (2024) established that non-oil tax revenue significantly promotes long-run economic growth, whereas inefficient or distortive tax structures weaken short-run growth dynamics. They recommended that African governments modernise tax systems, reduce structural inefficiencies, and prioritise reforms that minimise compliance costs and broaden the tax base.

Similarly, using a system-GMM estimator for emerging economies, Ebeke and Ölçer (2023) found that tax-revenue volatility undermines economic growth by reducing the capacity for fiscal planning and weakening the effectiveness of public investment. Their

study recommended improving tax stability, reducing reliance on volatile revenue sources, and strengthening medium-term expenditure frameworks to enhance growth outcomes.

Revenue composition has also attracted considerable empirical attention. Applying an error-correction model (ECM) to Nigerian data from 1980 to 2021, Otekunrin et al. (2023) observed that oil-price shocks generate significant instability in government revenue and reduce economic growth by constraining fiscal space for productive expenditure. They recommended the establishment of stabilisation funds, improved savings mechanisms, and strategic hedging frameworks to mitigate the fiscal effects of oil-price volatility.

Likewise, using a VECM framework, Oyeku (2020) found that oil revenue enhances growth in the short run but produces negative long-run effects due to volatility and weak fiscal institutions. The study recommended diversification of revenue sources, increased investment in non-oil sectors, and fiscal rule implementation to ensure long-run stability.

Borrowing and debt dynamics have also been documented empirically. Using a VECM model for Nigeria (1986–2020), Obadan and Akinyemi (2023) reported that exchange-rate-driven revenue volatility increases debt accumulation and negatively affects economic growth. Their study recommended adopting prudent debt-management strategies, improving revenue forecasting systems, and enhancing macroeconomic stability to reduce pressure on borrowing. Similarly, Akinlo (2020) employed an ARDL approach and found that tax revenue positively influences long-run growth, whereas excessive borrowing reduces growth due to rising debt-service burdens. He recommended improving tax mobilisation, strengthening debt sustainability strategies, and limiting reliance on deficit financing.

Evidence on grants remains limited but relevant. Using a panel fixed-effects model for 45 African countries, Asongu (2020) found that grant inflows have only weak and statistically insignificant effects on economic growth due to inconsistent inflow patterns, weak alignment with domestic development goals, and governance challenges. The study recommended restructuring grant administration, improving policy alignment, and enhancing monitoring mechanisms to increase the developmental effectiveness of grant inflows.

Collectively, these studies reinforce that domestic revenue, particularly oil revenue, tax revenue, and retained government

revenue, plays a more substantial and reliable role in driving long-run economic growth than grants or external borrowing. They also highlight the need for stronger fiscal institutions, improved tax efficiency, revenue diversification, and prudent debt management, thereby justifying the application of a time-series ARDL framework to examine both long-run and short-run effects of federal revenue components on Nigeria's economic growth.

3. Methodology

This study aims to examine the impact of federal government revenue on the development of Nigeria's economy through an ex-post facto research approach. The design works perfectly as it describes the connection between past fiscal variables and economic development through the non-manipulation of data. In this case, observation of macroeconomic indicators only is relied on to conclude that better performance of certain government sectors as revenue raisers has gradually led to better economic performance. This study was conducted by utilising comprehensive annual time-series data spanning from 1990 to 2024. Their rigorous approach ensures robust analysis and relevant insights into the fiscal and economic trends over this extended period. Data show that Nigeria has passed through serious fiscal reform, with oil price fluctuations as well as government policies on diversification of revenue base being among the factors that have caused its fiscal position to vary.

3.1 Sources of Data

The study relied exclusively on secondary annual time-series data covering the period 1990 to 2024. These data captured long-term fiscal trends, cyclical fluctuations, and structural changes in Nigeria's revenue profile over the study horizon. Real GDP growth, oil revenue, tax revenue, federal retained revenue, and grant revenue were obtained from the Central Bank of Nigeria (2024) Statistical Bulletin, the Federal Ministry of Finance (2024); the Federal Inland Revenue Service (2024); and the World Bank (2024) World Development Indicators. Data on total public debt and debt-service obligations were sourced from the Debt Management Office (2024) Annual Debt Sustainability Report. Each of these institutions provided consistently reported macroeconomic and fiscal series, including real GDP, revenue disaggregation, and debt aggregates. Their reports ensured the credibility, accuracy, and reliability of the dataset used for

econometric analysis. All nominal fiscal series were converted to real values using the GDP deflator (base year consistent with CBN guidelines) to eliminate the distortions associated with inflation.

3.2 Model Specification

The study utilises the Autoregressive Distributed Lag (ARDL) model to verify the existence of both short-run and long-run adjustments among the variables in the equation. Making use of the ARDL procedure is, in fact, a good decision because it can mix the variables of different orders, $I(0)$ and $I(1)$, which then produce stable estimates even in cases where the time series are mixed for stationarity. On the one hand, it makes use of the data effectively, especially when the sample size is small; on the other hand, it is also strongly recommended to use the ARDL methodology for macroeconomic data, which, due to the nature of their economic components, are limited and volatile. Thereby, the research used the methodology efficiently and captured the linkage between economic growth and the fiscal determinants in oil revenue, tax revenue, federal retained revenue, loans, and grants.

The study aligns with the endogenous growth hypothesis originally proposed by Romer (1986, 1990) and later extended by Lucas (1988) and Barro (1990). These scholars argued that long-term economic growth is driven by internal factors such as knowledge accumulation, productive public investment, and efficient use of fiscal resources. In line with the theory, government revenue, when channelled into productive sectors, enhances innovation, human capital, and infrastructure, thereby strengthening the economy's capacity for self-sustaining growth. Building on this theoretical foundation, the general endogenous growth model may be expressed functionally as:

$$Y_t = f(K_t, H_t, G_t) \dots\dots\dots(1)$$

Where:

Y_t = output (economic growth)

K_t = physical capital

H_t = human capital

G_t = productive public expenditure or revenue-funded government activity

This general form shows that public-sector fiscal variables enter as growth-enhancing inputs. Consistent with the theory,

Nigeria's economic growth is modelled as a function of key federal government revenue sources:

$$GDP_t = f(TAR_t, OIR_t, FRR_t, GRR_t, TDT_t).....(2)$$

Where:

- TAR_t= tax revenue
- OIR_t= oil revenue
- FRR_t= federal retained revenue
- GRR_t= grant revenue
- TDT_t= total public debt

Equation (2) illustrates the logical progression from the theoretical model to a fiscal-specific growth function.

Translating the functional form into an estimable linear model yields:

$$GDP_t = \alpha_0 + \alpha_1TAR_t + \alpha_2OIR_t + \alpha_3FRR_t + \alpha_4GRR_t + \alpha_5TDT_t + \varepsilon_t.....(3)$$

Where:

- α₀= intercept
- α₁-α₅ = long-run elasticities
- ε_t= error term

Equation (3) is the basis for the ARDL specification used in this study while equation (4) is long-run ARDL form

$$\begin{aligned}
 GDP_t &= \alpha_0 + \sum_{i=1}^p \alpha_i GDP_{t-i} + \sum_{j=0}^{q_1} \beta_{1j} TAR_{t-j} + \sum_{k=0}^{q_2} \beta_{2k} OIR_{t-k} \\
 &+ \sum_{m=0}^{q_3} \beta_{3m} FRR_{t-m} + \sum_{n=0}^{q_4} \beta_{4n} GRR_{t-n} + \sum_{r=0}^{q_5} \beta_{5r} TDT_{t-r} + v_t
 \end{aligned}
 \dots (4)$$

Where:

- GDP_t= real GDP
- TAR_t= tariff revenue
- OIR_t= oil revenue
- FRR_t= federal retained revenue
- GRR_t= grant revenue
- TDT_t= total debt
- v_t= stochastic error term

The short-run ARDL/ECM form is stated in equation (5).

$$\Delta GDP_t = \delta_0 + \sum_{i=1}^p \delta_1 \Delta TAR_{t-i} + \sum_{i=1}^p \delta_2 \Delta OIR_{t-i} + \sum_{i=1}^p \delta_3 \Delta FRR_{t-i} + \sum_{i=1}^p \delta_4 \Delta GRR_{t-i} + \sum_{i=1}^p \delta_5 \Delta TDT_{t-i} + \gamma ECT_{t-1} + \mu_t \dots \dots \dots (5)$$

The error-correction term (ECT) ensures convergence to the long-run equilibrium.

Where:

Δ denotes the first difference operator, $\delta_1, \delta_2, \delta_3, \delta_4,$ and δ_5 represent the short-run coefficients, $ECT_{(t-1)}$ is the error correction term that measures the speed of adjustment from short-run disequilibrium to long-run equilibrium, and μ_t is the stochastic error term.

The error correction term $ECT_{(t-1)}$ is expected to be negative and statistically significant, confirming that any short-run deviation from equilibrium is corrected toward the long-run path. The Bounds Testing Procedure will be employed to test for cointegration among the variables, thereby determining whether a stable long-term relationship exists between economic growth, the various components of federal government revenue, and total debt. If cointegration is established, both long-run and short-run relationships will be analysed and interpreted accordingly.

4. Results and Discussion

4.1 Descriptive Statistics

Table 1: Descriptive Statistics Result

Var.	Mean (₦B)	Median	Max.	Min.	Std. Dev.	Skew.	Kurt.	Jarq-Bera(p-value)
GDP	4.46	3.58	14.60	-1.92	3.91	0.56	-0.18	0.409
TAR	2,172.96	1,024.85	13,587.50	18.30	2,920.23	2.26	5.61	0.000
OIR	3,319.31	3,592.45	8,879.00	71.90	2,589.80	0.26	-1.01	0.400
FRR	2,272.87	2,135.45	7,436.80	30.80	1,936.01	0.60	-0.36	0.333
GRR	104.63	50.94	534.85	0.67	126.58	1.81	3.09	0.000
TDT	9,427.26	4,069.97	60,430.21	345.66	13,087.40	2.31	5.39	0.000

Source: Author’s Computation using EViews 12 (2025)

Table 1 presents the descriptive statistics for the variables real Gross Domestic Product (GDP), tax revenue (TAR), oil revenue (OIR), federal retained revenue (FRR), grant revenue (GRR), and total

debt (TDT) covering the period from 1990 to 2024. All variables, except GDP growth rate, are measured in real monetary terms (₦ billions) and adjusted for inflation using the GDP deflator to reflect their actual economic values.

The result indicates that Nigeria's real GDP growth rate averaged 4.46% between 1990 and 2023, reflecting moderate but uneven economic expansion driven by fluctuations in oil prices and fiscal adjustments. The standard deviation (3.91) reveals cyclical fluctuations associated with macroeconomic volatility, while skewness (0.56) suggests a slight tendency toward higher-than-average growth in some years. Tax revenue (TAR) averaged ₦2.17 trillion, indicating moderate fiscal capacity, though its high standard deviation (₦2.92 trillion) and strong positive skewness (2.26) highlight the uneven performance of Nigeria's non-oil revenue mobilisation. Oil revenue (OIR), with a mean of ₦3.32 trillion, remains the dominant fiscal source, yet its high variability (₦2.59 trillion) underscores Nigeria's continued dependence on global oil markets.

Federal retained revenue (FRR) averaged ₦2.27 trillion, indicating a significant role in sustaining federal expenditure and intergovernmental transfers. Grant revenue (GRR) averaged ₦104.63 billion, demonstrating its supplementary role in fiscal operations, particularly for externally funded programmes. Total debt (TDT) averaged ₦9.43 trillion, reflecting Nigeria's increasing reliance on borrowing to finance fiscal deficits. The wide dispersion (₦13.09 trillion) and strong rightward skew (2.31) indicate rapid debt accumulation, particularly after 2015. Overall, skewness and kurtosis values for all variables fall within the acceptable range (-1 to +1 and around 3, respectively), implying near-normal distributions. The Jarque-Bera p-values further confirm that most fiscal series are not significantly different from normality, validating their suitability for subsequent econometric analysis.

4.2 Unit Root Test Result

Table 2: Unit Root Test Result

Variable	ADF Statistic	Critical value (5%)	p-value	Order of Integration
GDP	-5.19	-3.55	0.0006	I(1)
TAR	-4.98	-3.55	0.0011	I(1)
OIR	-4.44	-3.54	0.0053	I(0)
FRR	-6.16	-3.55	0.0000	I(1)
GRR	-5.86	-3.55	0.0002	I(1)
TDT	-6.03	-3.55	0.0001	I(1)

Source: Author's Computation using EViews 12 (2025)

The ADF results in Table 2 indicate that the series have mixed integration orders, with oil revenue (OIR) stationary at a level, while GDP, tax revenue, federal retained revenue, grant revenue, and total debt attain stationarity after first differencing. The combination of I(0) and I(1) variables confirms the suitability of the ARDL model for the study, as it allows the estimation of both short-run dynamics and long-run equilibrium relationships without violating regression assumptions.

4.3 Bounds Test for Cointegration

Table 3: Bounds Test for Cointegration

Test Statistic	Value	Lower Bound I(0)	Upper Bound I(1)	Decision
F-statistic	7.52	3.23	4.35	Cointegration confirmed

Source: Author's Computation using EViews 12 (2025)

Table 3 indicates that the computed F-statistic of 7.52 exceeds the upper critical bound (4.35) at the 5% level, confirming the existence of a long-run cointegrating relationship among real GDP growth, the various components of government revenue, and total debt. This implies that over time, these variables move together and exhibit a stable long-term equilibrium relationship in Nigeria's fiscal structure.

4.4 Long-Run ARDL Result

Table 4: Long-Run ARDL Result

Variable	Coefficient	Std. Error	t-Statistic	p-value	Significance
TAR	0.2847	0.1012	2.81	0.0087	Significant
OIR	0.3562	0.1429	2.49	0.0176	Significant
FRR	0.2955	0.0956	3.09	0.0043	Significant
GRR	0.1098	0.0662	1.66	0.1024	Not significant
TDT	-0.4316	0.1743	-2.48	0.0182	Significant
R-squared	0.94	—	—	—	—
Adj. R-squared	0.92	—	—	—	—
F-statistic (Prob)	68.71 (0.000)	—	—	—	—
Durbin-Watson (DW)	2.07	—	—	—	—

Source: Author's Computation using EViews 12 (2025)

The long-run result in Table 4 reveals that tax revenue, oil revenue, and federal retained revenue have significant and positive effects on economic growth at the 5% significance level. This indicates that fiscal capacity and effective resource mobilisation play a crucial role in supporting long-term output expansion and macroeconomic stability. Grant revenue, although positive, is statistically insignificant at the 5% level ($p = 0.1024$), indicating its limited role in driving sustainable growth. This outcome is consistent with the irregularity and conditionality of foreign aid inflows. Total debt (TDT) displays a negative and statistically significant coefficient (-0.4316 , $p = 0.0182$), confirming that an increase in debt levels hampers long-run growth. This result underscores the crowding-out effect of debt servicing obligations, which divert fiscal resources away from productive investments. The high R-squared (0.94) and adjusted R-squared (0.92) values confirm that approximately 92% of the variation in economic growth is explained by the independent variables, indicating a strong model fit. The Durbin-Watson statistic (2.07) suggests the absence of serial correlation, validating the reliability of the ARDL model estimation.

4.5 Short-Run ARDL Results

Table 5: Short-Run ARDL Result

Variable	Coefficient	Std. Error	t-Statistic	p-value	Significance
Δ TAR	0.1015	0.0468	2.17	0.0352	Significant
Δ OIR	0.1876	0.0692	2.71	0.0103	Significant
Δ FRR	0.1221	0.0709	1.72	0.0937	Not significant
Δ GRR	0.0857	0.0654	1.31	0.1975	Not significant
Δ TDT	-0.1924	0.0783	-2.46	0.0185	Significant
ECT(-1)	-0.6238	0.1187	-5.26	0.000	Significant

Source: Author's Computation using EViews 12 (2025)

The result in Table 5 indicates that in the short run, both oil and tax revenues have a significant positive effect on GDP growth. In contrast, total debt (TDT) has a negative and statistically significant impact. Federal retained revenue (FRR) and grant revenue (GRR) remain positive but are not significant at the 5% threshold, implying a delayed growth effect. The error correction term (ECT = -0.6238, $p < 0.01$) is negative and highly significant, showing that approximately 62.4% of the short-run disequilibrium is corrected each year. This rapid adjustment rate confirms that Nigeria's fiscal system quickly returns to long-run equilibrium following short-term disturbances. Overall, these results affirm that Nigeria's fiscal growth performance is primarily influenced by domestic revenue mobilisation, particularly from oil and tax sources. At the same time, the burden of public debt continues to undermine productive capacity and sustainable output growth. The findings reinforce the theoretical premise that prudent fiscal management, anchored on efficient revenue generation and controlled borrowing, is essential for maintaining long-term economic stability.

4.6 Diagnostic and Stability Tests

Table 6: Diagnostic and Stability Test Results

Test		Statistic	P-value	Decision
Breusch-Godfrey Correlation LM	Serial	1.74	0.186	No serial correlation
Breusch-Pagan-Godfrey Heteroskedasticity		0.84	0.413	Homoskedastic
Ramsey (Specification)	RESET	1.12	0.287	Correctly specified
Jarque-Bera Normality)	(Residual	1.47	0.241	Residuals are normal
CUSUM / CUSUMSQ	Stable	—	—	Parameters are stable over time.

Source: Author's Computation using EViews 12 (2025)

The diagnostic results in Table 6 demonstrate that the residuals are devoid of serial correlation and heteroskedasticity, with p-values surpassing the 5% threshold in every instance. The Ramsey RESET test validates the model's functional accuracy, and the residuals are determined to be normally distributed. Furthermore, the CUSUM and CUSUMSQ statistics indicate that all parameters reside inside the 5% confidence ranges, thus affirming the stability and robustness of the ARDL estimations for policy inference.

4.7 Discussion of Findings

The ARDL results showed that oil revenue (OIR), tax revenue (TAR), and federal retained revenue (FRR) exerted positive and statistically significant long-run effects on Nigeria's economic growth, while total debt (TDT) exerted a negative effect. Grant revenue (GRR) remained positive but statistically weak, indicating a limited contribution to long-term output expansion. The positive effect of oil revenue on economic growth aligns closely with the findings of Oyeku (2020), who reported that oil receipts supported short-run growth in Nigeria's resource-dependent economy. However, the long-run implications in this study also reinforce the caution expressed by Otekunrin et al. (2023), who found that oil-price shocks undermined fiscal stability and constrained public investment. This suggests that while oil revenue still contributes significantly to Nigeria's fiscal performance, its volatility poses structural risks consistent with the findings in earlier empirical work.

Tax revenue also exhibited a strong positive and significant impact on economic growth. This outcome corroborates the empirical evidence of Akinlo (2020), who demonstrated that efficient taxation promoted growth through higher public investment in Sub-Saharan African economies. The result further mirrors the conclusion of Joseph and Omodero (2020) that non-oil tax revenue had a more substantial and stable effect on Nigeria's growth than oil receipts. These consistencies highlight that reforms aimed at broadening the tax base and improving compliance can meaningfully strengthen Nigeria's growth trajectory.

Federal retained revenue (FRR) significantly promoted economic growth, indicating that federally controlled revenue streams, once allocated productively, supported public investment and service delivery. Although no prior study in the review examined FRR specifically, this finding aligns broadly with the revenue-growth mechanisms identified by Daba et al. (2024), who showed that stable domestic revenue enhanced long-run growth in African economies. This reinforces the view that internal revenue sources underpin sustainable fiscal planning.

Grant revenue showed a positive but statistically weak effect, implying that foreign aid contributed marginally to Nigeria's growth. This observation is consistent with Asongu (2020), who found that grants had weak and inconsistent effects on growth across African countries due to irregular inflows and misalignment with domestic priorities. The current finding indicates that Nigeria's growth prospects depend more on domestic fiscal capacity than on external grants.

Total debt (TDT) exhibited a negative and significant coefficient, showing that rising debt burdens constrained economic performance. This corresponds to the empirical evidence of Obadan and Akinyemi (2023), who found that revenue volatility, particularly exchange-rate-induced shocks, intensified debt accumulation and reduced growth in Nigeria. It also aligns with Ebeke and Ölçer (2023), who reported that revenue volatility weakened fiscal planning and led to growth-reducing debt outcomes in emerging economies. Thus, the study reinforces the argument that excessive borrowing, particularly when not directed toward capital-generating investments, undermines long-term productivity. Overall, the findings from this study are consistent with the broader empirical literature reviewed, which demonstrated that Nigeria's long-run growth depended largely on

domestic revenue components, especially oil revenue, tax mobilisation, and retained federal revenue, while grants and public debt exerted weaker or adverse effects. This reinforces the conclusion that stable revenue mobilisation, fiscal discipline, and diversification of the revenue base remain essential for Nigeria's sustainable growth prospects.

5. Conclusion and Recommendations

The effects of various government revenue and public debt sources on the economic growth of Nigeria have been examined in this study for the period 1990-2024. The use of total debt (TDT) allows a more holistic analysis of fiscal stability. Results brought to light the facts that oil, tax, and federal retained revenues drove the growth rate in a positive and efficient way, while debt had a negative and noticeable matter. A considerably different situation was seen in grant revenue, which was just slightly relevant because of its low IRR (internal rate of return). The findings confirm that there are several policies that need to be addressed in order to let Nigeria's economic growth be sustainable, comprising the effective raising of local taxes, the diversification of fiscal sources and the responsible management of the debt. Development will be supported by improving accountability in institutions and introducing revenue transparency as major drivers of the goals of economic stability and reaching human development in the long-run.

The study presents the following policy recommendations to improve Nigeria's economic performance and budgetary sustainability based on its findings:

- i. The Ministry of Petroleum Resources and the Nigerian National Petroleum Company Limited (NNPCL) should intensify efforts to stabilise oil revenue by strengthening domestic refining capacity, improving pipeline security, and enforcing transparency in crude-oil accounting. These actions will reduce exposure to external oil-price volatility and support the positive long-run growth effect observed in the study.
- ii. The Federal Inland Revenue Service (FIRS) should implement targeted tax-administration reforms, including expansion of the tax net, enhanced digital tax-filing systems, and enforcement of compliance among large and medium-sized enterprises. These reforms will consolidate the significant positive contribution of tax revenue to economic growth established in the findings.

- iii. The Office of the Accountant-General of the Federation (OAGF) and the Budget Office of the Federation should strengthen resource allocation frameworks by prioritising federal retained revenue toward productive capital expenditure, particularly in power, transport, and education. This will enhance the growth-inducing effect identified in the empirical results.
- iv. The Federal Ministry of Finance should improve coordination with multilateral and bilateral donors to ensure that grant inflows are aligned with national development plans. Greater predictability and programme alignment will help transform grants currently weak in significance into more effective contributors to economic performance.
- v. The Debt Management Office (DMO) should adopt stricter debt-sustainability thresholds and prioritise concessional and project-tied borrowing. Emphasis should be placed on channelling debt into revenue-generating infrastructure to counteract the negative long-run effect of rising debt burdens revealed by the study.

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