



Tax Revenue and Economic Growth in Nigeria

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Abstract

This study investigates the impact of tax revenue on economic growth in Nigeria over the period 1994–2023. Specifically, it examines the effects of Customs and Excise Duties (CED), Capital Gains Tax (CGT), Company Income Tax (CIT), Value Added Tax (VAT), and Personal Income Tax (PIT) on real gross domestic product (RGDP). The study employs an ex post facto research design using annual time series data sourced from the Central Bank of Nigeria, National Bureau of Statistics, and Federal Inland Revenue Service. Given the mixed order of integration among the variables, the Autoregressive Distributed Lag (ARDL) approach is adopted to estimate both the short-run and long-run dynamics. The bounds test results confirm the existence of a long-run relationship among the variables. The long-run estimates reveal that CIT and VAT exert negative and statistically significant effects on economic growth, while PIT has a positive and significant impact. Conversely, CED and CGT show insignificant effects. The short-run dynamics indicate that most tax variables influence economic growth with time lags, reflecting delayed fiscal transmission mechanisms. The error correction term is negative and significant, suggesting a rapid adjustment to the long-run equilibrium. Diagnostic tests confirm that the model is well-specified, with no evidence of serial correlation, heteroskedasticity, or non-normality of residuals. The study concludes that taxation has mixed effects on economic growth in Nigeria, depending on the type of tax and time horizon. It recommends reforms aimed at reducing the distortionary effects of corporate and consumption taxes, strengthening tax administration, broadening the tax base, and ensuring efficient utilization of tax revenues to promote sustainable economic growth.

Keywords: Tax Revenue, Economic Growth, ARDL, Nigeria, Fiscal Policy, RGDP

Introduction

The government of any nation is saddled with enormous responsibilities, which are greatly influenced by the income it generates from various sources, one of which is taxation. To finance its operations, the Nigerian government is primarily reliant

on taxes. Individuals or companies must pay a tax to the government, which the government normally levies. Taxes are a significant source of revenue and a major source of income to the government. Taxes are considered different from other sources of government revenue because they are a

compulsory charge. In the 19th century, the main purpose for which taxes were imposed was for revenue to the government, but today, it is seen to be used for different purposes other than fiscal purposes. Taxation, being a major source of funding for all three tiers of government, is highly important in helping the government achieve its macroeconomic objectives. According to Abomaye-Nimenibo (2017), taxation is a process established by the government to exert control over taxes and tax collection. It is thus considered the redistribution of wealth from the private to the public sectors to help the nation in achieving some of its economic and social objectives, which include providing essential facilities and services like proficient health care services, quality roads, among others.

Taxation is the art of charging citizens with taxes, while a tax itself is a mandatory payment to be made by every citizen of a state. This payment of tax is called a civic duty (Abomaye-Nimenibo et al., 2018). Taxes are frequently levied to limit the creation of certain products and services, to protect new businesses and local businesses, and to reduce the level of income disparity in society, also to regulate business and to keep inflation under control (Edewusi & Ajayi, 2019). Due to the significance of taxes in bringing revenue to the government for various uses, their ability to affect consumption patterns, and their ability to affect economic variables, the government of every nation will strive to maximize the revenues from taxes (Asaolu et al., 2018). The effectiveness and efficiency in administering tax leads to an increment in the revenue generated which helps the government in the provision of amenities for citizens and even execution of capital projects in spite of this, the fraudulent affairs and schemes of tax authorities as well as incompetent tax personnel are seen to be threats and challenges that affect the revenues by channelling the funds from tax into their personal pockets (Asaolu et al., 2018).

The primary goal of a tax system is to produce adequate incomes to cover the government's vital expenditures on commodities, and tax is widely regarded as the most effective instrument for improving the public sector's capabilities and debt repayment (Okoye & Ezejiofor, 2014). Aside from the problems seen in the taxation system in the present time, the purpose of charging tax has not only been for revenue generation for the state but also a means for reallocation of wealth as well as economic regulation (Ojo, 2008). Consequently, a tax system is regarded as a powerful tool that the government can employ to aid socioeconomic development (Mathew, 2014).

Oil revenue forms a huge proportion of the revenue generated in Nigeria because Nigeria significantly depends on oil. Nigeria's over-reliance on oil as a key source of revenue is perilous and detrimental to its economic growth (Oladipupo & Ibadin, 2015). Globally, the price of oil has dropped dramatically in recent years, therefore, affecting the government's earnings and putting Nigeria in a precarious position, as there are insufficient funds to be allocated between the three tiers of government. This was evident in April 2020 when the price of crude oil was as low as \$38 per barrel and compounded with the outbreak of the COVID-19 pandemic (Gbeke & Nkak, 2021).

Economic growth is described as a constant increment in the production capacity of a country (as evaluated by reviewing the current year's gross national product to the previous year's), as well as an increment in per capita national output, measured by shifting the country's production possibility frontier outwards (Salami et al., 2015). The government's role in achieving economic growth for both established and developing countries is critical, and taxation, as an instrument of fiscal policy, can be a beneficial tool used by the government in stimulating economic growth (Edewusi & Ajayi, 2019). The correlation between

taxation and economic growth is a contested subject, as the economy, firms, and individual decisions are also affected by tax (Mdanat et al., 2018).

Despite the revenue reported by the government over time, the revenue has been insufficient in meeting its social and public spending, which is important to enhance economic growth. Hence, the broad objective of this study is to examine the impact of tax revenue on economic growth in Nigeria. Specifically, it examines the effects of Customs and Excise Duties (CED), Capital Gains Tax (CGT), Company Income Tax (CIT), Value Added Tax (VAT), and Personal Income Tax (PIT) on economic growth in Nigeria.

Literature Review

Conceptual Clarifications

Taxation

Tax is a compulsory, non-repayable remittance made to the government for products and services intermittently. It is normally paid by private businesses and consumers to the government (Agunbiade & Idebi, 2020). The government is empowered to control, administer, and make provisions for laws, rules, regulations, and policies that will regulate and guide the tax system so as to ensure all taxes are properly administered, and all revenue generated is reimbursed to the government (Abomaye-Nimenibo et al., 2018). Nigeria's government is one of those countries that has the legal authority to impose any type of tax on its population at any rate it deems fit (Amadi & Alolote, 2019). Macek (2014) opined that utilizing taxation as a fiscal policy tool to help attain economic development is complex for developing countries, given the reduction in the rate of tax income generated.

Taxes can be grouped into direct taxes and indirect taxes. Direct tax is a type of tax that is charged exactly on an individual or an organisation, and which the individual or organisation is required to pay by way of a notice known as an assessment notice. A taxpayer must have been informed of such tax payments. They are taxes that are remitted directly to the government by companies and individuals (Omodero et al., 2021). Types of taxes that fall under direct tax include Petroleum Profit Tax, Withholding Tax, Capital Gains Tax, Company Income Tax, and Stamp Duties. Indirect taxes are taxes whereby the tax burdens are not borne by the individuals or organisation imposed upon but are transferred to other individuals who will then bear the tax burdens. They are charged on goods and services where the tax burden doesn't fall on the initial buyer but on the final consumers (Abomaye-Nimenibo, 2017; Omodero et al., 2021). Indirect taxes include Value Added Tax, Customs and Excise Duties.

Economic Growth

According to Salami et al. (2015), economic growth refers to a continuous rise in the net national product over a time frame. Peter and Adesina (2015) believe that a rise in capital stock, an enhancement in the literacy level, and an upgraded level of technology are vital sources of economic growth. They believe certain economic indicators will provide a view of the economy and an improved understanding of it, some of which include GDP, Gross National Product (GNP), and Per Capita Income. Conceptually, economic growth is defined as a gradual upswing in national revenue or output as a direct consequence of the government's deliberate manipulation of economic indicators via fiscal or monetary policy measures (Etim et al., 2021). However, it has been argued that growth is influenced by four essential indices: national resources, human resources, technological advancement, and wealth creation (Igbasan, 2017). Economic growth is often measured by the increase in GDP (Owamah & Mgbomene, 2025; Owamah, 2025). A country is said to experience growth if its total output goes up over a certain time (Owamah & Mgbomene, 2025; Owamah et al., 2025).

Theoretical Framework

The theoretical underpinnings of the tax-growth nexus are rich and contested. Musgrave (1959) foundational tripartite framework of allocation, distribution, and stabilisation functions of government provides the broad rationale for taxation as an enabler of growth-enhancing public expenditure. Wagner (1883) posits that as per capita income rises, the demand for public services and thus the tax-to-GDP ratio increases, implying a two-way relationship between fiscal capacity and economic development.

Endogenous growth theory, as developed by Romer (1986), Lucas (1988), and Barro (1990), offers a more direct channel through which taxation affects growth. In Barro's (1990) model, productive government expenditure financed by distortionary taxes

can enhance growth if the marginal product of public capital exceeds the deadweight loss from taxation. This framework generates the testable prediction at the heart of this study: non-distortionary taxes financing productive expenditure should promote growth, while distortionary taxes financing transfers or unproductive consumption may retard it.

The optimal tax theory of Diamond and Mirrlees (1971) and the more policy-oriented contributions of Ramsey (1927) emphasise the efficiency costs of taxation and the importance of minimising deadweight losses. In the Nigerian context, this literature raises questions about the relative efficiency of petroleum profit taxes (which are levied on economic rents and therefore theoretically less distortionary) versus VAT (which may be regressive but has broad coverage) versus CIT (which can reduce investment incentives if poorly designed).

Resource curse theory, as articulated by Sachs and Warner (1995) and elaborated by van der Ploeg (2011), provides the theoretical basis for expecting petroleum profit tax effort to have an ambiguous or negative effect on growth in Nigeria. The Dutch Disease mechanism, whereby a booming resource sector crowds out the tradable non-resource sector by appreciating the real exchange rate, has been extensively documented in the Nigerian context (Sala-i-Martin & Subramanian, 2003; Collier, 2007). This suggests that maximising petroleum revenue effort without sterilising the resulting inflows may actually impair growth by distorting relative prices.

Empirical Studies

Ezejiofor and Ezinando (2026) investigated how tax revenue affects the economic growth of Nigeria and South Africa from 2001 to 2024 using descriptive statistics, Pearson Correlation, and Error Correction Model regression analysis. The study revealed that CIT has a positive but insignificant effect on Nigeria's real GDP, but recorded a negative and insignificant

effect on South Africa's real GDP. The research also discovered that VAT has a positive effect on real GDP in Nigeria and South Africa, though the effect was insignificant in Nigeria, but was significant in South Africa. They concluded that a review of corporate income tax is necessary to close loopholes that facilitate tax avoidance, which many companies exploit to evade taxes, thereby boosting economic growth in Nigeria more than in South Africa, where the variables indicate a long-term rise in RGDPs.

Etim et al. (2021) compared the effects of direct and indirect taxation on Nigeria's economic growth. Data were analyzed using descriptive and inferential statistical techniques using correlational and regression statistics. The study demonstrated that indirect taxes have a greater detrimental impact on economic growth.

Mukolu and Ogodor (2021) examined the impact of VAT on Nigeria's economic growth for the year 1994 to 2018 using the ARDL analysis method. The study showed that there is a significantly positive impact of Value Added Tax on GDP. It also showed that VAT has, to a great extent, given rise to the total revenue of the nation and has helped in tax evasion by taxpayers.

John and Dickson (2020) used Error Correction Models to analyze the influence of tax revenue on Nigeria's economic growth using both unadjusted and adjusted GDP from 1984 to 2018. The study utilized the Vector Error Correction Model to evaluate the effects of PPT, CIT, and VAT on GDP. When GDP was not adjusted for inflation, PPT had a minor but beneficial effect on economic growth, whereas VAT and CIT had a large but adverse impact on GDP. PPT had a negative and insignificant impact on adjusted GDP, but VAT had a positive and considerable impact, and CIT had a negative and significant one.

Adeusi et al. (2020) investigated the impact of non-oil revenue on Nigeria's economic growth, where company income tax, value-added tax, personal income tax, and custom

and excise duties were the non-oil revenue for the period 1994 to 2018. The OLS Regression Technique was used. The study revealed that Value Added Tax and Custom and Excise duties have a more significant positive impact on economic growth, while Company Income Tax and Personal Income Tax have a negative but significant effect on economic growth.

Bruno and Emmanuel (2019) used secondary data from the CBN statistical bulletin in several editions to look at tax income and the Nigerian economy between 2000 and 2017. They conducted the research using an after-the-fact design. The statistical analyses were performed using the OLS regression approach. During the course of their analysis, their results demonstrated that tax revenue had little impact on economic growth.

Asaolu et al. (2018) investigated the relationship between tax revenue and economic growth in Nigeria between 1994 and 2015. The study used a descriptive and historical research design and ARDL Regression. The study revealed a significant relationship between CED and VAT.

Abomaye-Nimenibo et al. (2018) conducted Multiple Regression Analysis to conduct an empirical assessment of the influence of tax revenue on economic growth from 1980 to 2015. The analysis indicated that, in the short run, the petroleum profit tax and corporate income tax had no major impact on economic growth, although customs and excise tariffs did. The study recommended that the government ensure that all companies are registered in Nigeria, limiting the risk of tax evasion.

Yahaya and Bakare (2018) analyzed how the petroleum profit tax and company income tax affect Nigeria's economic growth between 1981 and 2014. The researchers employed a time series study approach and OLS regression analysis. Petroleum profit tax and firm income tax have a significant and positive impact on Nigeria's economic growth, according to the study. It was suggested that the government use the revenue earned by these tariffs for

economic development and infrastructure improvements.

Dang and Bala (2018) in Nigeria explored the importance of tax revenue in a nation's development. The research explores how the main tax revenue sources, such as hydrocarbon tax, Corporation Income Tax (CIT), Customs and Excise Duties (CED), and Value Added Tax (VAT), affected Real Gross Domestic Product (RGDP). The ADF unit root test, ECM, and the Johansen Co-integration test were used by the researchers to evaluate the series data between 1981 and 2013. Tax revenue in Nigeria contributes little to national development, according to the study's findings, with some levies having a negative relationship with RDGP. Finally, they suggested stringent financial controls to limit income leakage in the system.

Udofot and Etim (2017), from 1980 to 2015, looked into the relationship between SMEs' tax revenue and economic growth in Nigeria. Regression and correlation analyses were used to examine the data collected. The findings demonstrate that the variables are positively and strongly related, and they suggest redesigning the entire tax administration system to increase revenue collection.

Methodology

Research Design

A research design is a model of proof that allows the researcher to draw inferences concerning relations among the variables under investigation (Nachmias & Nachmias, 1976). An ex post facto research approach was utilised in this research since the data are already available. This research used secondary data between 1994 and 2023. The selection of this period was determined by data availability.

Model Specification

In formulating the model to examine the impact of tax revenue on Nigeria's economic growth, this study adopted and modified the model specification of Ezejiofor and Ezinando (2026), who

investigated the effects of tax revenue on the economic growth of Nigeria and South Africa from 2001 to 2024. The model is expressed as: $RGDP_t = \beta_0 + \beta_1 CIT_t + \beta_2 VAT_t + e_t$

Where:

RGDP = Real GDP

CIT=Corporate Income tax

VAT = Value added tax

Therefore, the modified model is presented as;

$$RGDP_{it} = \beta_0 + \beta_1 \ln CED_t + \beta_2 \ln CGT_t + \beta_3 \ln CIT_t + \beta_4 \ln VAT_t + \beta_5 \ln PIT_t + e_t$$

Where:

$\ln RGDP$ = Natural Log of Real GDP

$\ln CED$ = Natural Log of Custom and Excise Duties

$\ln CGT$ = Natural Log of Capital Gains Tax

$\ln CIT$ = Natural Log of Company Income Tax

$\ln VAT$ = Natural Log of Value Added Tax

$\ln PIT$ = Natural Log of Personal Income Tax

β_0 = Constant term

β_1 - β_5 = Coefficients to be estimated

e = Error term.

RGDP (proxy for economic growth) is the dependent variable, while others (CED, CGT, CIT, VAT, PIT) representing tax revenue, are the independent variables. Data on CED, CGT, CIT, VAT, and PIT were obtained from the CBN Statistical Bulletin, National Bureau of Statistics publications, and Federal Inland Revenue Service annual reports. RGDP data are sourced from the National Bureau of Statistics and the World Bank Development Indicators database. All revenue variables are measured in Nigerian Naira billions at current prices, while RGDP is GDP expressed in constant prices, meaning that it has been adjusted to account for price changes over time. Data analysis was conducted using EViews version 12.

Expected A Priori Signs

Customs and Excise Duties, Value Added Tax, and Personal Income Tax are expected to exert positive effects on Real GDP through increased government revenue and public expenditure. However, Capital Gains Tax and Company Income Tax are expected

to have negative effects due to their possible disincentive effects on investment and production.

Pre-Estimation Tests

This research conducted the following pre-estimation tests:

I. Unit Root Test

Most time series require stationarity to give valid results. If a series is non-stationary, then the results from the regression may be spurious. This research utilised the ADF unit root test.

II. Cointegration Test

A co-integration test helps in checking whether a stable, long-term relationship exists among non-stationary variables, making it possible to model both short-run dynamics and long-run equilibrium in models involving time series. Since the variables in this research have mixed integration order, i.e., [I (0) and I (1)], the ARDL bounds test for cointegration was adopted.

Estimation Technique

This study used the ARDL technique given the mixed order of integration, i.e., [I (0) and I (1)]. The ARDL technique involves first estimating the conditional correction form after specification. The long-run association between two variables (X and Y) can be established using the ARDL method. ARDL model for two variables, say Y_t and X_t (independent variable), is expressed as:

$$Y_t = \alpha_0 + \sum_{i=1}^p \alpha_i Y_{t-i} + \sum_{j=0}^p \beta_j X_{t-j} + \varepsilon_t$$

Where:

Y_t = dependent variable at time t,

X_t = the independent (explanatory) variable at time t,

α_0 = intercept term,

α_i = coefficients of lagged dependent variable Y_{t-i} ,

β_j = coefficients of lagged independent variable X_{t-j} ,

p = the maximum lag length for the dependent variable,

q = the maximum lag length for the independent variable (X), ε_t = error term (white noise).

Error correction form is given as:

$$\Delta Y_t = \gamma_0 + \sum_{i=1}^{p-1} \gamma_i \Delta Y_{t-i} + \sum_{j=0}^{q-1} \delta_j \Delta X_{t-j} + \phi (Y_{t-1} - \theta_0 - \theta_1 X_{t-1}) + u_t$$

Where:

Δ denotes first difference,

γ_i and δ_j are short-run dynamic coefficients,

ϕ : error correction coefficient,

$(Y_{t-1} - \theta_0 - \theta_1 X_{t-1})$ is the error correction term (ECT)

θ_0 , θ_1 are long-run parameters, and u_t is the white noise error term

Results and Discussion

This section presents and discusses the results obtained. The section starts with the

preliminary tests and gradually moves to the actual estimated results.

Table 1. Descriptive Statistics

	lnRGDP	lnCED	lnCGT	lnCIT	lnPIT	lnVAT
Mean	32.46257	4.967840	1.660820	5.555023	4.634653	5.323700
Median	32.56109	5.244800	2.017800	6.002550	5.068150	5.661450
Maximum	32.97470	6.427700	3.346400	7.232300	6.586200	7.393000
Minimum	31.76214	2.653200	-1.204000	2.549400	1.526100	2.104100
Std. Dev.	0.448677	1.109329	1.261151	1.336067	1.461671	1.479520
Skewness	-0.358264	-0.456660	-0.611274	-0.696619	-0.579247	-0.514050
Kurtosis	1.546236	1.988507	2.335394	2.360037	2.178181	2.201576
Jarque-Bera	3.283551	2.321592	2.420403	2.938334	2.521869	2.118087
Probability	0.193636	0.313237	0.298137	0.230117	0.283389	0.346787
Sum	973.8771	149.0352	49.82460	166.6507	139.0396	159.7110
Sum Sq. Dev.	5.838012	35.68773	46.12455	51.76717	61.95800	63.48037
Observations	30	30	30	30	30	30

Source: EViews Output (2026)

Table 1 displays the descriptive statistics for the variables. The descriptive statistics for the variables indicate that the average value of real GDP (lnRGDP) is 32.46, with relatively low dispersion (standard deviation = 0.45), suggesting stability in economic output over the study period. In contrast, the tax variables (lnCED, lnCGT, lnCIT, lnPIT, and lnVAT) exhibit higher variability, with standard deviations ranging from 1.11 to 1.48, indicating greater fluctuations in tax revenues.

The mean and median values across all variables are fairly close, implying a limited presence of extreme values. However, all

series display negative skewness, suggesting a longer left tail and the occasional occurrence of lower-than-average values. The kurtosis statistics are below 3 for all variables, indicating platykurtic distributions (flatter than the normal distribution).

Furthermore, the Jarque-Bera test probabilities exceed 0.05 for all variables, implying that the null hypothesis of normal distribution cannot be rejected. Overall, the results suggest that the data are approximately normally distributed and suitable for further econometric analysis.

Table 2. Correlation Analysis

	lnRGDP	lnCED	lnCGT	lnCIT	lnPIT	lnVAT
lnRGDP	1	0.9845	0.9734	0.9718	0.9779	0.9756
lnCED	0.9845	1	0.9970	0.9944	0.9968	0.9964
lnCGT	0.9734	0.9970	1	0.9984	0.9983	0.9971
lnCIT	0.9718	0.9945	0.9984	1	0.9987	0.9963
lnPIT	0.9779	0.9968	0.9982	0.9987	1	0.9989
lnVAT	0.9756	0.9964	0.9970	0.9963	0.9989	1

Source: EViews Output (2026)

Table 2 displays the correlation matrix of the variables. It reveals a strong positive association among all variables in the model. Real GDP (lnRGDP) exhibits very high correlations with the tax variables—lnCED (0.9845), lnCGT (0.9734), lnCIT (0.9718), lnPIT (0.9779), and lnVAT (0.9756), indicating that increases in tax revenues are closely associated with increases in economic output.

Similarly, the tax variables are highly intercorrelated, with coefficients generally exceeding 0.99 in several cases (e.g., lnCGT

to lnCIT = 0.9984; lnPIT to lnVAT = 0.9989). This suggests that these revenue components tend to move together over time, likely reflecting common macroeconomic trends or shared policy influences.

Overall, while the strong positive correlations indicate a close relationship between fiscal variables and economic growth, they also signal the potential presence of multicollinearity among the explanatory variables, which may affect the reliability of estimated coefficients in regression analysis.

Table 3. Summary of Augmented Dickey-Fuller (ADF) Test for Unit Root

Variables	ADF Test Statistic	Test critical value at 5%	P – Value	Integration Order	Conclusion
lnRGDP	-2.974601	-2.971853	0.0497	I (1)	Stationary
lnCED	-2.969460	-2.967767	0.0498	I (0)	Stationary
lnCGT	-5.030920	-3.004861	0.0006	I (0)	Stationary
lnCIT	-3.967100	-2.967767	0.0050	I (0)	Stationary
lnPIT	-3.706920	-2.967767	0.0094	I (0)	Stationary
lnVAT	-4.024084	-2.967767	0.0043	I (0)	Stationary

Source: EViews Output (2026)

Table 3 displays the Augmented Dickey–Fuller (ADF) unit root test results. The result indicates that only lnRGDP exhibits stationarity at first difference, i.e., I (1) at 5% significance level, while the others (lnCED, lnCGT, lnCIT, lnPIT, and lnVAT) exhibited stationarity at level, i.e., I (0) at

5% significance level. Overall, the results reveal a mixture of integration orders, i.e., I (0) and I (1). This combination justifies the use of econometric techniques such as the ARDL bounds testing approach, which accommodates variables integrated of different orders.

Table 4. The ARDL bounds test results.

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Significance	I (0)	I (1)
F-statistic	11.03627	10%	2.08	3

k	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15

Source: EViews Output (2026)

Table 4 displays the ARDL bounds test results. The ARDL bounds test results indicate a strong long-run relationship among the variables. The computed F-statistic (11.04) exceeds the upper bound critical values at all conventional

significance levels (10%, 5%, 2.5%, and 1%). E.g., the upper bound critical value at 5% is 3.38. Therefore, the null hypothesis of no long-run (levels) relationship is rejected, confirming the existence of cointegration among the variables.

Table 5. ARDL Long-Run Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnCED	-0.279643	0.217032	-1.288488	0.2266
lnCGT	0.344351	0.250418	1.375105	0.1991
lnCIT	-1.077816	0.422671	-2.550012	0.0289
lnPIT	2.751330	0.841455	3.269730	0.0084
lnVAT	-1.543535	0.405984	-3.801955	0.0035
C	34.85841	1.326338	26.28171	0.0000

Source: EViews Output (2026)

The ARDL long-run estimates are displayed in Table 5. The results show that customs and excise duties (lnCED) have a negative but insignificant effect on economic growth (coefficient = -0.2796 , $p = 0.2266$); a 1% increase in CED is associated with a 27.9% decrease in RGDP. This implies that, although higher CED is associated with a reduction in real GDP in the long run, the effect is weak.

Similarly, capital gains tax (lnCGT) exhibits a positive but insignificant relationship with economic growth (coefficient = 0.3444 , $p = 0.1991$), a 1% increase in CGT is associated with a 34.4%% increase in RGDP. This suggests that increases in CGT may be associated with higher RGDP, but the effect is weak.

In contrast, company income tax (lnCIT) has a negative and significant impact on economic growth (coefficient = -1.0778 , $p = 0.0289$); a 1% increase in CIT is associated with a 1.2%% decrease in RGDP. This indicates that higher corporate tax burdens tend to reduce real GDP in the long run, possibly by discouraging investment and business expansion.

On the other hand, personal income tax (lnPIT) shows a positive and significant effect (coefficient = 2.7513 , $p = 0.0084$), a 1% increase in PIT is associated with a 2.8%% increase in RGDP. This suggests that increases in PIT are associated with higher economic growth, which may reflect improved government revenue mobilization translating into productive public expenditure.

Conversely, value-added tax (VAT) has a negative and highly significant effect on economic growth (coefficient = -1.5435 , $p = 0.0035$); a 1% increase in VAT is associated with a 1.5% decrease in RGDP. This implies that increases in VAT may dampen economic activity, potentially due to its distortionary effects on consumption.

The constant term is positive and highly significant (coefficient = 34.8584 , $p < 0.01$), indicating the baseline level of economic growth when all explanatory variables are held constant.

Overall, the results reveal mixed effects of taxation on economic growth in the long run: while PIT promotes growth, CIT and VAT

exert significant negative effects, and CED and CGT show no significant influence.

Table 6. ARDL Short-Run Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(lnCED)	0.019876	0.083363	0.238423	0.8164
D(lnCIT)	0.083410	0.116277	0.717341	0.4896
D (lnCIT (-1))	0.602024	0.135542	4.441608	0.0013
D (lnCIT (-2))	0.626571	0.137623	4.552821	0.0011
D(lnPIT)	-0.091761	0.194981	-0.470616	0.6480
D (lnPIT (-1))	-1.670947	0.258605	-6.461391	0.0001
D (lnPIT (-2))	-1.095820	0.208392	-5.258453	0.0004
D(lnVAT)	-0.165220	0.150466	-1.098060	0.2979
D (lnVAT (-1))	1.070454	0.178282	6.004274	0.0001
D (lnVAT (-2))	0.338799	0.089769	3.774110	0.0036
CointEq (-1)	-0.594772	0.053497	-11.11783	0.0000

R-squared 0.934293 Mean of dependent var 0.043387

Adjusted R-squared 0.893227 Durbin-Watson stat 2.435392

S.D. dependent var 0.038572

*** p-value incompatible with t-Bounds distribution.**

Source: EViews Output (2026)

The ARDL long-run estimates are displayed in Table 6. The ARDL error correction results reveal that short-run dynamics among tax variables and economic growth are largely driven by lagged effects. While contemporaneous changes in CIT, PIT, VAT, and CED are insignificant, lagged values of CIT and VAT exert positive and significant effects on economic growth, indicating delayed fiscal transmission. In contrast, lagged PIT exhibits a negative and significant impact, suggesting that higher personal income taxes dampen growth in subsequent periods. CED shows no meaningful short-run influence. The error correction term is negative and highly significant (-0.5948 , $p < 0.01$), confirming the existence of a long-run equilibrium relationship and indicating that approximately 59.5% of short-run disequilibrium is corrected annually. The model demonstrates strong explanatory power (Adjusted $R^2 = 0.8932$) and no evidence of serial correlation (DW = 2.44), affirming its robustness.

Discussion of Results

The findings from the ARDL long-run and short-run estimates provide nuanced insights into the relationship between tax revenue components and economic growth in Nigeria, and they largely align, while in some cases diverging from the extant empirical literature.

Discussion of Long-Run Results

The long-run estimates reveal a mixed impact of taxation on economic growth, which is consistent with prior empirical evidence. Specifically, company income tax (CIT) exhibits a negative and significant effect on economic growth. This finding corroborates the results of Adeusi et al. (2020) and John and Dickson (2020), who also reported that CIT exerts a negative influence on GDP, largely due to its distortionary effect on investment decisions and corporate expansion. Similarly, Dang and Bala (2018) observed that certain tax components, including CIT, may hinder growth due to inefficiencies and leakages in the tax system. However, this result contrasts with Yahaya and Bakare (2018),

who found a positive and significant relationship between CIT and economic growth, suggesting that the effectiveness of CIT may depend on how efficiently tax revenues are utilized.

In the case of value-added tax (VAT), the study finds a negative and highly significant long-run effect on economic growth. This contradicts the findings of Mukolu and Ogodor (2021) and Ezejiofor and Ezinando (2026), who reported a positive contribution of VAT to GDP, particularly when efficiently administered. However, the present finding aligns with Etim et al. (2021), who argued that indirect taxes tend to exert a more detrimental effect on economic growth. The negative impact of VAT in this study may reflect its burden on consumption, thereby reducing aggregate demand and slowing economic activity.

Conversely, personal income tax (PIT) demonstrates a positive and significant impact on economic growth in the long run. This suggests that increased PIT revenue may enhance government capacity to finance productive expenditures, thereby stimulating growth. This finding is in line with Udofot and Etim (2017), who found a strong positive relationship between tax revenue and economic performance. It also supports the argument that direct taxes, when efficiently managed, can promote economic development.

Meanwhile, customs and excise duties (CED) show a negative but insignificant effect, while capital gains tax (CGT) exhibits a positive but insignificant relationship with economic growth. These insignificant findings are consistent with Bruno and Emmanuel (2019), who reported that tax revenue overall has only a minimal impact on economic growth. Similarly, Abomaye-Nimenibo et al. (2018) found that some tax components do not significantly influence growth, particularly in the short run, suggesting structural inefficiencies in tax administration.

Overall, the long-run results reinforce the argument that the growth effects of taxation depend not only on the type of tax but also

on the efficiency of tax administration and the productive use of tax revenues.

Discussion of Short-Run Results

The short-run dynamics reveal that most contemporaneous tax variables do not significantly affect economic growth, indicating that fiscal policy impacts are not immediate. This supports the findings of Abomaye-Nimenibo et al. (2018), who reported that some tax variables do not significantly influence growth, particularly in the short run.

However, lagged values of CIT exhibit a positive and significant effect on economic growth, suggesting that the impact of corporate taxation materializes over time. This delayed effect may reflect the time required for firms to adjust investment and production decisions following tax changes. This aligns partially with Ezejiofor and Ezinando (2026), who noted weak but positive effects of CIT on economic growth in Nigeria.

Similarly, lagged VAT variables show a positive and significant impact, indicating that although VAT may initially constrain consumption, its revenue-generating capacity may later translate into growth-enhancing public expenditure. This dynamic supports the findings of Mukolu and Ogodor (2021), who emphasized the revenue-generating importance of VAT.

In contrast, lagged PIT variables exert a negative and significant effect on economic growth, suggesting that increases in personal income tax may reduce disposable income and consumption in the short run, thereby dampening economic activity. This result highlights a temporal trade-off, where PIT supports growth in the long run but constrains it in the short run.

Meanwhile, customs and excise duties remain insignificant in the short run, reinforcing the notion that trade-related taxes may not be a strong driver of immediate economic performance.

The error correction term (ECT) is negative and highly significant, confirming the existence of a long-run equilibrium

relationship among the variables. The speed of adjustment (approximately 59.5%) indicates that deviations from equilibrium are corrected relatively quickly, suggesting a stable economic system. This is consistent with the ECM-based findings of John and Dickson (2020) and Dang and Bala (2018), who also reported significant error correction mechanisms.

Taken together, the results suggest that:

- i. Taxation exerts heterogeneous effects on economic growth, depending on the tax type and time horizon.
- ii. Direct taxes (PIT) tend to support growth in the long run but may constrain it in the short run.
- iii. Indirect taxes (VAT) may be growth-inhibiting in the long run, but exhibit delayed positive effects.
- iv. Corporate taxes (CIT) can be detrimental in the long run but may

have transitional benefits in the short run.

- v. Institutional efficiency and fiscal policy implementation play a critical role in determining the effectiveness of tax revenue in promoting economic growth.

These findings underscore the importance of balanced tax policy design, efficient tax administration, and the strategic allocation of tax revenues toward productive sectors to achieve sustainable economic growth.

Post-Estimation (Diagnostic) Test

Post-estimation diagnostic tests are conducted to verify that the underlying assumptions of the estimated model are satisfied, thereby ensuring the reliability, efficiency, and validity of statistical inference and policy conclusions.

Table 7. Summary of Post-Estimation (Diagnostic) Test Results

Test	Null Hypothesis	Test Type	Test Statistic	Prob.
Normality Test	Normally Distributed Residuals	Jarque-Bera	JB-statistic (0.439376)	0.802769
Serial Correlation	Serial Correlation doesn't exist	Breusch-Godfrey LM Test	F-statistic (1.782239)	0.2290
Heteroscedasticity Test	Homoscedasticity exists	Breusch-Pagan-Godfrey	F-statistic (1.033126)	0.4953

Source: Source: EViews Output (2026)

The results presented in Table 7 provide evidence on the adequacy and reliability of the estimated model through a series of post-estimation diagnostic tests.

The normality test, based on the Jarque-Bera test, yields a statistic of 0.439376 with a probability value of 0.802769. Given that the p-value exceeds the conventional 5% significance level, the null hypothesis of normally distributed residuals cannot be rejected. This indicates that the residuals are approximately normally distributed, thereby supporting the validity of statistical inference drawn from the model.

Furthermore, the test for serial correlation using the Breusch-Godfrey LM test reports an

F-statistic of 1.782239 with a probability value of 0.2290. Since the p-value is greater than 0.05, the null hypothesis of no serial correlation is accepted. This suggests that the residuals are not autocorrelated, implying that the model does not suffer from dynamic misspecification and that the estimated coefficients are efficient.

In addition, the heteroskedasticity test conducted via the Breusch-Pagan-Godfrey test produces an F-statistic of 1.033126 with a probability value of 0.4953. The high p-value indicates that the null hypothesis of homoscedasticity cannot be rejected, confirming that the variance of the residuals is

constant. This ensures that the standard errors are reliable and that hypothesis testing is valid. Overall, the diagnostic test results reveal no evidence of violation of the classical linear regression assumptions. The residuals are normally distributed, free from serial correlation, and homoscedastic. Consequently, the estimated model is well-specified, and the results are robust, reliable, and suitable for policy interpretation and inference.

Conclusion

This study empirically examined the impact of tax revenue components – Customs and Excise Duties (CED), Capital Gains Tax (CGT), Company Income Tax (CIT), Value Added Tax (VAT), and Personal Income Tax (PIT) on economic growth in Nigeria over the period 1994–2023 using the ARDL modelling framework. The findings reveal the existence of a stable long-run relationship between taxation and economic growth, as confirmed by the bounds test and the statistically significant error correction mechanism.

The long-run estimates indicate that taxation exerts heterogeneous effects on economic growth. Specifically, PIT demonstrates a positive and significant impact on real GDP, suggesting that improved personal income tax mobilization enhances government revenue and supports growth-enhancing public expenditure. In contrast, CIT and VAT exhibit negative and significant effects, implying that excessive corporate tax burdens and consumption taxes may distort investment and consumption decisions, thereby constraining economic performance. Meanwhile, CED and CGT show statistically insignificant effects, indicating their relatively weak contribution to long-term growth dynamics.

In the short run, the results suggest that the effects of taxation on economic growth are largely lagged rather than contemporaneous. While current changes in tax variables are mostly insignificant, lagged values of CIT and VAT positively influence economic growth, whereas lagged PIT exerts a negative effect. This highlights the temporal complexity of fiscal policy transmission in Nigeria. The error correction term further reveals a relatively fast adjustment to long-run

equilibrium, reinforcing the stability of the model.

Importantly, the post-estimation diagnostic tests confirm that the model satisfies key classical assumptions, as the residuals are normally distributed, homoscedastic, and free from serial correlation. This affirms the robustness and reliability of the estimated results for policy inference.

Overall, the study concludes that while taxation remains a vital fiscal instrument for promoting economic growth, its effectiveness in Nigeria depends critically on the structure of the tax system, efficiency of tax administration, and the productive utilization of generated revenue. The mixed findings underscore the need for a balanced and growth-oriented tax policy framework.

Recommendations

In light of the empirical findings, the following policy recommendations are advanced:

- i. **Reform Company Income Tax (CIT) Structure:** Given the negative impact of CIT on economic growth, the government should consider reducing excessive corporate tax burdens and closing loopholes that encourage tax evasion. A more investment-friendly tax regime will stimulate business expansion, attract foreign investment, and enhance productivity.
- ii. **Review Value Added Tax (VAT) Policy:** The adverse effect of VAT on economic growth suggests the need for a cautious approach to consumption taxation. Policymakers should ensure that VAT rates are not excessively burdensome and should consider exemptions or reductions on essential goods and services to protect aggregate demand.
- iii. **Strengthen Personal Income Tax (PIT) Administration:** Since PIT positively influences economic growth in the long run, efforts should be intensified to expand the tax base, improve compliance, and enhance administrative efficiency. This can be achieved through digital tax systems,

- better record-keeping, and enforcement mechanisms.
- iv. Improve Efficiency of Tax Revenue Utilization: The growth impact of taxation depends not only on revenue generation but also on how such revenues are utilized. The government should prioritize channelling tax revenues into productive sectors such as infrastructure, education, and healthcare to maximize their developmental impact.
 - v. Enhance Tax Administration and Institutional Capacity: Addressing inefficiencies, corruption, and leakages within the tax system is critical. Strengthening institutions such as the Federal Inland Revenue Service will improve revenue collection and ensure transparency and accountability.
 - vi. Diversify Revenue Sources Beyond Oil: Given Nigeria's vulnerability to oil price shocks, there is a need to deepen non-oil tax revenue sources. Broadening the tax base and improving compliance across sectors will enhance fiscal sustainability and reduce dependence on volatile oil revenues.
 - vii. Adopt a Balanced Tax Policy Framework: Policymakers should strike a balance between direct and indirect taxes to minimize distortions while maximizing revenue. A well-structured tax mix will ensure that taxation supports both economic efficiency and equity.

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