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Public Sector Accounts and its Economic Implications: Historical Analysis on Trends and Elasticity

Stephen Oghenevwede[1] & Erhijakpor Andrew E. O.[2*]

[1]Department of Banking and Finance, Delta State University, Abraka

[*2]Professor of Finance & Development, Department of Banking and Finance, Delta State University, Abraka

Corresponding Author:
Erhijakpor Andrew E. O.

Professor of Finance & Development, Department of Banking and Finance, Delta State University, Abraka

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Abstract: This study examined public sector accounts and their economic implications through a historical analysis of trends and elasticity in Nigeria. GDP growth rate (GDPGR) served as the dependent variable, while tax-to-GDP ratio (TAX/GDP), public debt-to-GDP ratio (DEBT/GDP), capital expenditure ratio (CAPEX/GDP), recurrent expenditure ratio (RECEX/GDP), and interest payment-to-revenue ratio (INTPAY/REV) constituted the explanatory variables. Inflation rate (INF), exchange rate (EXR), and foreign direct investment as a percentage of GDP (FDI) were incorporated as control variables. The study adopted an ex-post facto research design and utilized annual time-series data sourced from the Central Bank of Nigeria Annual Reports and Statistical Bulletins, National Bureau of Statistics publications, World Bank databases, and International Monetary Fund databases. Descriptive and econometric techniques were employed in the analysis. The Autoregressive Distributed Lag (ARDL) approach was adopted to estimate both short-run and long-run relationships among the variables. The findings revealed that TAX/GDP exerted a negative and statistically insignificant effect on GDPGR in both the short run and long run. Similarly, DEBT/GDP had a negative but statistically insignificant influence on GDPGR. Conversely, CAPEX/GDP demonstrated a positive and statistically significant effect on GDPGR in both the short run and long run. RECEX/GDP also exerted a positive and significant effect on GDPGR. Likewise, INTPAY/REV significantly and positively influenced GDPGR. Additionally, the Error Correction Term coefficient indicated that approximately 106.47 percent of short-run disequilibrium was corrected within one period. The study concluded that public sector accounts remained important determinants of economic growth in Nigeria, although their effects varied across fiscal components. It recommended improvements in tax administration, prudent debt management, increased prioritization of capital expenditure, efficient management of recurrent expenditure, and strengthened fiscal transparency to promote sustainable economic growth in Nigeria.

Keywords: *Public Sector Accounts, historical trend, tax, GDP, capital, recurrent, expenditure, debt, revenue.*

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Introduction

Public Sector Accounts, historical trend, tax, GDP, capital, recurrent, expenditure, debt, revenue

The continued weak performance of Nigeria's economy, despite many years of active fiscal intervention, remains one of the most serious concerns for policymakers and researchers. Since gaining independence in 1960, successive governments have relied heavily on public sector activities to promote economic growth, stabilize the economy, and support national development. However, despite continuous increases in government expenditure, rising public debt, and repeated fiscal reforms, Nigeria's economic growth has remained unstable, uneven, and largely disconnected from the scale of government involvement (Onifade et al., 2020). This situation where expanding public sector accounts coexist with fragile economic outcomes raises important questions about the effectiveness, structure, and responsiveness of Nigeria's fiscal system (Opayinka, 2025).

A major concern is the persistent weakness in domestic revenue generation, reflected in Nigeria's consistently low tax-to-GDP ratio (Onifade et al., 2020). Over several decades, Nigeria has recorded one of the lowest tax effort levels globally, even during periods of economic growth. This structural weakness means that increases in national income have not resulted in proportional increases in government revenue, thereby weakening the fiscal link required for sustainable development (Oladipo & Ogunkola, 2021). The limited responsiveness of tax revenue to GDP growth has forced the government to depend heavily on borrowing to finance expenditure, worsening fiscal imbalances (Ajakaiye & Fakiyesi, 2025). This low tax performance is not merely a technical issue; it reflects deeper institutional, structural, and administrative problems within Nigeria's public finance system (Onifade et al., 2020). Despite reforms such as adjustments to value-added tax and the introduction of digital revenue systems, overall revenue performance has remained largely stagnant. Consequently, fiscal sustainability has increasingly relied on debt accumulation rather

than internally generated revenue, creating a fragile fiscal structure that is highly exposed to economic shocks (Ajakaiye & Fakiyesi, 2025).

This revenue weakness has directly contributed to Nigeria's rising public debt levels. Although borrowing can be justified as a tool for financing development and stabilizing expenditure, Nigeria's pattern of borrowing has raised serious concerns about sustainability (Onifade et al., 2020). Following the 2014 oil price decline, through the COVID-19 pandemic and afterward, public debt grew rapidly, often at a faster rate than GDP. While the overall debt-to-GDP ratio may appear moderate, experts argue that such figures hide deeper risks linked to weak revenue performance and increasing debt servicing obligations (Akanbi & Du Toit, 2021).

A key problem is the growing disconnect between rising public debt and economic growth. Economic theories suggest that debt used for productive investment should increase output. However, Nigeria's experience shows weak or even negative growth responses to increasing debt levels. Several studies such as Onifade et al., (2020) and Ali et al., (2025) indicated that the effect of public debt on GDP growth becomes weaker, especially when borrowed funds are not directed toward productive sectors. This situation raises serious concerns about how effectively borrowed resources are utilized and under what conditions public debt can meaningfully support economic growth.

Closely related to the debt issue is the increasing burden of interest payments on government revenue. In recent years, Nigeria's interest payment-to-revenue ratio has increased significantly, absorbing a large share of federally collected revenue (Ali et al., 2025). This trend has reduced fiscal space, leaving fewer resources available for capital investment and social development (Eme & Peter, 2023). As debt servicing takes priority, fiscal policy shifts from being a tool for growth to a mechanism for meeting existing financial obligations (CBN, 2023). The rapid growth in interest payments creates a structural problem because it changes the composition and effectiveness of public spending (Eme & Peter, 2023). As more revenue is used for debt servicing, government expenditure becomes less flexible and less responsive to economic needs (CBN, 2023). Empirical evidence suggests that high interest payment ratios negatively affect GDP growth by crowding out capital expenditure and weakening the overall impact of fiscal policy (Abata & Adekunle, 2022). Despite its importance, this variable has received limited attention in many fiscal-growth studies.

Another significant issue is the long-standing imbalance between capital and recurrent expenditure in Nigeria's fiscal structure. For many years, recurrent expenditure has dominated total government spending, often accounting for more than two-thirds of the budget (CBN, 2023). Although recurrent spending is necessary for administrative operations, its continuous expansion has reduced investment in infrastructure, education, and other productive sectors essential for long-term growth (Eme & Peter, 2023). The dominance of recurrent expenditure raises concerns about efficient resource allocation and growth performance. Studies show that recurrent expenditure often has weak or negative effects on GDP growth, especially when it is largely driven by wage bills and administrative costs rather than productivity-enhancing services (CBN, 2023). In contrast, capital expenditure generally has stronger positive effects on growth but remains insufficient and unstable due to revenue shortages and high debt servicing costs (Dada & Odewale, 2024). This imbalance limits the effectiveness of fiscal policy and contributes to ongoing infrastructure deficits.

The combined effects of weak revenue mobilization, rising public debt, increasing interest burdens, and expenditure imbalance have created a complex fiscal environment where higher government spending does not necessarily lead to economic growth (CBN, 2023). This trend is evident in Nigeria's experience since 2016, when expanded fiscal activity produced only modest growth results. Such outcomes suggest declining fiscal responsiveness and weakened links between public sector accounts and GDP growth (Adedeji et al., 2019).

Although many studies have examined fiscal policy and economic growth in Nigeria, important gaps remain. A large number of studies focus on individual fiscal variables such as public debt or government expenditure without considering how these variables interact within the broader public sector framework. This fragmented approach limits understanding of how fiscal components jointly influence economic performance over time (Adeoye, 2023). In addition, most existing studies emphasize short-run analysis and fail to account for long-term historical developments across different policy periods. Given Nigeria's transition from an agriculture-based revenue system to oil dependence, debt relief, renewed borrowing, and post-pandemic fiscal stress, there is a strong need for studies that combine long-term trend analysis with elasticity-based evaluation. Without such an approach, policy recommendations remain incomplete and sometimes inconsistent.

Another important gap is the limited use of elasticity concepts in fiscal-growth research. While many studies examine whether fiscal variables positively or negatively affect growth, few assess the degree of responsiveness of GDP growth to changes in these variables (Adeoye, 2023; Alli & Eze, 2024). Elasticity analysis provides deeper insight into whether increases in revenue, expenditure, or debt produce proportionate or diminishing effects on growth. Without this perspective, policy decisions may lack precision, especially in an environment of limited fiscal space (Alli & Eze, 2024). Furthermore, although the interest payment-to-revenue ratio has become central to Nigeria's fiscal discussions, empirical research has focused more on debt-to-GDP ratios (Alli & Eze, 2024). In revenue-constrained economies like Nigeria, fiscal sustainability depends more on revenue adequacy than on debt size alone (CBN, 2023).

Therefore, a fundamental problem in Nigeria's fiscal policy research is the absence of comprehensive studies that jointly examine the tax-to-GDP ratio, public debt-to-GDP ratio, capital expenditure ratio, recurrent expenditure ratio, and interest payment-to-revenue ratio within a long-term historical and elasticity-based framework. Without such integrated analysis, policymakers lack clear empirical guidance on which fiscal components most strongly influence GDP growth and under what conditions (Alli & Eze, 2024). The continued presence of fiscal deficits, high debt servicing costs, infrastructure gaps, and weak growth suggests that Nigeria's fiscal challenges are structural rather than temporary (Alli & Eze, 2024). Addressing these challenges requires a broad examination of how public sector accounts have developed over time and how their responsiveness has influenced economic performance. This need is particularly

urgent as Nigeria faces increasing development demands with limited fiscal resources (NBS, 2024).

In response to these concerns, this study is motivated by the need to reassess Nigeria's public sector accounts using a comprehensive historical perspective and an elasticity-based analytical approach. By examining long-term trends from 1960 to 2025 and evaluating how GDP growth responds to key fiscal indicators, the study aims to fill existing gaps in the literature and provide evidence-based insights to support sustainable fiscal policy formulation. The rest of the paper is shared as follows: Section two and three considers the related literature and methodology; section four and five deals with analysis/discussion and conclusion and recommendations respectively.

Review of Related Literature

Conceptual review

The public sector account refers to the organized recording, classification, and reporting of all government financial activities. It covers revenues, expenditures, assets, liabilities, and overall fiscal balances. In simple terms, it shows how the government generates money, how it spends it, what it owns, what it owes, and whether it is operating at a surplus or deficit (Ekong & Udoudo, 2022). The public sector includes all government institutions responsible for providing public services and managing national resources. Therefore, public sector accounts provide a clear picture of the financial condition and performance of government. They are important for ensuring transparency, accountability, and informed decision-making in fiscal policy (Adedeji, et al, 2019). At its foundation, the public sector account reflects the government's role as the manager of public resources (Ekong & Udoudo, 2022). It shows how revenue is raised through taxation and other sources, how funds are allocated across sectors, how public debt is managed, and how financial obligations are settled. Through this comprehensive financial record, policymakers and stakeholders can assess whether the government is managing resources responsibly, maintaining fiscal discipline, and sustaining public finances over time (Babatunde, 2022).

The research covers the structure, performance, and responsiveness of Nigeria's public sector accounts over the study period. It investigates how government revenue mobilization, borrowing, expenditure composition, and interest obligations have interacted with economic growth across multiple policy regimes and structural changes.

The study focuses on key fiscal variables that represent the public sector account. These include the tax-to-GDP ratio, which measures the effectiveness of government revenue mobilization and its responsiveness to economic growth; the public debt-to-GDP ratio, assessing the burden of government borrowing and its implications for growth; the capital expenditure ratio, evaluating the contribution of government investments to economic expansion; the recurrent expenditure ratio, which captures the impact of operational spending on economic performance; and the interest payment-to-revenue ratio, which reflects fiscal sustainability constraints and the crowding-out effect on productive investment. The dependent variable is the GDP growth rate, which serves as a proxy for overall economic performance. To enhance model robustness, secondary control variables such as inflation rate, exchange rate, and foreign direct investment may also be included.

Figure 2.1: Conceptual Model of the Study

The conceptual model of the study depicts the know conceptual relationships between the independent and dependent variables of this study as expressed in figure 2.1 below;

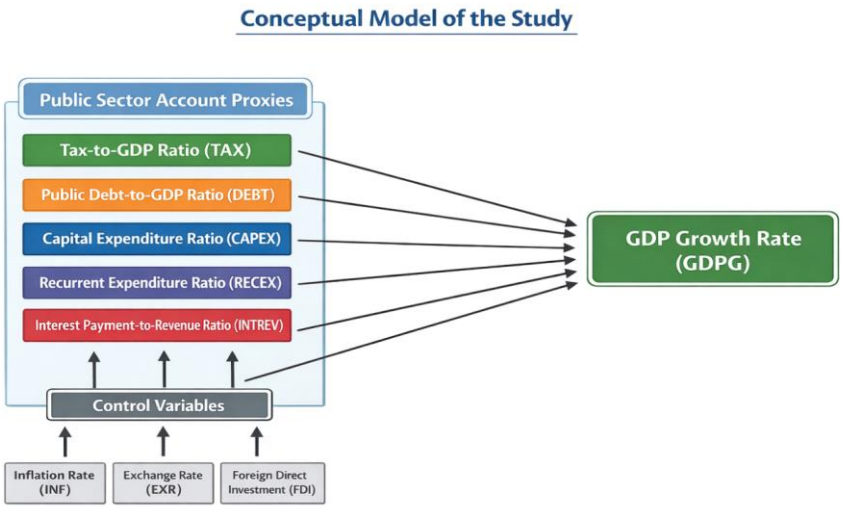

Figure 2.1: Source: Authors Conceptual Model, 2026.

Theoretical Framework

There are a couple of theories in the literature upon which this kind of work is anchored on, which includes the Keynesian fiscal theory, Wagner's law of increasing state activities, endogenous growth theory, neoclassical growth theory, debt overhang theory advanced by Paul Krugman (1988) and Jeffrey Sachs (1989), fiscal sustainability theory evolved through the works of the IMF and World Bank during the 1990s, Ricardian equivalence theory (David Ricardo, 1820; Barro, 1974), and public choice theory (James Buchanan & Gordon Tullock, 1962). These theories and their import are well documented in the literature.

Historical Perspective of Nigeria's Public Sector Accounts

A comprehensive understanding of Nigeria's fiscal-growth dynamics requires an examination of the historical evolution of public sector accounts across different economic regimes. Nigeria's fiscal system has undergone major structural transitions shaped by revenue base shifts, oil dependence, debt cycles, fiscal reforms, and macroeconomic shocks. These changes have influenced the responsiveness of GDP growth to fiscal indicators such as the tax-to-GDP ratio, public debt-to-GDP ratio, capital expenditure ratio, recurrent expenditure ratio, and interest payment-to-revenue ratio. Empirical studies emphasize that long-term structural analysis is necessary to properly interpret fiscal-growth interactions in developing economies (Adeoye, 2023; Ajakaiye & Fakiyesi, 2025).

Empirical Review

The empirical literature on the fiscal-growth nexus in Nigeria and comparable developing economies reveals extensive investigation into how revenue mobilization, public debt dynamics, expenditure composition, and debt servicing obligations influence economic performance. However, findings remain mixed, fragmented, and often variable-specific. In line with the hypotheses of this study, the review is structured around the five key fiscal proxies: tax-to-GDP ratio, public debt-to-GDP ratio, capital expenditure ratio, recurrent expenditure ratio, and interest payment-to-revenue ratio.

Although substantial evidence exists on individual fiscal components, most studies analyze variables in isolation rather than within an integrated framework. Few studies jointly examine tax performance, debt accumulation, expenditure composition, and interest burdens using a long-term elasticity-based approach spanning 1960–2024. This gap justifies the present study's unified ARDL framework and elasticity analysis to provide a more comprehensive understanding of Nigeria's fiscal-growth dynamics.

Despite the extensive body of empirical literature examining the effect of fiscal policy on economic growth, significant conceptual, methodological, and contextual gaps remain, particularly within the Nigerian context. Existing studies have largely concentrated on isolated fiscal variables such as government expenditure, tax revenue, or public debt, with limited attention given to the comprehensive structure of public sector accounts. Most empirical works assess these variables independently, thereby failing to capture the interactive and joint effects of revenue mobilization, expenditure composition, and debt sustainability on economic growth. This fragmented approach limits a holistic understanding of how the overall fiscal architecture influences growth dynamics in developing economies such as Nigeria.

Furthermore, a considerable number of earlier studies rely on aggregate government expenditure without disaggregating spending into capital and recurrent components. This omission obscures the differential growth effects of productive investment spending versus administrative and consumption-oriented expenditures. Consequently, the elasticity of GDP growth with respect to capital expenditure and recurrent expenditure remains inadequately explored, despite persistent concerns regarding Nigeria's expenditure inefficiency and rising recurrent obligations. Similarly, although public debt has attracted scholarly attention, fewer studies explicitly integrate debt sustainability indicators, particularly the interest payment-to-revenue ratio which has become increasingly critical in Nigeria's fiscal discourse due to the escalating cost of debt servicing.

Methodologically, many empirical investigations employ static estimation techniques such as ordinary least squares, which are inadequate for capturing the dynamic nature of fiscal–growth relationships. Where time-series models are applied, the focus is often restricted to short-run effects or limited sample periods, thereby neglecting long-run equilibrium relationships. In addition, few studies explicitly accommodate mixed integration properties of macroeconomic variables, despite the well-documented non-stationary behavior of fiscal data. This methodological limitation weakens the reliability and policy relevance of previous findings.

Moreover, the majority of existing studies emphasize fiscal size rather than fiscal sustainability. Limited empirical attention has been given to the revenue–expenditure–debt nexus as a unified framework for evaluating fiscal health. This gap is particularly critical for Nigeria, where low tax-to-GDP ratio, expanding public debt, high recurrent expenditure, and mounting interest payments coexist, raising serious concerns about long-term growth sustainability.

In light of these shortcomings, this study fills an important gap by adopting a comprehensive public sector account framework that jointly examines tax-to-GDP ratio, public debt-to-GDP ratio, capital expenditure ratio, recurrent expenditure ratio, and interest payment-to-revenue ratio within a single empirical model. By employing the Autoregressive Distributed Lag (ARDL) approach over the period 1960–2025, the study captures both short-run dynamics and long-run elasticities while accommodating mixed-order integration. This integrated and extended approach provides deeper insight into Nigeria's fiscal-growth relationship and offers more robust evidence to inform sustainable fiscal policy formulation.

Research Methodology

Data and Source

The study relies exclusively on secondary data sources, collected from Central Bank of Nigeria Annual Reports and Statistical Bulletins (1960–2025): These documents provide detailed fiscal data including government revenue, tax collection, debt stock, capital and recurrent expenditures, and interest payments, National Bureau of Statistics (NBS): Provides the official GDP growth rate and macroeconomic indicators such as inflation, exchange rates, and foreign direct investment, World Bank and IMF databases: Used to validate and supplement fiscal data and control variables and Peer-reviewed articles and

government policy reports where necessary, for context and cross-verification. The time scope of the study, 1960 to 2025, is carefully chosen to cover significant policy regimes and economic cycles in Nigeria, allowing for a comprehensive historical and contemporary fiscal-growth analysis.

Method of Data Analysis

The data analysis for this study combines descriptive and econometric techniques to examine the impact of Nigeria's public sector account proxies on GDP growth. The analysis is primarily conducted using E-Views 9.0, with the Autoregressive Distributed Lag (ARDL) bounds testing approach as the main econometric method, suitable for variables with mixed integration orders (I(0) and I(1)) and small annual sample sizes.

ARDL Bounds Test for Cointegration: The ARDL bounds testing approach, developed by Pesaran, Shin, and Smith (2001), was employed to test for a long-run equilibrium relationship between GDP growth and the fiscal variables. Decision rule: Compare the computed F-statistic with critical bounds; if the F-statistic exceeds the upper bound, cointegration exists; if it is below the lower bound, no cointegration exists; if it lies between the bounds, the result is inconclusive.

The Error Correction Model captures short-run adjustments toward long-run equilibrium. The Error Correction Term (ECT) should be negative and statistically significant. Decision rule: A negative and significant ECT confirms that deviations from the long-run equilibrium are corrected over time, with its magnitude indicating the speed of adjustment.

Model Specifications

The functional relationship between Nigeria's economic growth and its public sector account proxies along with control variables is expressed as:

GDPGR=f(TAX/GDP+DEBT/GDP+CAPEX/GDP+RECEX/GDP+INTPAY/REV+INFt+EXR+FDI)

Where: GDPGR= GDP growth rate at time; TAX/GDP= Tax revenue to GDP ratio (tax effort)

DEBT/GDP= Public debt to GDP ratio (debt burden); CAPEX/GDPt= Capital expenditure to GDP ratio (investment spending); RECEX/GDP= Recurrent expenditure to GDP ratio (operational spending); INTPAY/REV= Interest payment to revenue ratio (debt servicing burden); INF= Inflation rate (control variable); EXR= Exchange rate (control variable); FDI= Foreign direct investment (control variable).

Econometric Model for ARDL Analysis

The explicit econometric form suitable for ARDL estimation is given by:

$$GDPGR_t=\beta0+\beta1(GDPTAX)t+\beta2(GDPDEBT)t+\beta3(GDPCAPEX)t+\beta4(GDPRECEX)t+\beta5(REVINTPAY)t+\beta6INFt+\beta7EXRt+\beta8FDIt+\epsilon t$$

Where: β0 beta is the intercept term; β1,β2,...,β8 are coefficients measuring the impact of respective independent variables; ϵt is the stochastic error term

Table 3.1: A Priori Expectation of the Model

Variable	Proxy/Measurement	Expected Relationship with GDP Growth	Description
GDP Growth Rate (GDPGR)	Annual % change in GDP	Dependent variable	Measures the economic growth rate
Tax-to-GDP Ratio (TAX/GDP)	Total tax revenue as % of GDP	Positive	Indicates government revenue mobilization efficiency
Public Debt-to-GDP Ratio (DEBT/GDP)	Total public debt as % of GDP	Negative (beyond threshold)	Measures fiscal leverage and debt burden
Capital Expenditure Ratio (CAPEX/GDP)	Capital expenditure as % of GDP	Positive	Proxy for government investment in infrastructure and development
Recurrent Expenditure Ratio (RECEX/GDP)	Recurrent expenditure as % of GDP	Negative	Proxy for operational/administrative spending, often less growth enhancing
Interest Payment-to-Revenue Ratio (INTPAY/REV)	Interest payment as % of total government revenue	Negative	Measures fiscal sustainability and debt servicing burden
Inflation Rate (INF)	Annual % change in consumer price index	Negative	Reflects macroeconomic stability
Exchange Rate (EXR)	Naira per USD (annual average)	Mixed	Reflects external competitiveness and macroeconomic conditions
Foreign Direct Investment (FDI)	Net FDI inflows as % of GDP	Positive	Proxy for external capital inflows supporting growth

Source: Researcher's Computation, 2026

Results and Discussion

Data Analysis

The analysis of the relationship between public sector accounts and economic growth requires the application of appropriate econometric techniques capable of addressing the characteristics of macroeconomic time-series data. In view of the study's objective of examining fiscal sustainability, expenditure efficiency, and the responsiveness of public sector accounts, both preliminary and advanced analytical procedures are employed to ensure the validity and reliability of the findings.

Thus, the selected analytical procedures provide a comprehensive framework for investigating the fiscal-growth

nexus in Nigeria. The combination of preliminary analyses, diagnostic tests, stability assessments, unit root testing, and ARDL estimation enhances the robustness of the findings and generates empirical evidence regarding the sustainability, efficiency, and responsiveness of public sector accounts in promoting economic growth within Nigeria's institutional and economic context.

Descriptive Statistics

Descriptive statistics provide a preliminary overview of the characteristics of the study variables over the period under investigation. The need for this test arises from its ability to summarize the data and identify potential irregularities such as extreme values or substantial dispersion that may influence subsequent analyses. The analysis focuses on the interpretation of the mean, median, maximum, minimum, standard deviation, skewness, and kurtosis values. Variables with large standard deviations are considered relatively volatile, while skewness and kurtosis statistics provide indications regarding the shape of the distribution.

Table 4.1: Descriptive Statistics

	GDPGR	TAX_GDP	DEBT_GDP	CAPEX_GDP	RECEX_GDP	INTPAY_REV	INF	EXR	FDI_GDP
Mean	4.559697	6.713485	26.46788	3.958636	5.177121	15.29576	13.66818	15.87682	2.817727
Median	4.555000	6.815000	25.36500	3.830000	5.010000	14.65000	14.03000	2.425000	2.470000
Maximum	9.430000	8.740000	50.71000	6.120000	8.910000	30.28000	28.29000	120.4700	23.30000
Minimum	-0.160000	4.130000	6.390000	1.590000	2.190000	3.120000	2.110000	0.290000	0.110000
Std. Dev.	2.035484	0.935915	10.12566	1.007147	1.281620	6.934407	6.057738	29.01145	2.853200
Skewness	-0.040184	-0.389083	0.295222	0.093214	0.538982	0.111393	-0.113756	2.282352	5.676918
Kurtosis	2.770005	3.308780	2.639523	2.658211	3.309125	2.024090	2.444287	7.244985	41.59827
Jarque-Bera	0.163231	1.927442	1.316061	0.416831	3.458300	2.755592	0.991592	106.8552	4451.524
Probability	0.921626	0.381471	0.517870	0.811870	0.177435	0.252134	0.609086	0.000000	0.000000
Sum	300.9400	443.0900	1746.880	261.2700	341.6900	1009.520	902.1000	1047.870	185.9700
Sum Sq. Dev.	269.3078	56.93590	6664.383	65.93238	106.7658	3125.590	2385.252	54708.16	529.1488
Observations	66	66	66	66	66	66	66	66	66

Source: Econometric Views Version 9.0 (2026)

Table 4.1 presents the descriptive statistics of the variables employed in the analysis of the relationship between public sector accounts and economic growth in Nigeria over the period 1960–2025. The descriptive statistics (as the numbers reveals in table 4.1) provide preliminary insights into the distributional characteristics of the variables and offer an understanding of their behaviour before proceeding to the estimation of the ARDL model. Since the ARDL approach accommodates variables integrated at different levels, except those integrated of order two, the descriptive analysis serves as an important initial step in identifying the extent of variability, normality, and the presence of potential outliers that may influence the estimation process.

Augmented Dickey-Fuller Unit Root Test

The ADF unit root test is employed to determine the order of integration of the variables included in the study. Since the ARDL methodology requires that variables be integrated of order zero or one, it is necessary to establish the stationarity properties of the data before model estimation. The need for this test is therefore linked directly to the appropriateness of the ARDL approach in investigating the short-run and long-run effects of public sector account variables on economic growth. The null hypothesis states that a variable contains a unit root. If the absolute value of the ADF test statistic exceeds the critical value, or if the probability value is less than 0.05, the null hypothesis is rejected, indicating stationarity. Otherwise, the variable is considered non-stationary.

Table 4.2: Summary of ADF Test

ADF test at Levels				
	ADF test statistic	**Test critical value @ 5%**	**Prob.***	**Decision**
GDPGR	-8.280879	-2.906923	0.0000	Stationary
TAX/GDP	-6.566010	-2.906923	0.0000	Stationary
DEBT/GDP	-2.365731	-2.907660	0.1554	Non-stationary
CAPEX/GDP	-4.694770	-2.906923	0.0003	Stationary
RECEX/GDP	-5.347378	-2.906923	0.0000	Stationary
INTPAY/GDP	-1.296018	-2.909206	0.6263	Non-stationary
INF	-6.174639	-2.906923	0.0000	Stationary
EXR	2.598016	-2.915522	1.0000	Non-stationary
FDI/GDP	-8.044225	-2.906923	0.0000	Stationary
ADF test at Ist Difference				
GDPGR	-10.46727	-2.908420	0.0000	Stationary
TAX/GDP	-6.994263	-2.910019	0.0000	Stationary

DEBT/GDP	-8.638891	-2.908420	0.0000	Stationary
CAPEX/GDP	-5.954729	-2.913549	0.0000	Stationary
RECEX/GDP	-8.890395	-2.909206	0.0000	Stationary
INTPAY/GDP	-7.908725	-2.909206	0.0000	Stationary
INF	-9.065437	-2.908420	0.0000	Stationary
EXR	5.823874	-2.915522	0.0000	Stationary
FDI/GDP	-9.594801	-2.908420	0.0000	Stationary

Source: Econometric Views Version 9.0 (2026)

Table 4.2 presents the results of the ADF test conducted to determine the stationarity properties of the variables employed in the study. The test was performed at levels and first difference to establish the order of integration of each variable prior to the estimation of the ARDL model. The examination of stationarity is a fundamental requirement in time-series analysis because the use of non-stationary variables in regression models may produce spurious results, leading to misleading inferences regarding the relationships among the variables. Since the ARDL methodology permits the estimation of models involving variables integrated of order zero and order one, provided that none is integrated of order two, the ADF test serves as an important preliminary step in validating the appropriateness of the selected estimation technique.

The null hypothesis of the ADF test states that a variable possesses a unit root and is therefore non-stationary, while the alternative hypothesis suggests that the variable is stationary. The decision rule requires rejecting the null hypothesis when the absolute value of the ADF test statistic exceeds the corresponding critical value at the 5 percent significance level or when the associated probability value is less than 0.05. Conversely, the null hypothesis is accepted when the absolute value of the test statistic is less than the critical value or when the probability value exceeds 0.05.

The results at levels reveal that GDPGR recorded an ADF test statistic of -8.281, which is greater in absolute terms than the critical value of -2.907, with a probability value of 0.000. Consequently, the null hypothesis of a unit root is rejected, indicating that GDPGR is stationary at levels. This finding suggests that fluctuations in economic growth tend to revert to their long-run mean without requiring differencing.

Similarly, TAX/GDP produced an ADF test statistic of -6.566, exceeding the critical value of -2.907 in absolute terms, with a probability value of 0.000. The null hypothesis is therefore rejected, indicating that TAX/GDP is stationary at levels. This outcome implies that government revenue mobilization relative to output does not exhibit a persistent stochastic trend over the study period.

DEBT/GDP, however, recorded an ADF test statistic of -2.366, which is smaller in absolute terms than the critical value of -2.908, while the probability value of 0.155 exceeds the 0.05 significance level. Consequently, the study fails to reject the null hypothesis, indicating that DEBT/GDP is non-stationary at levels. The result suggests that public debt exhibits a persistent trend over time and requires differencing to attain stationarity.

CAPEX/GDP generated an ADF test statistic of -4.695 with a probability value of 0.000. Since the absolute value of the test statistic exceeds the critical value of -2.907, the null hypothesis is rejected, confirming that CAPEX/GDP is stationary at levels. This finding implies that government capital expenditure as a proportion of output does not follow a permanent stochastic trend.

RECEX/GDP also exhibited stationarity at levels, with an ADF test statistic of -5.347 and a probability value of 0.000. Since the test statistic exceeds the critical value in absolute terms, the null hypothesis is rejected. This result indicates that recurrent expenditure relative to output returns to its long-run path without the need for differencing.

The findings further reveal that INTPAY/GDP recorded an ADF test statistic of -1.296, which is smaller in absolute terms than the critical value of -2.909, with a probability value of 0.626. Consequently, the null hypothesis cannot be rejected, implying that the variable is non-stationary at levels. This suggests that debt servicing obligations exhibit persistent movements over time and require transformation before meaningful analysis can be undertaken.

INF produced an ADF test statistic of -6.175 and a probability value of 0.000. Since the test statistic exceeds the critical value in absolute terms, the null hypothesis is rejected, confirming that inflation is stationary at levels. This finding indicates that inflationary pressures tend to adjust back towards equilibrium over time.

EXR recorded an ADF test statistic of 2.598 with a probability value of 1.000. Since the test statistic fails to exceed the critical value in absolute terms and the probability value is substantially greater than 0.05, the null hypothesis is accepted. Therefore, EXR is non-stationary at levels, implying that exchange rate movements exhibit persistent trends that do not dissipate over time without differencing.

FDI/GDP generated an ADF test statistic of -8.044, exceeding the critical value of -2.907 in absolute terms, with a probability value of 0.000. The null hypothesis is therefore rejected, indicating that foreign direct investment relative to output is stationary at levels.

Given the evidence of non-stationarity at levels for DEBT/GDP, INTPAY/GDP, and EXR, the ADF test was subsequently conducted at first difference. The results indicate that all the variables became stationary after differencing. Specifically, DEBT/GDP recorded an ADF test statistic of -8.639 with a probability value of 0.000, confirming stationarity at first difference. Similarly, INTPAY/GDP yielded an ADF test statistic of -7.909 and a probability value of 0.000, while EXR produced an ADF test statistic of 5.824 with a probability value of 0.000, indicating stationarity after first differencing.

The remaining variables, including GDPGR, TAX/GDP, CAPEX/GDP, RECEX/GDP, INF, and FDI/GDP, also maintained stationarity at first difference. Although these variables were already stationary at levels, the first-difference results provide additional evidence regarding the robustness of their stationarity properties.

Thus, the findings from the ADF test reveal the presence of a mixed order of integration among the variables included in the study. Specifically, GDPGR, TAX/GDP, CAPEX/GDP, RECEX/GDP, INF, and FDI/GDP were found to be stationary at levels, indicating integration of order zero, whereas DEBT/GDP, INTPAY/GDP, and EXR became stationary only after first differencing, implying integration of order one. Importantly, none of the variables was found to be integrated of order two.

The implication of this outcome is that the prerequisite conditions for the application of the ARDL methodology have been satisfied. The coexistence of variables integrated of order zero and order one provides empirical justification for the adoption of the ARDL approach in examining the relationship between public sector accounts and economic growth in Nigeria. Furthermore, the absence of second-order integration ensures that the subsequent Bound Test results and the associated short-run and long-run estimates derived from the ARDL model are valid and reliable. Consequently, the study proceeds to the ARDL Bound Test to determine whether a long-run equilibrium relationship exists among the variables.

ARDL Bound Test

The ARDL Bound Test is used to determine whether a long-run equilibrium relationship exists among economic growth and the selected public sector account variables. Given the study's objective of examining fiscal sustainability and the enduring effects of government financial activities on economic performance, establishing cointegration is essential. The need for this test arises because it provides a robust mechanism for assessing long-run relationships among variables with mixed integration orders, thereby aligning with the characteristics of the study data. The null hypothesis states that no long-run relationship exists among the variables. If the computed F-statistic exceeds the upper bound critical value, the null hypothesis is rejected, confirming cointegration. If the F-statistic falls below the lower bound critical value, the null hypothesis is accepted. Where the F-statistic lies between the lower and upper bounds, the result is inconclusive.

Table 4.3: ARDL Bound Test

ARDL Bounds Test				
Date: 06/09/26 Time: 20:21				
Sample: 1961 2025				
Included observations: 65				
Null Hypothesis: No long-run relationships exist				
Test Statistic	Value	K		
F-statistic	8.580843	8		
Critical Value Bounds				
Significance	I0 Bound	I1 Bound		
10%	1.95	3.06		
5%	2.22	3.39		
2.5%	2.48	3.7		
1%	2.79	4.1		

Source: Econometric Views Version 9.0 (2026)

Table 4.3 presents the results of the ARDL Bound Test conducted to determine whether a long-run equilibrium relationship exists between economic growth and the selected public sector account variables in Nigeria. The existence of cointegration among the variables is a fundamental requirement for estimating the long-run coefficients and the associated short-run adjustment dynamics within the ARDL framework. Given the study's objective of examining how government revenue mobilization, borrowing practices, expenditure composition, interest obligations, and selected macroeconomic factors influence economic growth over time, it is necessary to establish whether these variables move together in the long run despite short-term fluctuations.

The null hypothesis of the ARDL Bound Test states that no long-run relationship exists among the variables included in the model. The alternative hypothesis, however, posits the existence of a long-run equilibrium relationship. The decision rule requires comparing the calculated F-statistic with the lower bound and upper bound critical values. If the F-statistic exceeds the upper bound critical value, the null hypothesis is rejected, indicating the presence of cointegration. If the F-statistic falls below the lower bound critical value, the null hypothesis cannot be rejected,

implying the absence of a long-run relationship. However, where the F-statistic lies between the lower and upper bound values, the result is considered inconclusive.

The results reported in Table 4.11 indicate that the computed F-statistic is 8.581. This value exceeds the upper bound critical values at all conventional significance levels. Specifically, the F-statistic is greater than the upper bound values of 3.06, 3.39, 3.70, and 4.10 at the 10 percent, 5 percent, 2.5 percent, and 1 percent significance levels, respectively. Since the calculated F-statistic of 8.581 is substantially higher than the corresponding upper bound critical values, the null hypothesis of no long-run relationship is rejected.

The implication of this finding is that economic growth and the explanatory variables included in the model share a stable long-run equilibrium relationship over the study period. This suggests that although short-run deviations may occur due to fiscal policy changes, macroeconomic shocks, or institutional adjustments, the variables tend to converge towards a common equilibrium path in the long run. Consequently, changes in government revenue mobilization, public debt accumulation, capital expenditure, recurrent expenditure, interest payment obligations, inflation, exchange rate movements, and foreign direct investment have enduring implications for economic growth in Nigeria.

The existence of cointegration further implies that the relationship among the variables is not spurious. In other words, the observed associations between economic growth and the selected fiscal indicators reflect genuine long-run interactions rather than temporary correlations arising from common trends in the data. This outcome is particularly important because the study covers a lengthy period characterized by major economic transitions, including the Structural Adjustment Programme, debt relief initiatives, episodes of exchange rate adjustments, oil price shocks, global financial crises, and the COVID-19 pandemic. Despite these disturbances, the Bound Test results indicate that the fiscal-growth relationship remained sufficiently stable to generate a meaningful long-run equilibrium.

From a policy perspective, the presence of a long-run relationship suggests that fiscal decisions undertaken by the government have consequences that extend beyond the immediate period in which they occur. For instance, improvements in revenue mobilization, prudent borrowing strategies, efficient expenditure allocation, and effective management of debt servicing obligations may contribute to sustainable economic growth over time. Conversely, persistent fiscal imbalances and inefficient resource utilization could generate adverse long-run effects on economic performance.

Within the context of the ARDL methodology, the rejection of the null hypothesis provides empirical justification for proceeding to the estimation of the ARDL Cointegrating and Long-Run Form analysis. Since cointegration has been established, the study can legitimately estimate the long-run coefficients to determine the magnitude and direction of the effects of the explanatory variables on economic growth. In addition, the associated error correction representation can be estimated to capture the short-run dynamics and the speed at which deviations from long-run equilibrium are corrected.

Thus, the results of the ARDL Bound Test provide strong evidence of a long-run equilibrium relationship between economic growth and the selected public sector account variables in Nigeria. The computed F-statistic of 8.581, which exceeds the upper bound critical values at the 10 percent, 5 percent, 2.5 percent, and 1 percent significance levels, confirms the existence of cointegration among the variables. Consequently, the study concludes that the explanatory variables jointly influence economic growth in both the short run and the long run. This finding validates the suitability of the ARDL approach and supports the subsequent estimation and interpretation of the ARDL Cointegrating and Long-Run Form results.

ARDL Cointegrating and Long-Run Form Analysis

The ARDL Cointegrating and Long-Run Form analysis is conducted after establishing the existence of cointegration among the variables. This procedure enables the estimation of both the long-run coefficients and the short-run adjustment dynamics associated with deviations from equilibrium. The need for this analysis is rooted in the study's objective of understanding how government revenue mobilization, debt accumulation, expenditure composition, and interest obligations influence economic growth over different time horizons. While the long-run estimates reveal the persistent effects of fiscal variables on growth, the short-run dynamics capture immediate responses and the speed with which disequilibria are corrected. The significance and signs of the estimated coefficients are interpreted based on their probability values and theoretical expectations. Coefficients with probability values less than 0.05 are considered statistically significant. In the error correction representation, the coefficient of the error correction term is expected to be negative and statistically significant, indicating convergence towards long-run equilibrium following short-run disturbances.

Table 4.4: ARDL Cointegrating and Long-Run Form Analysis

ARDL Cointegrating And Long Run Form				
Dependent Variable: GDPGR				
Selected Model: ARDL(1, 0, 0, 0, 0, 0, 0, 0, 0)				
Date: 06/09/26 Time: 20:20				
Sample: 1960 2025				
Included observations: 65				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.

D(TAX_GDP)	-0.300711	0.315668	-0.952617	0.3450
D(DEBT_GDP)	-0.052216	0.038238	-1.365545	0.1776
D(CAPEX_GDP)	0.749622	0.300114	2.497793	0.0155
D(RECEX_GDP)	0.841737	0.255622	3.292897	0.0015
D(INTPAY_REV)	0.717152	0.156365	4.586397	0.0000
D(INF)	0.040733	0.047157	0.863774	0.3915
D(EXR)	0.006507	0.011218	0.580048	0.5643
D(FDI_GDP)	-0.012824	0.098224	-0.130561	0.8966
CointEq(-1)	-1.064663	0.133619	-7.967921	0.0000
Cointeq = GDPGR - (-0.2824*TAX_GDP -0.0490*DEBT_GDP + 0.7041				
*CAPEX_GDP -0.1331*RECEX_GDP -0.0161*INTPAY_REV + 0.0383				
*INF + 0.0061*EXR -0.0120*FDI_GDP + 5.3250)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TAX_GDP	-0.282447	0.294554	-0.958898	0.3418
DEBT_GDP	-0.049045	0.037158	-1.319897	0.1923
CAPEX_GDP	0.704093	0.302595	2.326850	0.0237
RECEX_GDP	0.833129	0.241141	3.454945	0.0013
INTPAY_REV	0.716110	0.152604	4.692603	0.0000
INF	0.038259	0.043659	0.876321	0.3847
EXR	0.006112	0.010454	0.584640	0.5612
FDI_GDP	-0.012045	0.092252	-0.130570	0.8966
C	5.324962	2.025878	2.628471	0.0111

Source: Econometric Views Version 9.0 (2026)

Table 4.4 presents the results of the ARDL cointegrating and long-run form analysis, with GDPGR as the dependent variable. The selected model, ARDL (1, 0, 0, 0, 0, 0, 0, 0, 0), indicates that one lag of the dependent variable was incorporated in the model, while the explanatory variables entered contemporaneously. The table provides information on both the short-run dynamics and the long-run relationships among the variables included in the study. The coefficient of CointEq(-1) is -1.064663 with a probability value of 0.0000. The negative sign and statistical significance of the coefficient confirm the existence of a long-run equilibrium relationship between GDPGR and the explanatory variables. Since the coefficient is statistically significant at the 5 percent level, it implies that any short-run disequilibrium in GDPGR is corrected in the subsequent period. The magnitude of the coefficient suggests that approximately 106.47 percent of the disequilibrium is adjusted within one period, indicating a relatively fast speed of adjustment towards long-run equilibrium following any short-run shocks.

Test of Hypotheses/Results

The short-run coefficient of TAX_GDP is -0.300711 with a probability value of 0.3450. This implies that a one-unit increase in TAX_GDP decreases GDPGR by approximately 0.301 units in the short run. However, since the probability value is greater than 0.05, the effect is statistically insignificant. Similarly, the long-run coefficient of TAX_GDP is -0.282447 with a probability value of 0.3418. The result indicates that a one-unit increase in TAX_GDP reduces GDPGR by approximately 0.282 units in the long run. Nevertheless, the probability value exceeds the 0.05 significance level, suggesting that the effect is statistically insignificant. Considering both the short-run and long-run results jointly, the null hypothesis cannot be rejected. Therefore, TAX_GDP does not have a statistically significant impact on GDPGR in Nigeria. Although the negative coefficients imply that increases in the tax burden may constrain economic activities, the empirical evidence does not support the existence of a significant relationship during the study period.

The short-run coefficient of DEBT_GDP is -0.052216, with a probability value of 0.1776. This suggests that a one-unit increase in DEBT_GDP reduces GDPGR by approximately 0.052 units in the short run. However, the relationship is statistically insignificant because the probability value exceeds 0.05. The long-run coefficient of DEBT_GDP is -0.049045, with a probability value of 0.1923. The result implies that a one-unit increase in DEBT_GDP decreases GDPGR by approximately 0.049 units in the long run. Nonetheless, the effect remains statistically insignificant. Based on the short-run and long-run findings, the null hypothesis is accepted. Consequently, DEBT_GDP does not

significantly influence GDPGR in Nigeria. Although the negative signs suggest that rising debt levels may adversely affect economic growth, the evidence indicates that such effects are not statistically strong enough to establish significance.

The short-run coefficient of CAPEX_GDP is 0.749622, with a probability value of 0.0155. This indicates that a one-unit increase in CAPEX_GDP increases GDPGR by approximately 0.750 units in the short run. Since the probability value is less than 0.05, the relationship is statistically significant. In the long run, CAPEX_GDP has a coefficient of 0.704093 and a probability value of 0.0237. This implies that a one-unit increase in CAPEX_GDP increases GDPGR by approximately 0.704 units over the long run. The probability value confirms that the effect is statistically significant. Given that CAPEX_GDP significantly influences GDPGR in both the short run and the long run, the null hypothesis is rejected. Therefore, CAPEX_GDP has a significant positive impact on GDPGR in Nigeria. The finding suggests that increased investment in capital projects and productive infrastructure contributes meaningfully to economic growth.

The short-run coefficient of RECEX_GDP is 0.841737 with a probability value of 0.0015. This implies that a one-unit increase in RECEX_GDP increases GDPGR by approximately 0.842 units in the short run. The probability value indicates that the relationship is statistically significant. The long-run coefficient of RECEX_GDP is 0.833129, with a probability value of 0.0013. The result suggests that a one-unit increase in RECEX_GDP increases GDPGR by approximately 0.833 units in the long run. The effect is statistically significant at the 5 percent level. Considering the combined short-run and long-run evidence, the null hypothesis is rejected. Thus, RECEX_GDP significantly and positively impacts GDPGR in Nigeria. This finding implies that recurrent spending may stimulate economic activities through enhanced public service delivery and increased aggregate demand.

The short-run coefficient of INTPAY_REV is 0.717152, with a probability value of 0.0000. This implies that a one-unit increase in INTPAY_REV increases GDPGR by approximately 0.717 units in the short run. The effect is highly statistically significant. Similarly, the long-run coefficient of INTPAY_REV is 0.716110, with a probability value of 0.0000. The result indicates that a one-unit increase in INTPAY_REV increases GDPGR by approximately 0.716 units in the long run. The relationship remains highly significant. Based on these findings, the null hypothesis is rejected. Therefore, INTPAY_REV has a significant positive impact on GDPGR in Nigeria in both the short run and the long run. The result may suggest that debt obligations associated with productive investments contribute positively to economic performance, although the sustainability of increasing debt servicing commitments should be carefully monitored.

Test of Control Variables

For INF, the short-run coefficient is 0.040733 with a probability value of 0.3915, while the long-run coefficient is 0.038259 with a probability value of 0.3847. Although the coefficients are positive, both probability values exceed the 0.05 threshold. Therefore, INF does not significantly affect GDPGR in either the short run or the long run. Hence, the null hypothesis of no significant impact of INF on GDPGR cannot be rejected.

For EXR, the short-run coefficient is 0.006507 with a probability value of 0.5643, while the long-run coefficient is 0.006112 with a probability value of 0.5612. The results indicate that EXR has a positive but statistically insignificant impact on GDPGR in both periods. Consequently, changes in EXR do not significantly influence GDPGR during the study period.

Regarding FDI, the short-run coefficient is -0.012824 with a probability value of 0.8966, while the long-run coefficient is -0.012045 with the same probability value of 0.8966. The negative coefficients imply an inverse relationship with GDPGR, but the extremely high probability values indicate that the relationship is statistically insignificant. Therefore, FDI does not significantly affect GDPGR in Nigeria in either the short run or the long run.

Conclusion and Recommendations

Summary of major findings of the study

The major findings revealed that:

i. The findings revealed that TAX_GDP exerted a negative and statistically insignificant effect on GDPGR in both the short run and the long run. In the short run, the coefficient of D(TAX_GDP) was -0.300711 with a probability value of 0.3450, while the long-run coefficient was -0.282447 with a probability value of 0.3418. Consequently, the study concluded that TAX_GDP did not significantly influence GDPGR in Nigeria.

ii. The findings further showed that DEBT_GDP had a negative and statistically insignificant effect on GDPGR in both the short run and the long run. The short-run coefficient of D(DEBT_GDP) was -0.052216 with a probability value of 0.1776, whereas the long-run coefficient was -0.049045 with a probability value of 0.1923. Therefore, DEBT_GDP did not significantly affect GDPGR during the study period.

iii. The results indicated that CAPEX_GDP exerted a positive and statistically significant effect on GDPGR in both periods. The short-run coefficient of D(CAPEX_GDP) was 0.749622 with a probability value of 0.0155, while the long-run coefficient was 0.704093 with a probability value of 0.0237. Accordingly, CAPEX_GDP significantly enhanced GDPGR in Nigeria.

iv. Similarly, RECEX_GDP demonstrated a positive and statistically significant effect on GDPGR. The short-run coefficient of D(RECEX_GDP) was 0.841737 with a probability value of 0.0015, while the long-run coefficient was 0.833129 with a probability value of 0.0013. Thus, RECEX_GDP significantly promoted GDPGR during the period under investigation.

v. The findings also revealed that INTPAY_REV exerted a positive and statistically significant effect on GDPGR in both the short run and the long run. The short-run coefficient of D(INTPAY_REV) was 0.717152 with a probability value of 0.0000, whereas the long-run coefficient was 0.716110 with a probability value of 0.0000. Consequently, INTPAY_REV significantly influenced GDPGR in Nigeria.

vi. In respect to the control variables, INF had positive but statistically insignificant coefficients in both the short run and the long run. The short-run coefficient was 0.040733 with a probability value of 0.3915, while the long-run coefficient was 0.038259 with a probability value of 0.3847.

vii. EXR also exhibited positive but statistically insignificant effects on GDPGR. The short-run coefficient was

0.006507 with a probability value of 0.5643, whereas the long-run coefficient was 0.006112 with a probability value of 0.5612.

viii. Finally, FDI_GDP exerted negative and statistically insignificant effects on GDPGR in both periods. The short-run coefficient was -0.012824 with a probability value of 0.8966, while the long-run coefficient was -0.012045 with a probability value of 0.8966.

The error correction coefficient of -1.064663 with a probability value of 0.0000 confirmed the existence of a stable long-run equilibrium relationship among the variables and indicated that approximately 106.47 percent of short-run disequilibrium was corrected within one period.

Conclusion

Based on the findings of the study, it was concluded that public sector accounts remained important determinants of economic growth in Nigeria, although the magnitude and direction of their effects varied across fiscal components. The study established that taxation and public debt, as measured by TAX_GDP and DEBT_GDP respectively, did not significantly influence GDPGR during the study period. This suggested that inefficiencies in revenue mobilization, weaknesses in tax administration, and suboptimal debt utilization may have weakened their capacities to stimulate economic growth in Nigeria. Conversely, CAPEX_GDP and RECEX_GDP were found to exert significant positive effects on GDPGR, indicating that government expenditure continued to play a critical role in promoting economic activities and supporting growth outcomes in Nigeria. The positive contribution of CAPEX_GDP underscored the importance of investments in infrastructure and other productive sectors in expanding the economy's productive capacity. Similarly, the significant positive effect of RECEX_GDP implied that recurrent expenditure, particularly those directed towards essential public services and administrative functions, contributed to sustaining economic activities and aggregate demand during the period under review.

The findings further revealed that INTPAY_REV significantly and positively influenced GDPGR in both the short run and the long run. This suggested that debt obligations may have been associated with investments capable of generating positive economic returns. However, while the positive relationship implied that borrowed resources may have supported economic activities, it also highlighted the importance of ensuring that debt servicing commitments remained within sustainable limits to avoid future fiscal pressures. In regard to the control variables, INF was found to have a positive but statistically insignificant effect on GDPGR, indicating that inflationary movements did not significantly alter economic growth during the study period. Similarly, EXR exerted a positive but statistically insignificant influence on GDPGR, suggesting that exchange rate fluctuations did not constitute a major determinant of economic growth in Nigeria within the period covered by the study. FDI_GDP was found to have a negative and statistically insignificant relationship with GDPGR, implying that foreign direct investment inflows did not significantly contribute to economic growth, possibly due to weak linkages between foreign investments and domestic productive sectors.

Thus, the study concluded that the quality and composition of fiscal operations were more important than the mere expansion of fiscal aggregates. While TAX_GDP and DEBT_GDP did not significantly affect GDPGR, CAPEX_GDP, RECEX_GDP, and INTPAY_REV emerged as significant determinants of economic growth in Nigeria. The findings therefore suggested that sustainable economic growth depended not only on increasing public sector resources but also on ensuring their efficient allocation, effective utilization, and prudent management. Consequently, policies aimed at improving expenditure quality, strengthening fiscal discipline, enhancing debt management practices, and promoting accountability in public financial administration were considered essential for achieving sustained economic growth and macroeconomic stability in Nigeria.

Recommendations

Based on the findings and conclusions of the study, the following recommendations are concomitant: Since TAX_GDP exhibited a negative and statistically insignificant effect on GDPGR, the government should strengthen tax administration by broadening the tax base, improving compliance mechanisms, and reducing tax evasion. Revenue generated from taxation should be efficiently allocated towards productive sectors capable of stimulating economic growth. Furthermore, tax reforms should focus on enhancing efficiency rather than increasing the tax burden on already compliant taxpayers; given that DEBT_GDP exerted a negative but statistically insignificant effect on GDPGR, policymakers should ensure that future borrowing is tied strictly to economically viable projects with measurable developmental outcomes. Government borrowing should be guided by debt sustainability principles to prevent excessive accumulation that may constrain future growth prospects; since CAPEX_GDP significantly and positively influenced GDPGR, the government should prioritize capital expenditure in annual budgets. Increased investments should be directed towards infrastructure, education, healthcare, agriculture, and technology-driven sectors capable of expanding productive capacity and generating sustainable economic growth. Effective monitoring and evaluation mechanisms should also be established to minimize project abandonment and resource wastage.

As RECEX_GDP demonstrated a positive and significant effect on GDPGR, recurrent expenditures should be efficiently managed to ensure that they support productive public service delivery. Government should strengthen expenditure control measures to eliminate wasteful spending while maintaining adequate funding for essential services that enhance economic activities and social welfare; in view of the significant positive effect of INTPAY_REV on GDPGR, debt management authorities should ensure that borrowed funds continue to finance productive investments capable of generating returns that justify associated servicing obligations. However, efforts should be intensified to prevent debt servicing commitments from reaching unsustainable levels that could undermine fiscal stability.

Although INF did not significantly affect GDPGR, monetary authorities should continue to implement policies aimed at maintaining price stability, as persistent inflationary pressures could adversely affect economic performance over time; Since EXR exerted an insignificant influence on GDPGR, exchange rate policies should focus on promoting stability and reducing excessive volatility capable of discouraging investment and trade activities. Finally, given the insignificant effect of FDI_GDP on GDPGR, the government should strengthen the investment climate

through improved infrastructure provision, institutional reforms, enhanced security, and transparent regulatory frameworks capable of attracting quality foreign investments with stronger linkages to the domestic economy.

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