



The Impact of Debt Management on the Economic Development of Nigeria

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ABSTRACT

Debt can serve as a fiscal policy tool to enhance a nation's economic growth if managed efficiently. Government debt management is a response initiative used to stabilize the economy while ensuring sustainable growth. This study examined the effect of debt management on economic growth in Nigeria. Ex-post facto research design was employed for the study. The study's population encompassed the Nigerian economy, as measured through debt management and economic growth indicators, over 30 years from 1994 to 2023. The total enumeration sampling technique was employed. Data for the research were obtained from Nigeria's Statistical Bulletin, the Debt Management Office, and the National Bureau of Statistics. Data were analyzed using E-views (version 12.0) to produce both Descriptive and Inferential statistics (ARDL regression). The findings revealed that debt management significantly affects economic growth ($\text{Adj.}R^2 = 0.47$, $F_{(3, 26)} = 26.26$, $P < 0.05$). The study concluded that debt management has a significant impact on economic growth in Nigeria. The study recommended that the government should adopt prudent debt management strategies, such as prioritizing concessional loans, reducing the share of external debt, and ensuring that borrowed funds are channeled into productive sectors for high returns.

Keywords: Debt, Debt Management, Economic Growth, Fiscal Policy, and Gross Domestic Product

JEL Classifications: E2, E6, H3, H5, H6

1. INTRODUCTION

The Nigerian economy, one of the largest in Africa, has experienced phases of expansion and contraction influenced by variations in global oil prices, fiscal policies, debt management techniques, and foreign economic shocks. Nigeria's reliance on oil exports has significantly influenced its growth trajectory, rendering the economy vulnerable to external shocks, including declining oil prices and global financial crises. Consequently, the government has embarked on several debt management techniques and fiscal policies to stabilize and foster sustainable economic growth (Esu, 2024; Okeke et al., 2022).

Nigeria's developmental programs face challenges due to high borrowing costs and mounting debt, with 96% of the federal

government's revenue allocated to debt payment in 2023 (National Bureau of Statistics [NBS], 2024). Nigeria's public debt, a crucial policy concern, has been impacted by fiscal deficits, infrastructure funding demands, and economic shocks (Islam et al., 2024). Exploring its macroeconomic repercussions is vital for policymakers, as it directly influences economic stability, growth prospects, and debt sustainability. Excessive debt accumulation, however, can lead to financial distress and macroeconomic instability (Ofurum et al., 2024). The macroeconomic ramifications of public debt in Nigeria encompass debt sustainability, impacts on economic development, and external vulnerabilities.

Debt sustainability is influenced by factors such as the debt-to-GDP ratio, the debt service-to-revenue ratio, and the composition of external debt (Adegbe et al., 2022). Debt has both good and

negative effects on economic growth, and fiscal consolidation measures are essential for maintaining debt sustainability (Hadji and Ganawah, 2024). Debt can boost economic growth by financing infrastructure and development, but hinders it if excessive, leading to high interest payments and reduced investment (Adegbe et al., 2022). Fiscal consolidation ensures debt sustainability through spending cuts, tax increases, or structural reforms, and effective consolidation prevents debt crises and stabilizes the economy (World Bank, 2023). However, harsh austerity can slow growth and reduce social welfare, which is evaluated by empirical analysis in light of external vulnerabilities, including currency rate changes and global financial market circumstances (Kabwoya et al., 2024).

Debt management is a vital component of Nigeria's economic strategy, encompassing the oversight of public debt to guarantee that borrowing facilitates economic progress without resulting in unmanageable debt loads (Adegbe et al., 2022). Nigeria's debt portfolio comprises domestic and external debts, primarily allocated for infrastructure projects, social programs, and budgetary deficits. Although borrowing is essential for economic development, excessive debt accumulation presents risks, including elevated debt servicing costs, diminished fiscal space for productive investment, and potential macroeconomic instability (Kabwoya et al., 2024). The Nigerian government, via entities such as the debt management office (DMO), has implemented policies like debt restructuring, external financing, and judicious borrowing to ensure sustainable debt management (Oligbi, 2024).

Nonetheless, apprehensions remain over escalating debt levels, especially concerning income creation and economic productivity. Nigeria's national debt has risen markedly, indicating the government's dependence on borrowing to cover its budget deficit. In the second quarter of 2023, public debt escalated to ₦87.38 trillion (US\$113.42 billion) from ₦49.85 trillion (US\$108.30 billion) in the first quarter of 2023, reflecting a significant quarter-on-quarter growth of 75.27% (World Bank, 2023; Central Bank of Nigeria [CBN], 2023). The debt-to-GDP ratio improved, decreasing from 41.15% in Q2 2023 to 39.82% in Q3 2023, remaining below the nation's self-imposed ceiling of 40% (Debt Management Office, 2023). Despite concerns over debt buildup, the Nigerian government persists in implementing strategies such as debt restructuring and fiscal consolidation to maintain debt sustainability.

Deficit financing has nearly become a constant feature of Nigeria's fiscal policy management, leading to a significant increase in the nation's public debt, notwithstanding the advantages gained from the Paris Club debt relief in 2005 (Amu et al., 2025, Chinwoke et al., 2025). An ongoing increase in public debt without a corresponding rise in aggregate demand leads to a permanent and irreversible escalation in inflation (Okeke et al., 2022). Thus, an escalation in inflation will result in demands for increased compensation by government employees and an uptick in the expenses associated with government capital projects. This indicates that both recurring and capital expenditures will increase, and government revenue is insufficient to cover this extra expense (Majenge et al., 2024). The government will thus need

to incur more debt to cover this extra expense. This has elicited apprehensions over the nation's budgetary sustainability and its wider ramifications on macroeconomic performance.

The interaction of fiscal policy, debt management, and economic growth is crucial for Nigeria's economic stability and progress. Fiscal mismanagement and excessive debt accumulation impede economic progress by elevating inflation, diminishing investor confidence, and constraining government expenditure on essential industries (Ekuma et al., 2024). This study seeks to analyze the impact of debt management on Nigeria's economic growth, assessing its effectiveness in fostering sustainable development and identifying potential policy recommendations for economic stability and growth.

Between 2010 and 2023, there was a notable growth in the economy of Nigeria, with some fluctuations here and there, with a notable increment by 6.88% in the first quarter of 2011 (CBN, 2023). Though the progress was not without hiccups, such as the decline in the prices of crude oil, political instability, and infrastructural deficiencies, ultimately leading to the 2016 recession with the attendant contraction of the economy by 1.6% (World Bank, 2023). In 2021, a gradual but steady recovery of the gross domestic product (GDP) was experienced up to the tune of 3.6% despite the decline experienced in 2020 due to the emergence of Corona Virus (COVID-19) which resulted in a notable economic contraction of 1.79%, highlighting the nation's vulnerability to global disturbances (World Bank, 2023). The growth trajectory continued in 2022, with a noticeable growth of the economy's GDP by 3.25% until 2023, when the economy began to experience decline by 0.39%, resulting in a 2.86% GDP reduction (African Development Bank, [AfDB], 2023). The observed fluctuations underscore the ongoing complexities that impede Nigeria's economic stability.

Following fluctuations in Nigeria's economic growth, the government took a series of actions in an attempt to both cushion its negative effects and to revamp the economy, such as the enactment of fiscal policies and debt management strategies (CBN, 2023). Strategies for managing debt emphasize the reorganization of current obligations and the pursuit of more advantageous lending conditions to alleviate the overall debt load (Adesuyi et al., 2024). Notwithstanding these endeavors, the nation's debt profile remains a matter of considerable concern. For example, Nigeria's debt escalated to \$108.3 billion in 2023, signifying a 123% rise since 2012, a rate approximately 6 times greater than the country's GDP growth rate over the same period (CBN, 2023). The efficacy of these fiscal and debt management strategies in tackling the economic growth challenges faced by Nigeria has yielded varied results. Thus, a need to examine the effect of debt management on economic growth in Nigeria.

The objective of the study is to examine the effect of debt management on economic growth in Nigeria. examine the effect of debt management on economic growth in Nigeria.

The study sets out to answer the question: To what extent does debt management affect economic growth in Nigeria?

This study developed a tentative statement to be tested in achieving the set objective:

H₀₁: Debt management does not significantly affect economic growth in Nigeria.

This study aims to examine the effect of debt management on economic growth in Nigeria. The data for this study were retrieved from CBN's Statistical Bulletin, DMO, and the NBS. The study covered a period of 30 years (1994-2023). The total enumeration sampling technique was employed in selecting the sample size based on data availability.

The findings of this research are expected to benefit various stakeholders, such as the government, as this study on debt management and its impact on the economic growth of Nigeria will provide insights into effective strategies for optimizing public finance management to encourage economic growth and development.

2. REVIEW OF RELATED LITERATURE

This section addresses the review of the concept, the underlying theory, and a review of past related studies. It is subdivided into three sections.

2.1. Conceptual Review

2.1.1. Economic growth

The concept of economic growth is often characterized as the total output a nation can generate within a year, evaluated at market prices of its products, while considering price fluctuations and the imputed costs associated with the goods and services produced within the economy, minus net income received from foreign sources (Chinwoke et al., 2025; Amu et al., 2025; Duyile et al., 2024). Economic growth constitutes a systematic progression through which a nation's wealth and economic stature expand over time (Hadji and Ganawah, 2024). The researcher posits that economic growth is characterized by the augmentation in the value of goods and services generated by an economy over a specified period, commonly assessed through the expansion of gross domestic product (GDP).

2.1.2. Debt management

Public debt refers to the aggregate sum that a government has borrowed to reconcile the disparity between its income and spending. Kabwoya et al. (2024) define public debt as the aggregate of government-issued IOUs directed towards individuals, organizations, and foreign governments. Public debt management involves meticulous planning and execution of strategies to oversee government borrowing, ensuring that a nation's fiscal requirements are satisfied while simultaneously reducing costs and mitigating risks (Ofurum et al., 2024). According to Adegbe et al. (2022), the fundamental objective of public debt management is to satisfy the financial needs of the public sector at the minimal cost, while simultaneously addressing risk in both the medium and long term. The inception of the DMO in Nigeria in 2000 marked a pivotal advancement in the orchestration and regulation of public debt, which had hitherto been characterized by a lack of coordination (Hadji and Ganawah,

2024). The management of debt encompasses the systematic approach by which a government formulates, administers, and supervises its borrowing and repayment methodologies, ensuring the fulfillment of its financial commitments while maintaining its fiscal integrity. Debt management for the purpose of this study is measured using Internal Debt (IND), external debt (EXD) and debt service cost (DSC) (Adegbe et al., 2022, Chinwoke et al. 2025 and Duyile et al., 2024).

2.2. Theoretical Review - Keynesian Theory

John Maynard Keynes, a British economist, in 1936, developed the Keynesian Theory. The theory's assumption is that an economy does not always correct itself and that total spending in an economy (aggregate demand) is what drives economic growth (Majenge et al., 2024; Okeke et al., 2022). The theory believes that in periods of economic downturns, private sector contributions may be insufficient when it comes to achieving full employment and growth and thus demands that the government intervenes to boost economic activities through the increment of public spending and/or cutting taxes (Ali et al., 2024; Ekuma et al., 2024).

The theory is of great importance to the analysis of debt management in Nigeria, especially as the economy relies heavily on government spending to bridge the infrastructural, unemployment, and social development gaps (Gara et al., 2024). Given Nigeria's recurring reliance on debt to finance government expenditures, the theory provides a framework for understanding how increased government spending, financed by debt, could stimulate aggregate demand and foster economic growth (Adesuyi et al., 2024; Gara et al., 2024). This framework is particularly useful for evaluating the impact of fiscal policies, such as stimulus packages and public sector investment, on Nigeria's economic recovery, especially during periods of low private sector activity or economic downturns.

The theory is particularly relevant to studies on debt management as it suggests that government involvement supports the economy through public expenditure and relates closely to debt management that may motivate economic growth (Majenge et al., 2024). In the end, the theory emphasizes how much the government can help to smooth business cycles and promote long-term economic stability through debt financing.

2.3. Empirical Review

Kabwoya et al. (2024) conducted a thorough examination of the influence of debt on economic performance in Kenya, with particular attention to both internal and external debt dimensions. Through the application of regression analysis and correlation techniques, data spanning from 2000 to 2021 was meticulously examined to elucidate the relationship between debt levels and economic growth indicators, including GDP. The findings elucidated a complex relationship: whereas internal debt exhibited a positive correlation with economic growth, external debt revealed a negative correlation. Duyile et al. (2024) investigated the influence of debt management on economic development in Nigeria, employing an ex-post facto research design, with data for the variables sourced from secondary data repositories. Annual data are meticulously sourced from the debt management

bulletin, CBN statistical bulletin, and World Bank Development Indicators spanning the years 1980 to 2021. The study employed the autoregressive distributive lags (ARDL) model to evaluate the hypotheses presented. The findings indicated that the external debt stock exerted a positive and significant influence on Nigeria's economic growth, as assessed through gross capital formation in the long term, while no correlation was observed in the short term. Moreover, the findings indicated that total debt exerted a negative and significant influence on Nigeria's economic growth, as assessed through gross capital formation over the long term, while no discernible relationship was observed in the short term.

Chinwoke et al. (2025) conducted an evaluation of the impact of public debt on the economic growth of Nigeria. The information spanning the years 1981 to 2023 was sourced from the CBN bulletin of 2023, and an ex-post facto research design was employed. The analysis employed descriptive statistics alongside multiple regression techniques. The hypotheses underwent testing at a significant level of 5%. The influence of domestic debt on GDP was both positive and significant, whereas external debt exhibited a negative yet significant impact on GDP. The variables associated with public debt play a significant role in fostering economic growth within Nigeria. Amu et al. (2025) examined the connections between public debts and economic development in Nigeria. The study employed an ex-post facto research design. Utilizing the E-view statistical package, a range of econometric analyses was performed. The research indicated that both external and domestic debts exert a considerable and predominantly adverse influence on economic growth and development in Nigeria.

Adegbie et al. (2022) conducted an examination of the influence of public debt management on the trajectory of economic growth in Nigeria. The sample population was deliberately selected from the data presented in the 2020 edition of the Central Bank of Nigeria's (CBN) Statistical Bulletin, encompassing a span of 40 years (1981-2020). The findings indicated that the management of public debt (RGDP) exerted a positively significant influence on economic growth in Nigeria. The findings confirmed that proficient management of public debt is likely to exert a substantial positive influence on economic growth in Nigeria. Ismael et al. (2024) conducted an in-depth examination of the intricate dynamics linking external debt to economic growth within developing nations. Employing a quantitative research methodology, data was gathered from three chosen developing nations via an online questionnaire disseminated to key stakeholders, resulting in a total of 189 responses. A range of statistical methodologies was utilized to scrutinize the data, encompassing t-tests, Chi-square tests, variance inflation factor (VIF) evaluation, Partial least squares regression (PLS), and principal component analysis (PCA). The results indicate that moderate external debt levels can foster economic growth, whereas excessive debt is harmful.

The combined gaps in the studies on debt management and economic growth in Nigeria reveal several key issues that need further exploration. While some studies indicate a positive impact of domestic debt on GDP (Chinwoke et al., 2025), others emphasize the negative effects of both external and domestic debt on economic growth (Amu et al., 2025). The mixed findings underscore a lack

of clarity on the precise thresholds and mechanisms through which debt influences growth. Additionally, there is a need for more comprehensive analysis of the long-term effects of debt management practices, as many studies focus on short-term relationships (Duyile et al., 2024). There is also limited research on how debt management interacts with broader macroeconomic factors such as exchange rates, inflation, and fiscal policy (Hadji and Ganawah, 2024). Moreover, institutional quality and the effectiveness of debt management strategies in improving economic outcomes have not been sufficiently examined. Lastly, the role of external shocks in influencing the debt-growth relationship (Ismael et al., 2024) needs further attention, particularly in the Nigerian context. These gaps highlight the need for more integrated and nuanced research on public debt management's impact on Nigeria's economic growth. Thus, the study hypothesized that;
 H_{01} : Debt management does not significantly affect economic growth in Nigeria.

The conceptual model of study is presented in Figure 1.

3. METHODOLOGY

This study adopted the ex-post facto research design in examining the effect of debt management on the economic growth of Nigeria with the use existing data. The chosen research design is has been used by other researchers such as Adegbie et al. (2022), Ele et al. (2024), Oluwayemisi et al. (2024), and Chinwoke et al. (2025). The study's data spanned for 30 years from 1994 to 2023 which is deemed sufficient to draw meaningful conclusions and recommendations. Total enumeration sampling technique was employed since the population is the same as sample size, with the CBN, Debt Management Office, and National Bureau of Statistics selected as the data sources because they are widely recognized for their consistency, accuracy, and reliability, making them ideal for academic and professional research.

The data were analyzed in three stages, for the first stage involved, pre-estimation tests, including descriptive statistics (mean, variance, skewness, kurtosis, etc.) and stationarity tests using augmented dickey-fuller (ADF) test at a 5% significance level, ordinary least squares (OLS) technique and Johansen Cointegration test which was used to assess the long-run

Figure 1: Conceptual model

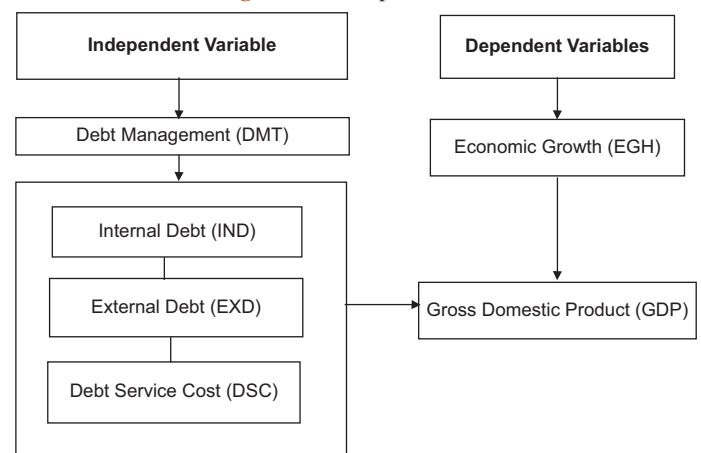


Table 1: *Apriori* expectation

S. N.	Model	Expectations	Test of significance	Decision rule
H ₀₁	$GDP_t = \beta_0 + \beta_1 IND_t + \beta_2 EXD_t + \beta_3 DSC_t + \epsilon_t$	$\beta_{1,3} < 0$ (i.e. negative)	If the ρ of the t-statistics of any of the constructs is $>5\%$, it implies that such a construct has no significant effect	If ρ of F-statistics is $>5\%$, do not reject H ₀

Source: Researcher's Compilation (2025)

Table 2: Summary of descriptive statistics of the variables results

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bers	Prob.
GDP	65,705.21	41,707.84	234,425.90	1,768.79	65,901.78	0.977455	2.974295	4.77792	0.0917
IND	7,593.52	2,774.17	59,120.86	407.58	11,528.51	3.168221	14.43945	213.7645	0.0000
EXD	4,977.95	2,344.44	38,219.85	438.89	7,822.73	2.932701	12.18451	148.4476	0.0000
DSC	1,208.54	388.25	7,802.63	30.84	1,838.65	2.228198	7.5086	50.23368	0.0000

Source: Researcher's Computation, (2025)

equilibrium relationships, followed by vector error correction model (VECM) to estimate short-run dynamics.

The second stage involved estimation tests using the autoregressive distributed lag (ARDL) model to examine long-run and short-run relationships, and the Granger causality test to determine causal relationships between independent and dependent variables. The final stage consists of post-estimation tests to ensure the robustness and integrity of the model. These included the Ramsey RESET test for linearity, the ARCH test for heteroscedasticity, the LM test for serial correlation, and tests for multicollinearity and normality. These diagnostic tests helped to confirm the validity of the model, ensuring that the disturbance term follows a normal distribution, exhibits constant variance, and maintains a linear relationship between dependent and independent variables, thus ensuring the reliability and accuracy of the findings of the study.

This study will utilize two categories of variables: the dependent (endogenous) variable, which encompasses measures of economic growth, and the independent (exogenous) variables, which pertain to measures of debt management. The functional equation is as follows;

$$Y = f(X)$$

$$Y = y_1$$

$$X_2 = x_1, x_2, x_3$$

Where:

Y = Economic growth (EGH)

y_1 = Gross domestic product (GDP)

X = Debt management (DMT)

x_1 = Internal debt (IND)

x_2 = External debt (EXD)

x_3 = Debt service cost (DSC)

The regression models are formulated as:

$$GDP_t = \beta_0 + \beta_1 IND_t + \beta_2 EXD_t + \beta_3 DSC_t + \epsilon_t \quad (\text{Eqn 1})$$

β_0 represents the Constant in the models, $\beta_{1,3}$ represent the coefficients of the exogenous variables, and t represents the time coefficient.

Apriori Expectation of the study is presented in Table 1.

4. RESULTS AND DISCUSSION OF FINDINGS

This chapter analyzed the effect of debt management on the economic growth in Nigeria (1994-2023) using descriptive statistics, co-integration analysis, and the ARDL bounds test. E-Views (Version 12.0) was used to assess the short- and long-run relationships of the model, guiding hypothesis decisions.

4.1. Preliminary Analysis

This analysis covers descriptive statistics, normality tests, and stationarity (ADF test), and between debt management and economic growth. Results are presented in Table 2.

4.1.1. Results of the summary of descriptive statistics of the variables

Table 2 provides descriptive statistics of the dependent and the independent variables. The mean values of variables range from ₦1,208.54 to ₦65,702.21 billion, with GDP having the highest (₦65,702.21) and DSC the lowest (₦1,208.54). Standard deviations vary between 1,838.65 and 65,901.78, with GDP having the highest value and DSC with the lowest value. The broad differences in average values indicate notable variation in economic indicators, with GDP standing out as the main variable. High standard deviations show significant changes, especially in GDP, which points to economic instability. This variability could affect policy decisions regarding debt management and sustainable development. All variables are positively skewed, with NTR, EXD, and IND being highly skewed, showing long tails of high values. The positive kurtosis values suggest distributions are more peaked than normal. Kurtosis ranges from 2.974 (GDP) to 14.439 (IND), with IND having the highest. Several variables (IND, EXD, DSC) fall below the 0.05 threshold, indicating non-normal distribution. This suggests significant deviations from normality, impacting statistical assumptions. Table 2 summarizes these statistics, providing insight into data distribution.

4.1.1.1. Interpretation

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4.1.2. Result of the stationary test

The stationary test examined the time series patterns over time to determine if the series exhibits an upward or downward trend. In this study, the Augmented Dickey-Fuller (ADF) unit root test was used to test for stationarity. The results of the test are presented in Table 3.

4.1.2.1. Interpretation

The study estimated the stationary status of all series, revealing that not all became stable at the same order of integration. IND, EXD, and DSC were stationary at their first differences, while GDP was stationary at the other level. As a result, autoregressive distributed lag (ARDL) model approach to cointegration was chosen for estimation. Before running the ARDL model, VAR optimal lag length selection criteria was applied to ensure appropriate lag selection for both dependent and independent variables. To determine the optimal lag length, an unrestricted VAR was run assuming the variables are not cointegrated. The lag length with

the lowest AIC value and marked with an asterisk is considered the best. Therefore, lag 2 is identified as the optimal lag length for this model based on the AIC criteria.

4.2. Test of Hypothesis

4.2.1. Research hypothesis one (H_{01})

Debt management does not significantly affect economic growth in Nigeria.

4.2.1.1. Model

$$GDP_t = \alpha_0 + \alpha_1 \Delta GDP_{t-1} + \alpha_2 \Delta IND_t + \alpha_3 \Delta EXD_t + \alpha_4 \Delta DSC_t + \alpha_5 ECT_{t-1}$$

4.2.1.2. Interpretation

For the ARDL Bound Test, the value of F-Stat of 5.84, which is greater than the critical values bound at the upper bound I(1) of 4.35 at 5%, is an indication of the existence of a long-run relationship between the dependent variable (economic growth) and debt management. Having found a long-run relationship, the study then estimates the long-run and the short-run elasticities (ECM) as well as the diagnostic tests and the results are presented in Table 4.

4.2.1.3. Diagnostic test

The linearity assumption of the ARDL model was tested using the Ramsey RESET test, with a $P = 0.35$, which is greater than the 5% significance level. This suggests that the model is correctly specified, as the null hypothesis of a linear relationship cannot be rejected. For heteroskedasticity, the Breusch-Pagan/Cook-Weisberg test resulted in a $P = 0.26$, indicating constant finite variance in the error terms, confirming that the model is homoscedastic. Breusch-Godfrey Serial Correlation LM Test revealed a $P = 0.60$, supporting the null hypothesis that there is no serial correlation in the residuals at the 5% significance level. Finally, the Jarque-Bera normality test showed a $P = 0.28$, suggesting that the residuals are normally distributed, and the null hypothesis of normality cannot be rejected.

The estimated equation is presented as:

$$GDP_t = 1.393 - 0.221 \Delta GDP_{t-1} + 0.085 \Delta IND_t - 0.045 \Delta EXD_t + 0.120 \Delta DSC_t - 0.221 ECT_{t-1} \quad (4.2)$$

ECM result depicts that:

A change in a-year lagged GDP ($\alpha_1 = -0.221$; $P = 0.00$) negatively and significantly influenced the current year GDP; its coefficient value of 0.221 implies that all things being equal, a change in a-year lagged GDP would lead to improvement in current year GDP by 22.1%. Furthermore, the statistical result for internal debt (IND) ($\alpha_2 = 0.085$; $P = 0.21$), shows that *IND* has insignificant positive effect on *GDP* and indicating that, all things being equal, a per cent increase in *IND* will not have any percentage increase on economic growth at 0.085%. Furthermore, the statistical result for external debt (*EXD*) ($\alpha_3 = -0.049$; $P = 0.08$), shows that *EXD* has no significant negative effect on *GDP* and indicating that, all things being equal, a per cent increase in *EXD* will have percentage decrease on economic growth. Finally, the result also shows that debt service cost (*DSC*) will have a positive and significant

Table 3: Unit root test

Variable	Level	1 st difference	Conclusion
GDP	-3.5492***	-3.6754***	I (0)
IND	-1.8214	-2.654**	I (1)
EXD	-0.6006	-3.5463**	I (1)
DSC	-0.1057	-7.1193***	I (1)

Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and *, respectively

Source: Researcher's Computation, (2025)

Table 4: Auto regression distributed lag model (ARDL)

ECM regression				
Long-run estimate				
Variable	Coefficient	Standard error	t-statistic	Prob.
C	1.393	0.326	4.278	0.000
LOG (IND)	0.385	0.223	1.728	0.097
LOG (EXD)	-0.223	0.085	-2.618	0.015
LOG (DSC)	0.544	0.199	2.733	0.012
Diagnosis tests:				
ARDL Bound Test @ 5%: $F - stat = 5.837$ ($I(0) = 3.23$, $I(1) = 4.35$)				
$R^2 = 0.49$ Adj. $R^2 = 0.47$; $F - stat = 26.26$ (0.00) ECT: -0.221				
$X^2_{IB} = 2.53(0.28)$; $X^2_{LM} = 1.03(0.60)$; $X^2_{BPG} = 4.03(0.26)$ $X^2_{RR} = 0.89(0.35)$				

X^2_{IB} ; X^2_{LM} ; X^2_{BPG} ; X^2_{RR} represent Jarque-Bera normality test, LM test for serial correlation, Breusch-Pagan Godfrey test for heteroscedasticity, and Ramsey Reset test for linearity respectively. I (0) and I (1) represent lower and upper bound, respectively. While the respective probability values are in bracket; ECT: Error correction term

effect on economic growth based on the coefficient and P-value of $\alpha_4 = 0.12$; $P = 0.03$. This means that for every per cent change in DSC, economic growth (GDP) will be increased by 0.12%.

The coefficient of error correction term (ECT), CointEq (-1), is -0.2211 , with SE of 0.04, and a t-statistic of -5.12 , which is highly significant at 0.00 probability level. This negative coefficient implies that any deviation of GDP from its long-term equilibrium is corrected at a rate of 22.1% per period. In other words, if GDP moves away from its equilibrium value, the model adjusts approximately 22.1% of the gap in the next period, indicating a stable adjustment process towards the long-term growth path of GDP.

The estimated long run outcome shows that:

The result of the long-run estimate reveals that two of the measures of debt management (EXD and DSC) exerted significant effect on economic growth (GDP). The statistical values of the variables; for instance, IND ($\alpha_1 = 0.385$; $P = 0.097$) implies that the elasticity of IND pertaining to GDP in the long run is 0.385, indicating that ceteris paribus, a per cent change in IND is expected to increase GDP by 0.385%. Furthermore, it was revealed in the study that EXD ($\alpha_2 = -0.223$; $P = 0.02$) depicted a negative nexus with economic growth, as displayed in the long run. The estimate of EXD pertaining to GDP is an indication that ceteris paribus, a per cent change in EXD is expected to decrease GDP by 22.3%. In contrast, DSC has a positive significant effect on economic growth with $\alpha_3 = 0.54$; $P = 0.01$. This shows that when debt service cost increase by 1%, it will lead to a 0.54 increase in GDP.

4.2.1.4. Joint effect significance of variables

The adjusted R-squared indicates that 47% of the variations in economic growth are explained by debt management measures, while the remaining 53% are attributed to other factors not included in the model. F-statistic value of 26.26 with a $P = 0.000$ confirms the statistical significance of the joint effect of the explanatory variables. Consequently, the study achieves its main objective by rejecting the null hypothesis.

4.2.1.5. Decision

Judging by the probability of F-statistics of 0.000, the study therefore rejects the null hypothesis, which states that debt management does not significantly affect economic growth in Nigeria, and hereby accepts the alternate hypothesis and concludes that 'Debt management significantly affects economic growth in Nigeria.

4.2.2. Discussion of findings

The analysis revealed that internal debt (IND), external debt (EXD), and debt service cost (DSC) were consistent in the Model, with the null hypothesis rejected at a 5% significance level, confirming that debt management significantly affects economic growth in Nigeria. The variables from the model showed that internal debt and debt service cost had a positive effect on economic growth, while external debt had a negative effect. The findings are supported by several studies. For instance, Chinwoke et al. (2025) found that domestic debt had a positive and significant influence on Nigeria's GDP, aligning with the positive effect of internal debt observed in the analysis. Similarly, Adegbie et al.

(2022) emphasized that effective public debt management, which includes managing internal debt and debt service costs, positively influences economic growth in Nigeria. These studies reinforce the idea that well-managed internal debt and debt servicing contribute to economic growth by fostering domestic investment and financial stability. On the other hand, the negative impact of external debt is echoed in the works of Amu et al. (2025) and Hadji and Ganawah (2024), who found that external debt exerts a significant adverse effect on economic growth in Nigeria and Sierra Leone, respectively. This is likely due to the risks associated with currency fluctuations, high-interest payments, and the potential for debt dependency, which can stifle long-term economic development. However, some studies present contrasting findings such as; Duyile et al. (2024) found that external debt stock had a positive and significant long-term impact on Nigeria's economic growth, which contradicts the negative effect observed in the analysis. Additionally, Ismael et al. (2024) suggested that moderate levels of external debt can foster economic growth in developing nations, though excessive debt is harmful.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The study formulated an objective, from which a hypothesis was developed. The study used both descriptive and inferential statistics to investigate the effect of debt management on economic growth in Nigeria.

5.1.1. Model

ARDL Bounds Test confirms a long-run relationship between economic growth (GDP) and debt management, with an F-statistic of 5.84, exceeding the upper bound critical value. In the short run, lagged GDP negatively impacts current GDP (-22.1%), internal debt (IND) has an insignificant positive effect (0.085%), external debt (EXD) has a weak negative effect (-4.9%), and debt service cost (DSC) significantly boosts GDP (12%). Error Correction Term (ECT) of -0.2211 indicates that GDP corrects back to equilibrium at 22.1% per period. In the long run, internal debt positively affects GDP (38.5%), external debt significantly reduces GDP (-22.3%), while debt service cost significantly enhances growth (54%). The model explains 47% of GDP variations, and the F-statistic ($P = 0.000$) confirms the joint significance of debt management on economic growth in Nigeria.

The study concluded that debt management significantly affects economic growth in Nigeria, indicating that effective debt management is crucial for Nigeria's economic growth, emphasizing the need for cautious external borrowing, improved internal debt utilization, and efficient debt servicing mechanisms to ensure sustainable economic development.

5.2. Recommendations

After uncovering the research findings related to debt management and economic growth in Nigeria, the study proposes the following recommendations based on each objective of the research as thus:

1. The government should adopt prudent debt management strategies, such as prioritizing concessional loans, reducing the share of external debt, and ensuring that borrowed funds are

- channeled into productive sectors that generate high returns.
2. Additionally, enhancing the capacity of the debt management office (DMO) to monitor and manage debt levels effectively will help maintain sustainable debt-to-GDP ratios and avoid debt distress. These will help to maximize the positive impact of debt management on economic growth.

5.3. Limitation of the Study

The analysis relied on historical data and focused only on selected debt management (IND, EXD, DSC) variables, potentially overlooking other macroeconomic variables or factors that also influence economic growth. Future research could explore broader economic factors and consider sector-specific fiscal impacts to enhance the understanding of debt management's role in Nigeria's economic growth.

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