

Domestic Debt and Economic Growth in Nigeria

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ABSTRACT

Nigeria has increasingly relied on domestic borrowing to finance fiscal deficits, public expenditure and development programmes. This study examined the effect of domestic debt on economic growth in Nigeria from 1981 to 2024. Specifically, it assessed the effects of Treasury Bills, Treasury Bonds and domestic debt-service payments, while controlling for gross capital formation and population growth. The study adopted an ex post facto design and used annual secondary data obtained from the Central Bank of Nigeria Statistical Bulletin and the World Development Indicators. The Autoregressive Distributed Lag (ARDL) approach was employed after Augmented Dickey–Fuller unit-root tests established a mixture of level and first-difference stationarity. The bounds test confirmed a long-run relationship among the variables. The long-run estimates show that Treasury Bills exert a positive and statistically significant effect on economic growth ($\beta = 0.1020$, $p = 0.0308$), whereas Treasury Bonds have a negative and statistically significant effect ($\beta = -0.1699$, $p = 0.0015$). Domestic debt-service payments have a positive but statistically insignificant effect ($\beta = 0.0120$, $p = 0.6474$). The study concludes that the growth outcome of domestic debt depends on the instrument used, the productivity of expenditure and the quality of debt management. It recommends prudent use of long-term domestic borrowing, stronger project selection and transparent allocation of borrowed funds to productive sectors.

Keywords: Domestic debt; Economic growth; Treasury Bills; Treasury Bonds; Debt service; ARDL.

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1. Introduction

Economic literature suggests that budget deficit financing is a key justification for government domestic debt (Odozi, 1996; Alison, 2003). It is normal, therefore, that a country engages in a reasonable level of borrowing with the expectation of enhancing economic growth (Pereira & Xu, 2000). The federal government of Nigeria has often borrowed from the domestic money and capital markets to finance its fiscal deficits. Borrowing domestically amounts to the injection of high-powered money into the system, which has serious adverse implications on price and exchange rate stability. Similarly, it tends to crowd out the private sector from the credit market thereby stalling investment and output growth (Oloja-Ojabo, et al., 2022; Abubakar & Mamman, 2021).

Nigeria has experienced a substantial increase in domestic public debt over the past decades, driven largely by the need to finance budget deficits and government spending (including public investments), which has led to escalating debt servicing costs that strain fiscal resources available for development (Ogbonna, Okezie, & Ofoegbu, 2021). Despite the positive role that domestic

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debt can play in stimulating economic growth when used optimally, the rising burden of debt servicing and inflationary pressures may undermine this potential, creating a complex dynamic between debt accumulation, inflation, and economic performance (Nyphas, Emmanuel & Auta, 2023).

Domestic or public debt has grown substantially from ₦1.52 trillion in the early 2000s to ₦59.12 trillion (US\$65.73 billion) by December, 2023. The debt-to-GDP ratio increased from 7.3% in 2008 to 38.8% in 2023, with projections suggesting it could reach 52.9% by 2024. Debt servicing consumes a disproportionate share of government revenues, reaching 111% of revenues in 2023 and 35% of consolidated public revenue, this crowding-out effect limits fiscal space for critical growth-enhancing expenditures. Domestic debt financing through central bank borrowing has contributed to inflationary pressures, with inflation rising from 18.8% in 2022 to 24.5% in 2023 and projected to reach 33% in 2024 (NBS, 2024). High inflation erodes the real value of debt but also distorts economic decision-making. Despite increasing domestic borrowing ostensibly for infrastructure and development projects, public investment as a percentage of GDP remains low at 1.9% in 2023, with concerns about the quality and growth impact of these investments (AFDB, 2024).

Economic growth has been volatile and generally tepid, slowing from 3.3% in 2022 to 2.9% in 2023, raising questions about whether domestic debt accumulation has translated into sustained growth. While public debt can be a valuable tool for financing development and stimulating economic activity, its accumulation and the associated debt servicing obligations can also pose significant challenges to economic growth. Understanding the intricate relationship between domestic public debt and Nigeria's economic trajectory is crucial for informed policymaking and sustainable development. Specifically, this research seeks to investigate the dynamic impact of domestic public debt and its servicing burden on Nigeria's economic growth, as measured by Real Gross Domestic Product (Real GDP), during the period of 1981 to 2024. Furthermore, the study analysed the potential mediating and moderating roles of key macroeconomic variables, namely inflation and public investments, in this relationship.

In Nigeria, the instruments for domestic borrowing from the Nigerian financial market include treasury bills, federal government of Nigeria (FGN) bonds, treasury certificates, development stock and treasury bonds. Issuance of FGN Bonds commenced in 2003, development Stocks were fully paid by end-2010, whereas FGN Savings Bond, FGN Sukuk and FGN Green Bond were introduced in March, September and December of 2017, respectively (CBN, 2023). Thus, treasury bills and treasury bonds appear to be the major instruments of government domestic borrowing in Nigeria.

From a disaggregated perspective, FGN holdings of treasury bills outstanding increased from 5.8 billion Naira in 1981 to 25.5 billion in 1990, that is, 340 per cent increase. In 2000 it had gone up 1700 per cent to 465.6 billion Naira from its 1990 level; between 2000 and 2010 it increased by 174 per cent to 1,277.1 billion Naira; between 2010 and 2020 it went up by 113 per cent; and then 140 per cent between 2020 and 2023. Similarly, FGN borrowing through treasury bonds, introduced in 1989, increased from 11.35 billion Naira in that year to 431 billion in 2000. However, it decreased by 13.5 per cent to 373 billion Naira in 2010, by a further 269 per cent to 101 billion in 2020, and then by 321 per cent to 24 billion in 2023 (NBS, 2024). Thus, borrowing through the treasury bonds has been declining compared to treasury bills. However, economic growth in the

country, measured by per capita GDP, averaged 0.41 per cent in annual growths between 1981 and 2023, which is far from impressive.

Over time, governments aim to achieve macroeconomic goals such as full employment, balance of payments equilibrium, price stability, and economic growth. To finance these objectives, borrowing becomes essential, especially when revenue sources are insufficient (Abdulkarim & Saidatulakmal, 2021). Domestic debt can positively impact short-term economic growth by boosting aggregate demand and output, but in the long run, it might hinder growth by crowding out private investment, raising interest rates, and increasing inflation and taxation (Mhlaba, 2019). Excessive borrowing without proper investment can lead to a high debt burden and significant interest payments, exacerbating the economic challenges (Joy & Panda, 2020).

In Nigeria, the debt situation has become increasingly unsustainable, with the government spending a large portion of its revenue on debt servicing. In 2021, nearly 98% of Nigeria's total revenue went towards servicing debt, reflecting a critical financial strain (Izuaka, 2021). Although Nigeria's debt-to-GDP ratio is relatively low at 22%, the debt service-to-revenue ratio indicates severe sustainability issues, threatening the nation's economic stability and growth (Ogbonna et al., 2019). High debt service burdens reduce funds available for critical infrastructure, adversely affecting growth and development. Nigeria's significant poverty levels, with 40.1% of the population living below the poverty line, further complicate the situation (Abdulkarim & Saidatulakmal, 2021).

Nigeria faces a rising level of government debt, both foreign and domestic, which negatively affects local investors' access to capital in money and capital markets, slowing GDP growth, export growth, and reducing income per capita. Higher interest rates, resulting from increased domestic debt, reduce investment and consumers spending as resources are diverted to the government, considered a more trusted borrower. This diversion limits funds for private firms and hinders closing the large investment gap needed for growth and development (Ogunjimi, 2019).

Historical data shows fluctuations in Nigeria's investment/GDP ratio: from 4.9% (1981-1985) to 21.9% (2001-2005), with a recent decline to 11.5% (World Development Indicator, 2022). Nigeria is now one of Sub-Saharan Africa's most heavily indebted countries, experiencing slowed GDP and export growth, decreasing income per capita, and rising poverty levels.

These issues are exacerbated by deteriorating global prices for primary exports, leading to more borrowing (Ogunjimi, 2019). High public debt creates uncertainty and hampers economic growth, with high debt-to-GDP ratios discouraging investment and negatively impacting the stock market and long-term productive investment and employment (Saungweme et al., 2019). This study aims to determine the impact of domestic debt on economic growth in Nigeria.

Nigeria's economic landscape over the past four decades has been significantly shaped by its public debt management strategies, particularly regarding domestic public debt. The country experienced dramatic fluctuations in its debt profile, with domestic public debt playing an increasingly prominent role in government financing. The relationship between domestic debt and economic growth remains a contentious issue in development economics. While some argue that domestic borrowing can stimulate growth through financing productive public investments, others contend that excessive domestic debt crowds out private sector credit and leads to unsustainable debt

servicing burdens. In Nigeria's case, this debate takes on particular significance given the country's heavy reliance on domestic borrowing to finance budget deficits, with domestic debt constituting 60.74% of total national debt as of December, 2023. In the past four decades, Nigeria has borrowed large amount internally, often at highly concessional interest rates with the hope to accelerate development through higher investment, and thus improve the level of economic activities in the country.

The Data from the CBN statistical bulletin showed that Nigeria's domestic debt stock had been on the rise over time. According to CBN (2023), total stock of domestic debt increased from ₦11.19 billion in 1981 to ₦13.3 trillion in 2023. From another angle, domestic debt increased by 22 per cent yearly while debt service payments on domestic debt increased by 41 per cent annually between 1981 and 2023. When disaggregated, government debt in treasury bills increased nearly 340 per cent between 1981 and 1990, 288 per cent between 1992 and 2000, 118 per cent between 2001 and 2010, and 277 per cent between 2011 and 2023. Also, government debt in treasury bonds increased 67 per cent between 1989 and 1992, 268 per cent between 1993 and 2000, but declined by 13 per cent between 2001 and 2010, also declined by 71 per cent between 2011 and 2020, and then by 68 per cent between 2021 and 2023. On the other hand, per capita GDP decreased by 13 per cent between 1981 and 1990, it also decreased by 7 per cent between 1991 and 2000; however, it increased by 59 per cent between 2001 and 2010, but declined by 2 per cent between 2011 and 2023.

Also, it averaged 0.6 per cent annually in growth between 1981 and 2023. The data implies that income level still remains low in the face of rising domestic public debt, although enhancing economic growth was the initial intention.

The rapid increase in the stock of Nigeria's domestic debt has been attributed to the need to finance rising profile of government expenditure, and accommodating budget deficit (Obiwuru et al., 2013). The implications of growing domestic debt for economic growth have therefore provoked intellectual discourse on the subject matter, but most previous efforts have focused on the domestic debt as an aggregate variable (Opara, Nzotta, & Kanu, 2021; Usman, 2019; Ayuba & Khan, 2019; James, Magaji, Ayo, & Musa, 2016). On the other hand, this study used the disaggregated approach by focusing on the two main debt instruments of public domestic debt, namely, treasury bills and treasury bonds. We believe that this approach will yield more specific policy implications.

The objectives of the study are to ascertain the significant impact of federal government treasury bills debt stock on economic growth in Nigeria; to determine the level of impact of federal government treasury bonds debt stock on economic growth in Nigeria; and ascertain the extent of impact of domestic public debt service payment on economic growth in Nigeria.

2. Literature Review

2.1 Theoretical Review

2.1.1 Debt overhang theory by Paul Krugman and Jeffrey Sachs in 1980s

The debt overhang theory was developed by Paul Krugman and Jeffrey Sachs in the 1980s. It suggests that if a country is highly indebted to the extent that the debt is more than its repayment capacity, debt service will strangle investments and hinder economic growth (Gordon & Cosim,

2018). Debt overhang is a circumstance where the debt burden is so huge that a country cannot secure further debts to finance new project. Coccia (2017) stated that the theory posits that public debt and public debt servicing impact economic growth by making debt repayment priority rather than other expenditure. Excessive public borrowing has a dual effect to the domestic economy. The first is crowding out effect and also hike in increase interest rate. High interest payment obligation can raise a country's budget shortfall. Huge debt service will hamper growth by reducing the public resources productive spending to stimulate growth (Yusuf & Mohammed, 2021).

2.1.2 Keynesian theory of debt by Keynes (1936)

The Keynesian theory of public debt was developed partly as a result of the economic crisis created by the great depression of the 1930s in the 19th century. In the theory, constant unbalanced budgets and rapid increase in public debt affect the nations' financial stability. It conceived that huge public debt is a national asset rather than a liability and hence, continuous deficit spending is very essential to the economic growth of nations because, it leads to full employment (Precious, 2015).

The Keynesian theory postulated that the economy tends to equilibrium at full employment, which was an attack on the classical principles of budgeting and public finance. By assumption, Keynes assume that if there were unemployed resources that the private sector could not employ, these resources can be put to use by adopting an unbalanced budget. Accordingly, Keynes upheld that a rise in public debt via the multiple effects would raise the National Income. It linked public borrowing with deficit financing and urge the government to borrow for all purposes in order to increase effective demand in the economy, which would, in turn, result in increased employment and output.

Lerner (1955), opined that duly importance should be given to certain advantage of public borrowing while considering burden thesis of public debt. The economic effect of public debt is assessed in the consideration of the nature of the expenditure for which debt is incurred and in terms of the income generating potentialities. In modern theory, duly importance was given to the net burden of public debt.

Furthermore, the theory postulated that additional flow of income generated by increased debt to finance expenditure leads the payment of taxes to serve the debt. During the period of unemployment, public debt increase contributes to current capital for the nation. More so, the theory stated that public borrowing promotes the development of more and more institutionalized sources of savings like stock, capital market, insurance companies, and Banks.

2.2 Empirical Review and Gap

The study by Orji, Ezema, Uduakobong, and Emediong (2024) examined the impact of treasury bills on economic growth in Nigeria. The study used the auto-regressive distributed lag (ARDL) method and found that treasury bills bought by deposit money banks (DMBs) had no significant impact on real gross domestic product (GDP) of Nigeria; but treasury bills bought by non-bank public had no significant impact on real GDP of Nigeria. In contrast, the present study focuses on treasury bills purchased by the federal government of Nigeria.

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Makinde and Oladele (2024) conducted their study through a mixed-methods approach, combining quantitative analysis with qualitative insights to comprehensively evaluate the impact of internal and external debt on Nigeria's economic indicators from 1985-2022. They gathered data from multiple sources, including national economic databases, financial reports, and academic literature, to construct a comprehensive data spanning several years. Using econometrics techniques such as regressions analysis, the examined the relationship between internal external debt various economic indicators, including interest rate, private investment, exchange rates, and GDP growth. The gap in Makinde and Oladele (2024) is that the study combined internal and external debt without isolating the specific impact of domestic debt on Nigeria's economic growth.

Similarly, George-Anokwuru (2023) examined the influence of treasury bills on economic growth in Nigeria from 1985 to 2019. Their researcher used annual time data on treasury bills, real gross domestic product, inflation rate, and monetary policy rate. The researchers used the ARDL method and found that in the long run, treasury bills have negative and insignificant relationship with economic growth. But in short run, treasury bills have negative and significant relationship with economic growth.

Akpotor and Egharevba (2022) analysed the effect treasury bills issue on economic growth in Nigeria from 1986 to 2019 using Vector Error Correction Model technique. The findings revealed that treasury bills have insignificant negative effects on economic growth in Nigeria.

Ukeje, Nwachukwu and Nwachukwu (2023) investigated the effect of debt securities on economic growth in Nigeria using annual time series data covering a period of 22 years (1999-2021). The authors used the ARDL method to estimate the effect of treasury bills, treasury bonds, government bonds, and promissory notes on economic growth in Nigeria. The findings revealed that treasury bills, treasury bonds, government bonds and promissory notes all had positive effects on economic growth in Nigeria both in the short and long runs.

The study by Omodero and Alege (2022) investigated the effect of each type of government bond on economic growth. Thus, the study examined the impact of various public-sector bonds on the economic growth of Nigeria over the period 2003-2019. The authors used the OLS method and found that treasury bills and the federal government of Nigeria bond impact positively and significantly on the economic growth of Nigeria. On the contrary, treasury bonds and inflation exerted a negative effect on the economy.

In a similar study, Oke, Dada, and Aremo (2021) examined the impact of bond market development on the growth of the Nigerian economy over the years 1986-2018. The researchers used the co-integration bounds test approach and found that government bond exhibited an insignificant positive relationship; corporate bond and the value of bond traded were positive and statistically significant, while bond yield had a negative relationship, with GDP growth. However, the study did not include treasury bond. Similarly, Chidi-Okeke, Ogbonna, Okeke, and Chris-Ejiogu (2020) examined the effect of bond market development on economic growth in Nigeria. The study employed time series of 33 years from the Debt Management Office (DMO), and the world development indicators. The researchers used the ARDL method and found that the federal government bond market capitalization had no significant impact on economic growth in Nigeria. However, other debt variables were not included in the study.

Yusuf and Mohd (2021) conducted a research study to investigate the effect of government debt on economic growth in Nigeria using annual data from 1980 to 2018 and the ARDL technique. The empirical results showed that both in the long and short terms, domestic debt service payments inhibited growth of the economy.

The study by Oluitan (2020) studied the effect of public debt on economic growth in Nigeria for a 56-year period covering 1960-2015. The study used error correction model (ECM) to estimate the relationship and found that the proxy for domestic debt service payment is negative and significant, which implies that domestic debt repayment has inverse relationship with economic growth.

Boussou and Duke, (2020), also examined the impact of domestic debt on real gross domestic product growth in Nigeria over a 36-year period from 1981 to 2016. The study adopted the econometric method by using ordinary least squares estimation (OLS) The study used an ex-post facto or Causal Comparative study design (time series analysis). The results indicated that the variables are integrated at first difference or order one, I (1), but product growth is integrated at level I (0), validating the usage of ARDL so because series are integrated at various levels. The amount of public debt in a nation was found to be a significant determinant of economic growth. The study recommended that the government make available sustainable deficit budgeting and effective resource utilization through effective and efficient project and program execution (e.g., interest and exchange rates) by the Central Bank of Nigeria and Debt Management Office when contracting loans

Okorie (2020) investigated the relationship between domestic debt and economic growth in Nigeria while the annual data spanning from 1980 and 2018. The study adopted the model of Okon (2013) modified to accommodate Development stock. The study adopted the Engle-Granger (1979) Error Correction Model estimation techniques. The finding from the study showed that the variations in public debt structure accounted for about 67% in economic growth during the period under review. It was therefore recommended that government should diversify the economy to reduce debt Burden on economic growth.

3. Methodology

The study adopted a quantitative, ex post facto research design, using annual Nigerian time-series data for 1981–2024. Real GDP was the dependent variable. Gross capital formation (GCF), Treasury Bills outstanding (TRB), Treasury Bonds outstanding (TBND), domestic debt-service payments (DDS) and population growth rate (PGR) were the explanatory variables. GDP, GCF and PGR were obtained from the World Bank's World Development Indicators, while TRB, TBND and DDS were obtained from the Central Bank of Nigeria Statistical Bulletin.

3.1 Model specification

We adopted the Solow growth model as the anchor theory for this study, supported by the the Keynesian theory and the debt overhang theory. The latter two support government borrowing and exposes the debt overhang implication of rising debt stock, respectively. The Solow growth theory postulates that long-term per capita income growth is dictated by capital, population growth, and technological progress, thus,

$$Y = f(K, L, A)$$

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Where, Y = Total output of the economy, K = Capital, L = Labour, and A = Level of technology.

Given the level of technology, we therefore adapted the model in Equation 1 for this study, thus,

$$\text{GDP} = f(\text{GCF}, \text{PGR}) \quad 2$$

Where, GDP = GDP per capita, GCF = Gross Capital Formation, and PGR = Population growth rate.

The Keynesian theory promoted increased government involvement in the economy and the debt overhang theory warns against debt rising too much to the point that the repayment of the principal and the interest become burdensome and makes obtaining further loan nearly impossible. In line with these supporting theories, we introduced the debt components into the model of Equation 2 to evaluate their effects on economic growth, thus,

$$\text{GDP} = f(\text{GCF}, \text{TRB}, \text{TBND}, \text{DDS}, \text{PGR}) \quad 3$$

Where TRB = Treasury bills held by the federal government, TBND = Treasury bonds held by the federal government, DDS = Domestic debt service payment, others are as in Equation 2. The empirical model specified is similar to those of Omes, et al. (2021) and Umar et al. (2022). The explicit form of the model of this study is specified as,

$$\ln \text{GDP}_t = \beta_0 + \beta_1 \text{GCF}_t + \beta_2 \ln \text{TRB}_t + \beta_3 \ln \text{TBND}_t + \beta_4 \ln \text{DDS}_t + \beta_5 \text{PGR}_t + \mu_t \quad 4$$

Where, $\ln = \log$, $t = \text{time (current year)}$, $\mu = \text{error term}$ and the β s are the parameters of the model to be estimated. We expect that $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$, $\beta_5 < 0$.

3.2 Sources of Data

The study used annual time series data involving six variables, namely, **real GDP per capita**, gross capital formation, treasury bills held by the federal government of Nigeria, treasury bonds held by the federal government of Nigeria, domestic public debt service payment, and population growth rate. The per capita GDP, gross capital formation, and population growth rate data were obtained from the World Bank world development indicators available at: <https://databank.worldbank.org/reports.aspx?source=2&country=NGA>; while the treasury bills, treasury bonds and the domestic debt service data were obtained from the CBN Statistical Bulletin of 2023, available at: <https://www.cbn.gov.ng/documents/Statbulletin.asp>.

3.3 Estimation procedure

We tested for unit root using the Dickey-Fuller test, Thereafter, we employed diagnostics tests such as autocorrelation, heteroskedasticity.

The Unit root test was used to test for the stationarity of the time series data. This involves testing of the order of integration of the individual time series under consideration. These tests are initially performed at levels and then in first difference form. Three different models with varying deterministic components are considered while performing the tests. These are (1) model with an intercept which assumes that there are no linear trends in the data such that the first differenced

series has zero mean (2) model with a linear trend which includes a trend stationary variable to take account of unknown exogenous growth and (3) a model which neither includes a trend nor a constant. The most popular ones are Augmented Dickey-Fuller (ADF) test due to Dickey and Fuller (1979, 1981). Augmented Dickey Fuller (ADF) test statistics shall be compared with the critical values at 5% level of significance. A situation whereby the ADF test statistics is greater than the critical values with consideration on absolute values, the data at the tested order will be said to be stationary. Augmented Dickey-Fuller test relies on rejecting a null hypothesis of unit root (the series are non-stationary) in favour of the alternative hypotheses of stationarity. The tests are conducted with and without a deterministic trend (t) for each of the series.

The general form of ADF test is estimated by the following regression:

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum \alpha \Delta y_t + e_t \quad 3$$

Where: Y is a time series, t is a linear time trend, Δ is the first difference operator, α_0 is a constant, n is the optimum number of lags in the dependent variable and e is the random error term.

The null hypothesis is that $\alpha_1 = 0$. If the null hypothesis $\alpha_1 = 1$, then we conclude that the series under consideration $\Delta(y_t)$ has unit root and is therefore non-stationary.

If the ADF test fails to reject the test in levels but rejects the test in first differences, then the series contains one-unit root and is of integrated order one I(1). If the test fails to reject the test in levels and first differences but rejects the test in second differences, then the series contains two-unit roots and is of integrated order two I(2).

4. Results and Discussion

4.1 Unit Root Test

One of the implicit assumptions that underlie regression analysis involving time series data is that such a data series is stationary. In this context, testing for stationarity or otherwise of the employed data sets becomes of essence in this analysis. The Augmented Dickey-Fuller (ADF) formulae were employed to test for the existence of unit roots in the data using trend and intercept. The test results are presented in table 1 below.

The Augmented Dickey Fuller (ADF) unit root test with trend and intercept is employed in order to test for the stationarity of the time series data used are presented in Table1 below.

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Table 1: ADF Unit Root Test of Stationarity of Time Series Data

Series	ADF tests at Level			ADF tests at 1 st Difference			
	ADF Statistic	5% Critical Level	p-Values	ADF Statistic	5% Critical Level	p-Values	Order of Integration
LGDP	-1.786179	-3.523623	0.6932	-4.090982	-3.520787	0.0129	I(1)
LGCF	-0.218078	-3.518090	0.9906	-5.953046	-3.520787	0.0001	I(1)
LTRB	-2.211677	-3.518090	0.4713	-6.176779	-3.520787	0.0000	I(1)
LTBND	-2.100000	-3.544284	0.5279	-5.872286	-3.548490	0.0002	I(1)
LDDS	-3.037771	-3.518090	0.1342	-5.846111	-3.523623	0.0001	I(0)
LPGR	-3.743747	-3.544284	0.0323				

N/B: I(0) stands for stationary at level while I(1) stands for stationary at first difference.

Source: Researcher's compilation, 2026

Table 1 above shows the summary of unit root test results. The result shows that the variables; gross domestic product (GDP), Gross Capital Formation (GCF), Treasury bills (TRB), Treasury Bonds (TBND) and Domestic Debt Service (DDS) were not stationary at levels using the Augmented Dickey Fuller test. The reason for this conclusion is because their critical values were less than ADF test statistics in absolute value at 5 percent level of significance. While and Population Growth Rate (PGR) was stationary at level because, the ADF test statistics was greater than the value of 5% level of significance in an absolute term. Nevertheless, all the variables considered became stationary after the first difference since their ADF test statistics were greater than their critical values in absolute value. The results show that the series are in mixed order of integration.

4.2 ARDL Bounds Test

Table 2: ARDL Bounds test result.

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	K
F-statistic	5.968758	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: Researcher's Estimate, 2026

The ARDL Bound test result presented in Table 2 indicates that there is a presence of long run relationship at 5% level of significance existing between domestic debt and economic growth in Nigeria because the value of F-statistic which is 5.968758 is greater than the value of upper bound boundary of 3.79 at 5% level of significant. On the other hand, it means that the domestic debt has significant long run relationship with economic growth in Nigeria.

4.3 ARDL Short Run Coefficient and Long Run Form

Table 3: ARDL Short Run Coefficient

Included observations: 32

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDP(-1))	0.066754	0.249093	0.267990	0.7977
DLOG(GDP(-2))	0.237440	0.192025	1.236506	0.2625
DLOG(GCF)	0.009703	0.067063	0.144684	0.8897
DLOG(GCF(-1))	0.058205	0.041858	1.390543	0.2137
DLOG(GCF(-2))	-0.011800	0.070163	-0.168185	0.8720
DLOG(GCF(-3))	0.137995	0.078661	1.754304	0.1299
DLOG(TRB)	0.015206	0.022528	0.674984	0.5248
DLOG(TRB(-1))	0.108069	0.028135	3.841113	0.0085
DLOG(TRB(-2))	-0.038372	0.034044	-1.127104	0.3027
DLOG(TRB(-3))	-0.087452	0.029001	-3.015524	0.0235
DLOG(TBND)	-0.087310	0.034252	-2.549031	0.0435
DLOG(TBND(-1))	0.131941	0.032722	4.032214	0.0069
DLOG(TBND(-2))	-0.075216	0.028519	-2.637420	0.0387
DLOG(TBND(-3))	0.049725	0.032118	1.548194	0.1725
DLOG(DDS)	0.044338	0.012423	3.568949	0.0118
DLOG(PGR)	0.325493	0.478073	0.680845	0.5214
DLOG(PGR(-1))	-2.660910	0.821882	-3.237580	0.0177
DLOG(PGR(-2))	2.612215	0.790644	3.303907	0.0163
DLOG(PGR(-3))	-1.821333	0.702649	-2.592094	0.0411
CointEq(-1)	-0.844679	0.245364	-3.442563	0.0138

Cointeq = LOG(GDP) - (-0.2200*LOG(GCF) + .1020*LOG(TRB) - 0.1699

*LOG(TBND) + 0.0120*LOG(DDS) + 3.9956*LOG(PGR) + 9.6483)

Source: *Researcher's Estimate, 2026*

The short-run coefficients and the Error Correction Mechanism (ECM) results presented in table 3 shows that the past value of GCF lag one period was not statistically significant and impacted positively on gross domestic product. The result further disclosed that Treasury bills (TRB), Treasury Bonds (TBND), Domestic Debt Service (DDS) and Population Growth Rate (PGR) a lag one was not statistically significant and impacted positively on gross domestic product in Nigeria.

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Therefore, the result summarized as follows:

One percent increase in Gross Capital Formation (GCF) brings about 0.9% increase in gross domestic product in Nigeria. One percent increase in Treasury bills (TRB) brings about 1% increase in domestic product in Nigeria. One percent increase in Treasury Bonds (TBND) brings about 8% decrease in and statistically impacted on gross domestic product in Nigeria. One percent increase in Domestic Debt Service (DDS) brings about 4% increase and statistically impact in gross domestic product in Nigeria. While one percent increase in Population Growth Rate (PGR) brings about 3% increase in gross domestic product in Nigeria, at the time of the study.

4.4 ARDL Long Run Coefficient

Table 4: ARDL Long Run Coefficient
Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(GCF)	-0.219979	0.092412	-2.380426	0.0547
LOG(TRB)	0.102033	0.036337	2.807975	0.0308
LOG(TBND)	-0.169946	0.030999	-5.482383	0.0015
LOG(DDS)	0.012001	0.024939	0.481218	0.6474
LOG(PGR)	3.995624	0.645984	6.185330	0.0008
C	9.648287	0.994829	9.698440	0.0001

Source: *Researcher's Estimate, 2026*

The long run coefficients of the variables of the study presented in Table 4 revealed that the values of the coefficients of Gross Capital Formation (GCF) and Treasury Bonds (TBND) respectively were negatively related to gross domestic product while Treasury bills (TRB), Domestic Debt Service (DDS) and Population Growth Rate (PGR) was positively related but statistically significant.

The result further disclosed as thus:

One percent increase in Gross Capital Formation (GCF) leads to approximately 2% decrease in gross domestic product in Nigeria but not statistically significant impact. This means that any government policy geared towards increasing gross capital formation will bring reduction on gross domestic product in Nigeria. An increase in Gross Capital Formation is associated with a decrease in Gross Domestic Product, holding other factors constant. In practical terms, this suggests that during the period studied, increases in investment (capital formation) did not translate into economic growth in Nigeria.

One percent increase in Treasury bills (TRB) leads to 10% increase in gross domestic product in Nigeria and the result also indicate that the treasury bill has positive and statistically significant impact on economic growth in Nigeria. Moreover, one percent increase in Treasury Bonds (TBND) leads to 16% decrease on economic growth in Nigeria. One percent increase in Domestic Debt Service (DDS) leads to 1% increase on economic growth in Nigeria. One percent increase in Population Growth Rate (PGR) leads to 3% increase on economic growth in Nigeria. In the long run; the results show that Gross Capital Formation (GCF) has a negative/e but statistically insignificant effect on Gross Domestic Product (GDP), indicating that increases in capital

formation was associated with a 2% decrease in GDP during the study period. The negative and insignificant impact of GCF is attributed to; capital projects are often poorly executed or abandoned, funds may be diverted due to corruption, investment may not target productive sectors (e.g., over-concentration in oil) which imply that investment spending did not significantly translate into economic growth.

In contrast, Treasury Bills (TRB) exhibit a positive and statistically significant relationship with economic growth, as a unit increase in Treasury Bills leads to approximately a 10% increase in GDP. This implies that government borrowing instruments contributed positively to economic performance. However, Treasury Bonds (TBND) has a negative effect on economic growth, with a unit increase resulting in about a 16% decrease in GDP. This suggests that long-term domestic borrowing may have adversely affected growth, possibly due to debt burden or crowding-out effects.

Furthermore, Domestic Debt Service (DDS) shows a positive relationship with economic growth, where a 1% increase leads to a 1% rise in GDP. A positive relationship may reflect the productive use of borrowed funds. When the government borrows domestically to finance infrastructure, education, healthcare, or security, such investments can stimulate economic activity. If these borrowed funds are efficiently allocated, they enhance productive capacity, create employment, and increase aggregate demand. In this case, higher domestic debt service simply reflects repayment of previously growth-enhancing investments. Thus, DDS may rise alongside GDP because economic expansion enables the government to meet its debt obligations more comfortably. Similarly, Population Growth Rate (PGR) positively impacts economic growth, with a 1% increase associated with a 3% increase in GDP.

4.5 Post Correlation Test

i. Serial correlation post diagnostic test

Table 5: Breusch-Godfrey Serial Correlation LM
Breusch-Godfrey Serial Correlation LM Test:

F-statistic	151.133	Prob. F(2,4)	0.3982
Obs*R-squared	31.58207	Prob. Chi-Square(2)	0.9123

Source: *Researcher's Estimate, 2026*

The post diagnostic result of serial correlation in Table 5 revealed that there is no presence of serial correlation, because both the probability values of F-statistic and observed R-square are higher than 5 percent level of significant.

ii. Heteroskedasticity Post Diagnostic Test

The study employed the Breusch-Pagan-Godfrey test of heteroskedasticity to determine whether the variances of the residuals are constant (homoscedastic). The result obtained is presented in the table below.

Table 6: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.649255	Prob. F(25,6)	0.1136
		Prob. Chi-Square(25)	0.2499
Obs*R-squared	29.34188	Prob. Chi-Square(25)	1.0000
Scaled explained SS	0.596586		

Source: *Researcher's Estimate, 2026*

The Breusch-Pagan-Godfrey test of Heteroskedasticity in Table 6 also revealed that, there is no presence of Heteroskedasticity, because the probabilities value of F-statistic and that of the observed R square are higher than 5 percent level of significant.

5. Conclusion and Recommendations

The study investigated domestic debts and economic growth in Nigeria for the period of 1981 to 2024. Having analysed and estimated the nature of the empirical result in section four. The study uses Autoregressive Distributed lag (ARDL) Model after testing for unit root via Augmented Dickey – Fuller (ADF) test and the bound test. The results revealed that the time series variables employed were integrated at level and at first difference while the bound test also revealed that there was presence of long- run relationship between domestic debts and economic growth in Nigerian and the error correction mechanism was statistically significant and also negative. Therefore, the summary of the findings which are in-line with the objectives of the study are summarized as thus:

- i. The study revealed that, treasury bills debt stock has positive and statistically significant impact on economic growth in Nigeria.
- ii. The study revealed that treasury bonds debt stock has negative and statistically significant impact on economic growth in Nigeria.
- iii. The study also finds that domestic public debt service has positive and statistically insignificant impact on economic growth in Nigeria.

This research work examined domestic debts and economic growth in Nigeria. The roles of domestic debt cannot be overemphasized, despite receiving limited attention from literature, its relevance as a burning socio-economic issue within Nigeria in particular and the world at large is not in doubt, and for this reason the researcher is motivated in carrying out the study on domestic debts and economic growth in Nigeria.

The study employed ARDL model in order to estimate the impacts of domestic debts on economic growth in Nigeria. The use of ARDL model is appropriate because it is useful and the best technique to estimate both short run and long effect of domestic debts. At this point, the empirical evidence from the ARDL – Bound test analysis showed that, there is a long-run equilibrium relationship existing between domestic debts and economic growth in Nigeria under the periods of the study.

On the other hand, the ECM coefficient also indicated negative sign and statistically significant indicating the sign of return to long run equilibrium. The long run coefficients of the variables of the study include; Treasury Bonds (TBND), Treasury bills (TRB), Domestic debts (DD) and Population Growth Rate (PGR) were statistically significant impact on economic growth in Nigeria while Gross Capital Formation (GCF) and Debt Service (DDS) were statistically insignificant on economic growth in Nigeria. The findings underscore that the impact of domestic public debt on economic growth depends not merely on the act of servicing the debt, but on the efficiency of debt utilization and the broader fiscal management framework. For domestic public debt to contribute significantly to economic growth in Nigeria, borrowed funds must be channelled toward productive investments, accompanied by sound macroeconomic policies, prudent debt management strategies, and structural reforms that enhance the productivity of public expenditure.

Hence, the effective debt management, improved allocation of public resources, and sustained institutional reforms remain essential to ensuring that domestic public debt contributes positively and significantly to Nigeria's long-term economic growth trajectory.

The recommendations of this study are derived from the findings of the time series data analysis of the study and they are stated as thus:

- i. Since Treasury Bills Debt Stock positively and significantly stimulates economic growth, government should continue to use short-term securities to finance fiscal deficits in a way that supports liquidity and investment without excessively burdening long-term debt markets.
- ii. Given that Treasury Bonds Debt Stock negatively affects growth, reliance on long-term domestic borrowing should be carefully managed to avoid crowding out private investment and creating unsustainable debt servicing obligations. Alternative financing strategies, such as external concessional borrowing or public-private partnerships for infrastructure, may be explored.
- iii. Government should focus on efficient allocation of resources from debt servicing and ensure that funds raised are channelled into productive, growth-enhancing sectors like infrastructure, industry, and human capital development.

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