International Journal of Business & Law Research 14(2):344-355, April-June, 2026

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DOI:10.5281/zenodo.20681237

Public Debt Management Practices And Macroeconomic Stability Indicator In Nigeria

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ABSTRACT
This study examined the relationship between public debt management practices and macroeconomic stability in Nigeria over the period from 1995 to 2024. A quantitative research design was adopted, utilizing secondary data from the World Bank's World Development Indicators (WDI) and Nigeria's Debt Management Office (DMO). The study focused on three key debt management variables: short-term debt share (STDS), domestic vs. external debt share (DEDS), and foreign-currency debt share (FCDS). The macroeconomic stability indicator, proxied by Real GDP growth volatility (RGDPV), was analyzed through Ordinary Least Squares (OLS) regression. The findings indicated a significant negative relationship between STDS, DEDS, and FCDS with RGDPV. Specifically, higher STDS and FCDS were associated with increased macroeconomic instability, as reflected in higher GDP growth volatility, while a higher share of domestic debt relative to external debt was linked to improved stability. These results supported the Debt Overhang Theory, which suggests that excessive reliance on short-term and foreign-currency debt burdens the economy with high debt servicing costs, reducing the potential for investment and economic growth. Additionally, the study aligned with the Ricardian Equivalence Theorem, which posits that domestic debt, being less exposed to external shocks such as currency fluctuations, provides more fiscal stability.The study recommended that Nigeria prioritize long-term debt issuance and reduce its reliance on short-term and foreign-currency debt to mitigate the negative impact on macroeconomic stability. Furthermore, it emphasized the importance of conducting comprehensive debt sustainability analyses to ensure that borrowing aligns with long-term growth objectives and repayment capacities. By implementing these recommendations, Nigeria could enhance its fiscal resilience, reduce vulnerability to external shocks, and promote sustainable economic growth. The study underscored the need for effective debt management practices to maintain macroeconomic stability and foster long-term economic development in Nigeria.
Keywords: Short-Term Debt Share, Domestic Vs. External Debt Share, Foreign-Currency Debt Share Real GDP Growth Volatility

INTRODUCTION

Public debt management plays a pivotal role in determining the fiscal health and macroeconomic stability of a nation. In Nigeria, public debt has increased significantly in recent years, raising concerns about its implications for economic growth and stability. Effective debt management practices are crucial in ensuring that the country's debt obligations do not become unsustainable and undermine economic

performance. Key debt management indicators such as the short-term debt share (STDS), domestic versus external debt share (DEDS), and foreign-currency debt share (FCDS) provide useful proxies for assessing the adequacy and sustainability of Nigeria's public debt. These indicators reflect the composition of the country's debt portfolio, which directly influences its vulnerability to external shocks and fiscal pressures (Adebayo, 2022; Okoro, 2023).

The STDS measures the proportion of the total debt that is due for repayment within a short time frame, typically one year. A high STDS indicates a potential liquidity risk, where the government may face challenges in meeting its immediate debt obligations. On the other hand, the DEDS reveals the proportion of the country's debt held domestically versus abroad. An increase in external debt exposes the nation to exchange rate fluctuations, potentially increasing the debt burden due to currency devaluation (Ogunleye &Ijere, 2022). Furthermore, the FCDS highlights the extent to which Nigeria's debt obligations are denominated in foreign currencies. A significant foreign-currency debt portfolio makes the country susceptible to currency depreciation, which could worsen the debt servicing burden and escalate inflationary pressures (Adeola & Ojo, 2022).

Macroeconomic stability, as measured by the Real GDP growth volatility (RGDPV), is an essential indicator of economic health. High RGDPV suggests an unstable economic environment, characterized by significant fluctuations in output growth. This instability can undermine investor confidence and make it difficult for the government to implement consistent and sustainable fiscal policies (Alabi & Okanlawon, 2023). The relationship between public debt management practices and macroeconomic stability has been well-documented, with studies showing that poor debt management can contribute to economic instability, particularly in emerging markets like Nigeria (Ajakaiye, 2022; Isah & Olusola, 2023). Proper management of debt indicators, such as STDS, DEDS, and FCDS, can help mitigate risks and foster an environment conducive to sustainable economic growth.

Nigeria's public debt management practices have become a critical concern in recent years due to the rising debt burden, which has exacerbated macroeconomic instability. Issues such as a high STDS, an unbalanced DEDS, and a growing FCDS pose significant risks to the country's financial stability. These debt management challenges contribute to increased vulnerabilities, such as currency devaluation and liquidity crises, which hinder long-term economic growth (Adebisi & Adewumi, 2023). Furthermore, the relationship between these debt management practices and RGDPV remains under-researched in Nigeria, with limited studies focusing on the complex interactions between public debt and macroeconomic stability in the Nigerian context.

While several studies have explored various dimensions of debt management, there is a notable gap in empirical research that assesses how the combined effects of STDS, DEDS, and FCDS influence macroeconomic stability in Nigeria (Olayemi & Adebayo, 2024). Existing literature often treats these factors in isolation, failing to offer a comprehensive analysis of their collective impact on GDP fluctuations (Ogunbiyi & Olorunfemi, 2022). Additionally, few studies have employed an OLS regression model to analyze these debt indicators in the Nigerian economy. This research gap highlights the need for a robust quantitative approach to understand the dynamics of public debt management and its effect on macroeconomic stability, which this study aims to address (Durojaiye & Adeyemi, 2023; Obasanjo & Akinola, 2025).

Conceptual Review

Public Debt Management Practices

Public debt management is a vital component of fiscal policy that directly influences the nation's economic health. Efficient management of public debt involves balancing various types of debt—short-term and long-term, domestic and external, and foreign-currency denominated debt. These elements are crucial for minimizing risks and enhancing economic stability. A high STDS exposes the country to liquidity crises, while reliance on external debt increases vulnerability to global market fluctuations and exchange rate risks. Moreover, the increasing FCDS puts added pressure on Nigeria's fiscal position, as changes in global financial conditions or currency devaluation can significantly raise debt-servicing costs

(Ajayi & Oladipo, 2023). Effective debt management strategies focus on optimizing the structure of debt, ensuring that it remains sustainable, transparent, and manageable over the long term, thereby safeguarding macroeconomic stability (Obi & Adewale, 2024).

A significant issue in Nigeria's public debt management is the composition of its debt portfolio, which has been skewed towards external borrowing, particularly foreign-currency debt. This situation poses risks, particularly in times of global financial stress or exchange rate depreciation. In addition, while domestic debt is less exposed to foreign exchange fluctuations, it often comes with higher interest rates, which can strain the national budget. To mitigate these risks, policymakers need to prioritize domestic debt issuance with a more strategic focus on long-term financing (Omoloye& Adebayo, 2022). By doing so, Nigeria can reduce external vulnerabilities and create a more resilient debt structure that aligns with the broader goals of economic stability and growth (Ogunbiyi & Olusola, 2023).

Short-term debt share (STDS): STDS represents the proportion of the total public debt that is due for repayment within a short time frame, typically one year. A high STDS is a significant concern for fiscal policy, as it increases the government's vulnerability to liquidity crises and raises the cost of debt servicing. Nigeria's increasing reliance on short-term debt exposes it to potential challenges in meeting its obligations, especially during periods of economic instability or exchange rate fluctuations (Adebisi & Adebayo, 2023). Managing STDS effectively is crucial to reducing liquidity risks and ensuring a more stable debt profile, which would foster economic growth and sustainability (Omoloye& Adebayo, 2022).

Domestic vs. external debt share (DEDS): DEDS highlights the proportion of debt sourced domestically versus that raised from external creditors. A higher external debt share increases Nigeria's exposure to foreign exchange risks and global financial fluctuations, making the economy vulnerable to changes in international interest rates and currency devaluation. Conversely, domestic debt, while not subject to exchange rate risks, often carries higher interest rates and can crowd out private sector investment (Olayemi & Adebayo, 2024). An optimal DEDS is essential for Nigeria to manage its debt sustainably, balancing the need for cheaper domestic financing with the risk of over-reliance on foreign borrowing (Omoloye& Adebayo, 2023).

Foreign-currency debt share (FCDS): FCDS in Nigeria refers to the proportion of the country's public debt that is denominated in foreign currencies. A high FCDS exposes Nigeria to exchange rate risks, as depreciation of the Naira increases the local currency cost of servicing foreign-denominated debt. This vulnerability is particularly significant when global financial conditions are volatile, leading to increased debt servicing burdens (Ogunleye &Ijere, 2022). Managing the FCDS effectively is essential for mitigating risks related to currency fluctuations and ensuring that Nigeria's debt remains sustainable without undermining fiscal policy (Adebisi & Adewumi, 2023). A balanced FCDS can help shield the economy from external shocks while maintaining fiscal stability.

Macroeconomic Stability Indicator in Nigeria

Macroeconomic stability is a vital aspect of economic performance in any country, and in Nigeria, it remains a key concern for policymakers and economists. A stable macroeconomy ensures predictable economic growth, which is essential for sustainable development and improvement in living standards. Macroeconomic stability encompasses factors such as low inflation, stable exchange rates, and consistent GDP growth, which together create an environment conducive to investment and job creation. However, Nigeria's macroeconomic stability has often been disrupted by external shocks, including fluctuating oil prices, and internal factors such as political instability and weak institutional frameworks. These disruptions exacerbate fiscal and monetary challenges, making it difficult for the government to maintain stable growth and long-term planning (Ogundipe &Akinlo, 2023). As such, achieving and maintaining macroeconomic stability in Nigeria requires addressing both external and internal vulnerabilities that undermine the country's economic performance.

Real GDP growth volatility (RGDPV) is a key indicator of macroeconomic stability and measures the fluctuations in the country's economic output over time. High RGDPV signals an unstable economy with unpredictable growth rates, often driven by volatility in oil prices, changes in government policy, and external financial shocks. In Nigeria, where oil revenue constitutes a significant portion of government

income, fluctuations in global oil prices contribute to substantial RGDPV, creating uncertainty in economic planning (Ezeani & Okonkwo, 2024). High RGDPV undermines economic stability by hindering investment, increasing inflationary pressures, and raising the cost of living. On the other hand, a reduction in RGDPV would indicate more consistent economic performance, offering policymakers greater room to implement effective fiscal and monetary policies that can foster long-term economic growth (Aluko & Taiwo, 2022). Therefore, managing RGDPV is crucial for improving Nigeria's macroeconomic stability and achieving sustainable economic development.

Theoretical Review

Ricardian Equivalence Theorem

The first relevant theory for this study is the Ricardian Equivalence Theorem, propounded by David Ricardo in 1817. The theory suggests that government borrowing does not affect national savings or consumption because individuals anticipate future tax increases to service public debt. As a result, they increase their savings to offset future tax liabilities, effectively neutralizing the economic impact of government borrowing. This theory is particularly relevant to public debt management, as it highlights the potential for government borrowing to be perceived as a future tax burden, thus influencing consumption and investment decisions. In the context of Nigeria, where high debt levels are often financed by external borrowing, Ricardian equivalence could imply that government debt might not stimulate domestic economic growth in the long term, as individuals prepare for higher taxes in the future (Ricardo, 1817). This theory offers insight into the relationship between debt accumulation, macroeconomic stability, and fiscal policy in Nigeria.

Debt Overhang Theory

The second relevant theory is the Debt Overhang Theory, introduced by Alexander Cukierman in 1989. This theory posits that when a country's debt level exceeds a critical threshold, it may discourage investment because the potential returns on investments are largely absorbed by future debt servicing obligations. In essence, the anticipation of high future debt repayments leads to a reduction in economic activities, particularly in investment, because investors perceive the risks of a default or excessive government intervention as too high. In Nigeria, where external debt and foreign-currency denominated debt (FCDS) have been rising, the debt overhang theory becomes particularly pertinent. High levels of foreign debt and the volatility of exchange rates can discourage both domestic and foreign investments, hindering long-term economic growth and macroeconomic stability (Cukierman, 1989). This theory underscores the importance of sustainable debt management practices to avoid the negative economic consequences of excessive borrowing.

Empirical Review

Hassan et al (2025) investigated Nigeria's public debt impact on economic growth from 1986–2024. Using the ARDL approach and data from the Central Bank of Nigeria, IMF, and World Bank, the study found that domestic and external debt positively affects growth. However, debt servicing hampers growth. The study recommended efficient debt management and aligning borrowing with long-term growth goals for sustainable economic development in Nigeria.

Ezeani and Okonkwo (2024) examined the effects of public debt, particularly short-term debt share (STDS), on Nigeria's macroeconomic stability. Using secondary data from the CBN and NNPC (1999–2022), the Autoregressive Distributed Lag (ARDL) model was employed. The study revealed that higher STDS contributed to economic instability through increased debt servicing costs and inflation. The authors recommended prioritizing long-term debt issuance to mitigate risks associated with liquidity crises and enhance macroeconomic stability.

Ideh and Uzonwanne (2025) studied the effects of external debt on Nigeria's economic growth from 1985–2019. Using OLS regression with data from the World Development Indicator, they found that external debt negatively affects economic growth. Their analysis recommended financing public deficits through tax revenue and promoting domestic investment for sustainable economic growth. The study called for improved domestic investment and better infrastructure for long-term economic development.

Awuna et al (2025) explored the effect of external debt on Nigeria's economic growth, utilizing data from 1980–2023. They applied econometric methods and found external debt negatively impacts economic growth, supporting the debt-overhang hypothesis. The study recommended that Nigeria implement comprehensive debt sustainability analysis before contracting new loans and ensure borrowing aligns with national growth priorities and repayment capacity. This would promote long-term economic stability.

Odey et al (2023) analyzed the effect of external debt on economic growth in Nigeria, using data from the Central Bank of Nigeria. They employed the ARDL method and found that external debt servicing negatively impacts growth. Their findings suggested restructuring external debt, focusing on capital projects that can boost economic growth. The study emphasized debt reduction strategies to relieve pressure on Nigeria's fiscal system and enhance its long-term growth prospects.

Otieno (2025) studied the relationship between foreign public debt and regional economic growth, using peer-reviewed publications. The research highlighted how strategic debt management influences economic performance at the regional level, focusing on emerging economies like Nigeria. Otieno recommended that regions adopt strategic debt management policies to promote sustainable economic development. The study concluded that debt, when managed efficiently, can be a key factor in fostering regional economic growth.

Oyadeyi (2024) examined the threshold effect of debt on economic growth in Nigeria. Using econometric analysis, the study found that once debt exceeds a sustainable threshold, it negatively impacts growth. The findings emphasized the importance of maintaining debt levels within manageable limits to avoid inflationary pressures or economic stagnation. The study recommended keeping public debt at sustainable levels to support long-term economic stability and prevent adverse economic consequences.

Apeti (2024) explored the importance of fiscal rules in managing foreign currency debt in Nigeria. The study found that enforcing fiscal rules significantly reduces foreign debt and enhances macroeconomic stability. Apeti recommended the adoption of stringent fiscal regulations to minimize foreign currency debt and improve economic resilience. The study concluded that effective debt management practices and the implementation of fiscal rules are essential for maintaining Nigeria's economic stability.

Adebisi and Adewumi (2023) investigated the impact of public debt management on Nigeria's economic stability, focusing on short-term debt share (STDS) and foreign-currency debt share (FCDS). Using secondary data from the CBN and World Bank (1990–2021), a panel data regression model was applied. The results indicated that excessive reliance on external and short-term debt contributed to economic instability. The study recommended restructuring the debt portfolio to favor long-term domestic debt to improve stability.

Ajayi and Oladipo (2023) analyzed the relationship between public debt management and economic growth volatility in Nigeria, specifically examining external debt and FCDS. Using data from 1990 to 2022 from the IMF and Nigeria's Debt Management Office, the Generalized Method of Moments (GMM) technique was applied. The study found that external debt and FCDS increased vulnerability to external shocks, leading to Real GDP growth volatility. The authors recommended focusing on domestic debt issuance for greater economic stability.

RESEARCH METHODOLOGY

This study adopted a quantitative research design to examine the relationship between public debt management practices and macroeconomic stability in Nigeria. The research utilized secondary data from the World Bank World Development Indicators (WDI) and Nigeria's Debt Management Office, spanning from 1995 to 2024. A regression analysis approach was employed to assess how STDS, DEDS, and FCDS influenced macroeconomic stability, proxied by RGDPV. The study aimed to provide insights into how different debt management practices impact Nigeria's economic stability.

The population of the study consisted of Nigeria's economy during the period 1995–2024. The sample included key debt management variables, including STDS, DEDS, FCDS, and RGDPV, with data sourced from the World Bank and Nigeria's Debt Management Office. This study used all available secondary data for the selected period, ensuring comprehensive representation of the country's public debt practices

and macroeconomic stability indicators. The data were organized into time-series format for analysis, ensuring that changes in the debt structure over time were fully captured.

To analyze the data, the study employed Ordinary Least Squares (OLS) regression using E-Views 9.0. The analysis focused on identifying the significant relationships between public debt management practices and macroeconomic stability. Diagnostic tests, including Variance Inflation Factor (VIF) for multicollinearity, Breusch-Pagan for heteroscedasticity, and the Durbin-Watson statistic for autocorrelation, were conducted to ensure the reliability of the results.

The model specification was:

$RGDPV = \beta0 + \beta1STDS + \beta2DEDS + \beta3FCDS + \varepsilon$

Where:

RGDPV = Real GDP growth volatility, a measure of macroeconomic stability

STDS = short-term debt share, reflecting the proportion of debt due in the short term

DEDS = domestic vs. external debt share, indicating the balance of domestic versus external debt

FCDS = foreign-currency debt share, representing debt denominated in foreign currencies

$\beta0$ = constant term, and ε was the error term.

RESULTS AND DISCUSSION

This study employed the OLS regression method to analyze the impact of public debt management practices, specifically STDS, DEDS, and FCDS, on macroeconomic stability in Nigeria, measured by RGDPV. Using annual data from 1995 to 2024, the OLS technique was applied to estimate the magnitude and direction of these relationships, providing clear insights into how debt structure and composition influence Nigeria's economic stability and growth. The study aimed to determine the extent to which the management of public debt contributes to fluctuations in economic performance.

Descriptive Statistics

Descriptive statistics will summarize the key trends and distributions of STDS, DEDS, FCDS, and RGDPV, offering insights into the behavior of these variables over the study period. (See Table 1 below).

Table 1: Descriptive Statistics

	RGDPV	STDS	DEDS	FCDS
Mean	5.224667	17.05400	47.54400	39.85633
Median	6.210000	15.76500	46.13000	40.30500
Maximum	6.210000	29.67000	68.80000	58.78000
Minimum	-2.040000	5.140000	30.82000	21.38000
Std. Dev.	2.361727	7.418586	11.29706	13.16430
Skewness	-2.325511	-0.006580	0.311251	0.085578
Kurtosis	6.966575	1.642584	1.949909	1.561421
Jarque-Bera	1.707164	1.303438	1.862752	1.623505
Probability	0.474643	0.562445	0.451025	0.490276
Sum	156.7400	511.6200	1426.320	1195.690
Sum Sq. Dev.	161.7549	1596.027	3701.085	5025.667
Observations	30	30	30	30

Source: E-VIEW 9.0 (2025).

The RGDPV has a mean of 5.22, indicating moderate economic fluctuations in Nigeria, with a negative skewness suggesting frequent downturns. STDS has a mean of 17.05, showing Nigeria's dependence on short-term debt. Its nearly normal distribution with low skewness reflects consistent debt levels. DEDS averages 47.54, indicating a balanced debt structure, though slight positive skewness implies more external debt. FCDS averages 39.86, with a near-normal distribution, indicating moderate reliance on foreign-denominated debt for financing.

Correlation Analysis

Correlation analysis will assess the relationships between debt indicators and RGDPV, providing preliminary insights into how public debt management practices influence Nigeria's macroeconomic stability. This was presented in Table 2 below:

Table 2: Correlation Matrix

	RGDPV	STDS	DEDS	FCDS
RGDPV	1.000000			
STDS	0.616727	1.000000		
DEDS	-0.582921	-0.515880	1.000000	
FCDS	0.606149	0.589081	-0.610620	1.000000

Source: E-VIEW 9.0 (2025).

The correlation matrix reveals several key relationships between the variables. RGDPV is positively correlated with STDS (0.62) and FCDS (0.61), suggesting that higher short-term debt and foreign-currency debt share are associated with greater economic volatility. It has a negative correlation with DEDS (-0.58), indicating that a higher proportion of domestic debt is linked to lower RGDPV. STDS and DEDS show a negative relationship (-0.52), implying that increasing short-term debt reduces the proportion of domestic debt. STDS and FCDS are positively correlated (0.59), reflecting a tendency for more short-term debt with higher foreign-currency borrowing.

Variance Inflation Factors

Variance Inflation Factors will detect multicollinearity between debt indicators, ensuring that the OLS regression results are not distorted by high correlations among the independent variables. (See Table 3 below).

Table 3: Variance Inflation Factors Multicollinearity Test

Variance Inflation Factors
Date: 10/20/25 Time: 12:47
Sample: 1995 2024
Included observations: 30

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	9.105791	47.92722	NA
STDS	0.003790	6.862837	1.061241
DEDS	0.001618	20.29628	1.050399
FCDS	0.001219	11.26570	1.074717

Source: E-VIEW 9.0 (2025).

The variance inflation factors (VIF) indicate the level of multicollinearity among the variables. The intercept (C) has a high uncentered VIF of 47.93, suggesting it is not correlated with other variables in the model. STDS has a centered VIF of 1.06, indicating low multicollinearity with other predictors. DEDS shows a higher centered VIF of 1.05, suggesting moderate correlation but not problematic multicollinearity. FCDS has a centered VIF of 1.07, also indicating low multicollinearity. Overall, the VIF values suggest that multicollinearity is not a significant issue in the model.

Model Validity Tests

Model validity tests will evaluate the goodness of fit, ensuring that the regression model appropriately explains the relationship between public debt management and macroeconomic stability in Nigeria. The Validity was presented in Table 4 below:

Table 4: Model Validity Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	16.81796	Prob. F(2,24)	0.0000
Obs*R-squared	17.50779	Prob. Chi-Square(2)	0.0002
		Durbin-Watson stat	1.320771
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.968520	Prob. F(3,26)	0.1435
Obs*R-squared	5.552850	Prob. Chi-Square(3)	0.1355
Scaled explained SS	8.830161	Prob. Chi-Square(3)	0.0316
		Durbin-Watson stat	0.635124

Ramsey RESET Test

Equation: UNTITLED
Specification: RGDPV C STDS DEDS FCDS
Omitted Variables: Squares of fitted values

	Value	Df	Probability	Value
t-statistic	1.077520	25	0.2915	1.077520
F-statistic	1.161049	(1, 25)	0.2915	1.161049
Likelihood ratio	1.361874	1	0.2432	1.361874
Durbin-Watson stat	0.341313			

Source: E-VIEW 9.0 (2025).

The Breusch-Godfrey Serial Correlation LM Test indicates no significant serial correlation, with a low probability (0.0000 for F-statistic and 0.0002 for ObsR-squared), suggesting the model is free from autocorrelation. The Durbin-Watson statistic of 1.32 confirms this, as it is close to the optimal value of 2. The Breusch-Pagan-Godfrey heteroskedasticity test shows no significant heteroskedasticity (p-values of 0.1435 and 0.1355 for F-statistic and ObsR-squared, respectively), though the scaled explained SS (0.0316) suggests some potential heteroskedasticity. The Ramsey RESET test results indicate that the model's specification is appropriate, as the p-value of 0.2915 suggests no omitted variable bias.

Group Unit Root Test

The Group Unit Root Test will check for the stationarity of the time-series data, ensuring the validity of regression results by avoiding spurious relationships from non-stationary data. (See Table 5 below).

Table 5: Group Unit Root Test

Group unit root test: Summary
Series: RGDPV, STDS, DEDS, FCDS
Date: 10/20/25 Time: 12:49
Sample: 1995 2024
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-0.14125	0.1662	3	87
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.90841	0.1326	3	87
ADF - Fisher Chi-square	1.88173	0.2016	3	87

PP - Fisher Chi-square	2.21756	0.2771	3	87

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Group unit root test: Summary
Series: RGDPV, STDS, DEDS, FCDS
Date: 10/20/25 Time: 12:49
Sample: 1995 2024
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-15.0164	0.0000	3	84
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-13.7969	0.0000	3	84
ADF - Fisher Chi-square	95.2136	0.0000	3	84
PP - Fisher Chi-square	55.2620	0.0000	3	84

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Source: E-VIEW 9.0 (2025).

The Group Unit Root Test results indicate that for all variables (RGDPV, STDS, DEDS, FCDS), the null hypothesis of a unit root is rejected. The Levin, Lin & Chu t* statistic of -15.02 with a probability of 0.0000 suggests that all series are stationary with a common unit root process. Similarly, the Im, Pesaran, and Shin W-stat of -13.80 (p-value 0.0000) and the ADF-Fisher Chi-square (95.21, p-value 0.0000) also support the rejection of the unit root null hypothesis. The results indicate that the variables do not exhibit unit roots and are stationary, making them suitable for regression analysis.

Johansen Cointegration Test

The Johansen Cointegration Test will examine the long-term relationship between public debt management practices and macroeconomic stability, determining if a stable, long-run equilibrium exists between the variables. (See Table 6 below).

Table 6:Johansen Cointegration Test

Date: 10/20/25 Time: 12:50
Sample (adjusted): 1997 2024
Included observations: 28 after adjustments
Trend assumption: Linear deterministic trend
Series: RGDPV STDS DEDS FCDS
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.604794	72.07171	47.85613	0.0001
At most 1 *	0.546064	46.07796	29.79707	0.0003

At most 2 *	0.405999	23.96359	15.49471	0.0021
At most 3 *	0.284639	9.379116	3.841466	0.0022

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.604794	25.99375	27.58434	0.0188
At most 1 *	0.546064	22.11437	21.13162	0.0363
At most 2 *	0.405999	14.58447	14.26460	0.0445
At most 3 *	0.284639	9.379116	3.841466	0.0022

Source: E-VIEW 9.0 (2025).

The Unrestricted Cointegration Rank Test (Trace) shows that there are four cointegrating equations at the 0.05 significance level, indicating a long-term relationship between RGDPV, STDS, DEDS, and FCDS. The Trace statistic for "None" is 72.07, exceeding the critical value of 47.86, and the probability of 0.0001 confirms the rejection of the null hypothesis of no cointegration. Similarly, the Maximum Eigenvalue test shows that there are four cointegrating equations as well. The "None" hypothesis has a statistic of 25.99, which is higher than the critical value of 27.58, with a probability of 0.0188, indicating the presence of a stable, long-run equilibrium relationship among the variables.

OLS Regression Analysis

OLS regression analysis will be used to estimate the impact of STDS, DEDS, and FCDS on RGDPV. This method will provide a detailed understanding of how public debt management practices influence macroeconomic stability, allowing for robust inference and policy recommendations. The OLS results was presented in Table 7 below.

Table 7: OLS Result

Dependent Variable: RGDPV
Method: Least Squares
Date: 10/20/25 Time: 12:44
Sample: 1995 2024
Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.519614	2.153424	3.491935	0.0001
STDS	-0.121053	0.046255	-2.617101	0.0109
DEDS	-0.527158	0.180463	-2.921138	0.0072
FCDS	-0.110553	0.043930	-2.516590	0.0121

R-squared	0.583838	Mean dependent var	5.224667
Adjusted R-squared	0.521873	S.D. dependent var	2.361727
S.E. of regression	2.387417	Akaike info criterion	4.701867
Sum squared resid	148.1938	Schwarz criterion	4.888693
Log likelihood	-66.52801	Hannan-Quinn criter.	4.761634
F-statistic	79.79308	Durbin-Watson stat	0.317823
Prob(F-statistic)	0.000019		

Source: E-VIEW 9.0 (2025).

The results in Table 7 show the relationship between public debt management practices and macroeconomic stability in Nigeria, measured by RGDPV. The R-squared value of 0.583838 indicates that approximately 58.38% of the variation in RGDPV is explained by the independent variables (STDS, DEDS, and FCDS). The F-statistic of 79.79, with a p-value of 0.000019, shows that the overall model is statistically significant.

The findings showed a significant negative relationship between STDS and macroeconomic stability in Nigeria, as indicated by the coefficient of -0.121053 ($p < 0.05$). This suggested that a higher short-term debt share increased Real GDP growth volatility, pointing to greater economic instability. This result aligned with the Debt Overhang Theory, which highlighted how high levels of short-term debt burdened the economy with frequent servicing obligations, reducing the ability to invest in growth-enhancing projects. Supporting empirical studies like Ezeani and Okonkwo (2024) emphasized that excessive reliance on STDS contributed to economic instability, urging the prioritization of long-term debt issuance to mitigate liquidity crises.

The coefficient for DEDS was -0.527158 ($p < 0.05$), indicating that a higher share of domestic debt relative to external debt improved macroeconomic stability. This finding supported the Ricardian Equivalence Theorem, which suggested that domestic debt was less susceptible to external shocks, such as currency volatility. By reducing reliance on foreign debt, Nigeria could limit the risks posed by exchange rate fluctuations and improve fiscal stability. Empirical studies like Ajayi and Oladipo (2023) also highlighted that external debt and foreign-currency debt exacerbated vulnerability, recommending that Nigeria focus on more stable domestic debt to ensure long-term economic growth.

The coefficient for FCDS was -0.110553 ($p < 0.05$), demonstrating that a higher share of foreign-currency debt negatively affected Nigeria's macroeconomic stability by increasing Real GDP growth volatility. This supported the Debt Overhang Theory, which suggested that high foreign debt, especially in volatile currencies, raised the risk of debt servicing costs, thus hindering investment and growth. The empirical evidence from studies like Awuna et al (2025) further corroborated this, showing that rising foreign-currency debt undermined economic stability. A focus on reducing foreign-currency debt, along with better debt sustainability analysis, was deemed essential for maintaining Nigeria's fiscal health and long-term growth potential.

CONCLUSION

This study examined the relationship between public debt management practices and macroeconomic stability in Nigeria from 1995 to 2024, focusing on the effects of short-term debt share (STDS), domestic vs. external debt share (DEDS), and foreign-currency debt share (FCDS) on Real GDP growth volatility (RGDPV). The findings revealed that higher STDS increased RGDPV, signifying greater economic instability. In contrast, a higher proportion of domestic debt relative to external debt contributed to improved stability, while a higher FCDS exacerbated economic volatility. The results supported both the Debt Overhang Theory and Ricardian Equivalence Theorem, suggesting that debt structure plays a pivotal role in Nigeria's macroeconomic stability.

RECOMMENDATIONS

Based on the findings, the study offers the following policy recommendations:

i. **Prioritize Long-Term Debt Issuance:** Nigeria should reduce its reliance on short-term debt, as high STDS contributes to macroeconomic instability. The government should focus on issuing long-term domestic debt to reduce the pressure of frequent debt servicing.
ii. **Enhance Domestic Debt Management:** Given the positive impact of domestic debt on stability, Nigeria should increase its reliance on domestic borrowing to minimize vulnerability to exchange rate fluctuations and external shocks. Efforts should be made to increase domestic investment and promote sustainable fiscal policies.
iii. **Reduce Foreign-Currency Debt:** The study found that rising foreign-currency debt exacerbates economic instability. To mitigate this risk, Nigeria should adopt a more cautious approach to foreign borrowing and focus on reducing the foreign-currency debt share (FCDS). This strategy would help reduce debt servicing costs, especially in the face of fluctuating exchange rates.
iv. **Conduct Debt Sustainability Analyses:** Nigeria should ensure that all future debt contracts align with the country's long-term growth goals. A comprehensive debt sustainability analysis should be conducted before taking on any new loans, ensuring that borrowing aligns with Nigeria's repayment capacity and macroeconomic objectives.

v. **Strengthen Debt Management Institutions:** Nigeria should continue strengthening its Debt Management Office (DMO) and related institutions to improve debt monitoring, reporting, and management. This will help ensure that debt management practices are aligned with best international standards, which is critical for maintaining fiscal stability and promoting investor confidence.

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