

Fiscal Discipline and Public Investments in Nigeria

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Abstract

This study evaluated the impact of fiscal discipline on public investments in Nigeria using yearly time series data spanning from 1981 to 2024. Specifically, the study investigated how fiscal deficit management (FIDM), public debt sustainability (PDBS), government recurrent expenditure (GREC), and revenue mobilization efficiency (REME) influence public investments. The Autoregressive Distributed Lag (ARDL) technique was employed for the analysis. The result of the bounds test revealed the absence of cointegration among the variables, implying that no long-run relationship existed between fiscal discipline indicators and public investments in Nigeria within the study period. Consequently, the analysis focused on the short-run dynamics. The findings showed that fiscal deficit management significantly reduced public investments in the short run, although its lagged value exerted a positive effect, suggesting that the adverse impact may diminish over time. Public debt sustainability also exhibited a significant negative effect initially, while subsequent adjustments indicated a delayed positive contribution to public investments. Government recurrent expenditure had no statistically significant short-run impact on public investments in Nigeria. Revenue mobilization efficiency was excluded from the short-run ARDL estimation because its time-series properties did not support dynamic differencing within the estimation framework. The study concludes that weak fiscal discipline, particularly excessive fiscal deficits and unsustainable debt patterns, constrains public investment growth in Nigeria in the short run. The study implies that fiscal authorities must adopt prudent fiscal management strategies capable of balancing macroeconomic stability with sustainable capital investment expansion. The study therefore recommends that the government should strengthen fiscal deficit controls, improve debt management practices, prioritize productive public expenditures, and enhance institutional mechanisms for fiscal accountability and transparency in order to stimulate sustainable public investment growth in Nigeria.

Keywords: *Fiscal discipline, fiscal deficit management, public debt sustainability, government*

1.0 Introduction

Fiscal discipline has become an important issue in Nigeria's public finance management, especially in relation to the sustainability and effectiveness of public investments. Public investments in infrastructure, education, healthcare and other capital projects play a pivotal role in improving economic growth, reducing poverty and stimulating national productivity. However, the capacity of government to finance and sustain such investments depends mainly on prudent fiscal management, controlled recurrent expenditure, efficient revenue mobilization and sustainable borrowing practices (Yadok, Ismaila & Anene, 2022). In Nigeria, recurring fiscal imbalances and rising public debt have raised concerns as to whether fiscal indiscipline is crowding out/in capital expenditure and hindering long-term development goals.

Historically, Nigeria's fiscal framework has been largely dependent on oil revenue which makes public finances susceptible to external shocks like fluctuations in global crude oil prices (Asomba, Ugwuozor & Onwuzulike, 2024). During periods of oil boom, government expenditure often rises rapidly while downturns trigger fiscal crises, debt pressures and declines in capital project financing. This pro-cyclical fiscal dynamic has weakened the consistency in the planning and execution of public investments. Although reforms like the Fiscal Responsibility Act (2007) were introduced to enhance deficit control, debt sustainability and transparency, implementation bottlenecks and weak institutional enforcement have undermined their effectiveness in ensuring sustained fiscal discipline in Nigeria (Okegbe, 2019).

In the recent years, increasing public debt and debt service obligations have heightened debates regarding fiscal sustainability in Nigeria. A considerable proportion of public revenue is now allocated to debt servicing, leading to a significant reduction in infrastructure and development projects (Dikeogu-Okoroigwe, Amanze & Bredino, 2024; Evans, 2020). While borrowing can aid growth when directed toward productive public and viable investments, concerns have been that excessive recurrent spending especially wage bills, subsidies and administrative costs have constrained capital investments (Ubesie, Okoh & Ejike, 2022; Uwaleke, 2018). The removal of fuel subsidies in 2023, exchange rate floatation and tax reforms have further signaled the delicate balance between fiscal consolidation and maintenance of sufficient funding for public investments. Contemporary macroeconomic bottlenecks like exchange rate volatility, inflationary pressures, declining real incomes and revenue underperformance have also influenced government's ability to maintain stable levels of investment. The persistently low tax-to-GDP ratio, when compared with peer economies, suggests inadequate revenue mobilization, which compels governments to rely more heavily on deficit financing to bridge fiscal gaps (Asomba, Ugwuozor, Onwuzulike & Nebo, 2024). Likewise, infrastructure shortfalls remain large which requires substantial and sustained capital (Oduneka & Oduneka, 2025). This tension in fiscal consolidation efforts and developmental spending needs underscore the importance of examining how fiscal discipline impacts public investments in Nigeria.

Furthermore, issues bordering on credibility, transparency, and accountability in the Nigerian budgetary system remain relevant to the debate on fiscal discipline (BudgIT, 2022). Gaps between approved budgets and actual spending, unnecessary delays in the implementation of capital projects and concerns regarding value for money have triggered questions about public investment management systems (World Bank, 2022). As reported by the International Monetary Fund (IMF, 2023), strengthening fiscal rules and regulations, enhancing expenditure prioritization, improving monitoring and evaluation frameworks, and promotion of digital

financial management systems are frequently viewed as necessary reforms to align fiscal discipline with developmental objectives.

Following these dynamics, insights regarding the impact of fiscal discipline on public investments is timely and policy-relevant for Nigeria. It is critical to determine whether adherence to fiscal rules, proper debt management, controlled recurrent spending and enhanced revenue mobilization result in increased and greater efficiency in capital spending. This study contributes to policy discussions on attaining macroeconomic stability while addressing Nigeria's pressing development challenges in a sustainable and inclusive manner.

Empirical evidence on the connection between fiscal discipline and public investment have produced mixed results and this creates a gap in the literature that motivates this study. Some studies like Haruna and Aigbedion (2024); Oji and Odi (2024); Onyele and Nwadike (2021) emphasized the positive role of fiscal rules, debt management and controlled expenditure in encouraging capital investment while others such as Eneji, Bitrus, Haruna, Yilkes and Gajere (2022) and Zidiegheha (2025) suggested that fiscal consolidation may at times restrict investment if not accompanied by efficient revenue mobilization or expenditure prioritization. Discrepancies also exist in the measurement of fiscal discipline and investment efficiency, as well as in the periods and contexts analyzed. These inconsistencies point to the need for a more comprehensive, context-specific analysis to understand the impact of fiscal discipline on public investment, making this study timely and relevant for policy formulation. Therefore, the main objective of this study is to analyse the impact of fiscal discipline on public investments in Nigeria. The specific objectives are to:

- a) assess the impact of public debt sustainability on government investment in Nigeria.
- b) evaluate the impact of fiscal deficit management on public investment in Nigeria.
- c) investigate the impact of government recurrent expenditure control on public investment in Nigeria.
- d) determine the impact of revenue mobilization efficiency on public sector investment in Nigeria.

2.0 Literature Review

Concept of fiscal discipline

Fiscal discipline refers to the government's commitment to maintaining sound public finances through prudent management of revenue, expenditure, and borrowing. It involves ensuring that government spending aligns with available resources, deficits are controlled, debt levels remain sustainable, and fiscal rules are adhered to (Ojong & Hycent, 2013). By exercising fiscal discipline, governments aim to achieve macroeconomic stability, reduce the risk of excessive debt accumulation, and create a predictable environment for public investment and private sector activity (Okoro, 2013). A key aspect of fiscal discipline is the control of recurrent expenditure and budget deficits (Mikesell, 1999; Schick, 2001). Effective fiscal management ensures that a disproportionate share of revenue is not consumed by operational costs or debt servicing, thereby freeing up resources for productive capital projects (Boex, Martinez-Vazquez & McNab, 2000). In addition, revenue mobilization efficiency, including tax collection and non-oil revenue generation, is critical to supporting sustained fiscal discipline, reducing reliance on borrowing, and promoting financial sustainability (Bello & Obaseki, 2009; Hou, 2002).

Fiscal discipline also encompasses transparency, accountability, and adherence to statutory fiscal rules, such as debt ceilings and expenditure limits (Branch & Adderley, 2009). Governments that publish accurate budget information, maintain clear reporting standards, and implement

monitoring and oversight mechanisms are more likely to sustain fiscal discipline (Asatryan, Feld & Geys, 2015; Rubin, 2007). In the Nigerian context, strengthening fiscal discipline is particularly important due to historical budget deficits, high debt service obligations, and the need to optimize public investment for economic growth and development (Dafflon, 2012; Effiong & Okijie, 2021; Okwo, 2010).

Concept of public investment

Public investment plays a pivotal role in promoting economic growth and development due to its significant multiplier effects on the broader economy. These investments involve government expenditures aimed at acquiring, improving, or enhancing the capacity of long-term assets, such as infrastructure, machinery, and equipment (Muhammad, 2024). By expanding the productive capacity of the economy, public investment contributes to stabilizing income levels, creating employment opportunities, and improving the efficiency of resource utilization. From an accounting perspective, the cost of such assets (excluding land) is recorded under Property, Plant, and Equipment and gradually expensed over the asset's useful life through depreciation, reflecting the systematic allocation of investment costs over time.

Public investment encompasses financial resources allocated to a range of developmental projects, including educational institutions, healthcare facilities, transportation networks, and industrial equipment. These capital expenditures are long-term in nature, designed to generate returns over extended periods by enhancing production capabilities, operational efficiency, and service delivery (IMF, 2019). Beyond immediate economic benefits, public investment fosters labor participation, supports technological adoption, and strengthens institutional and infrastructural capacities, thereby improving the economy's ability to produce goods and services in subsequent periods (Usman, 2019). Capital project expenditures, a key component of public investment, specifically refer to financial outlays directed toward the acquisition of fixed assets, land, inventory, or intangible assets. Government capital expenditures are intended for assets with longevity that are repeatedly used in the delivery of public goods and services, such as schools, hospitals, roads, and power facilities. However, it is important to recognize that a portion of donor-funded "capital" expenditures may be misclassified, often including non-capital items, which can obscure the actual contribution of public investment to long-term development objectives. Accurate classification and effective management of capital expenditures are therefore crucial for ensuring that public investment fulfills its intended economic and social roles.

Fiscal discipline and public investment interactions

The interaction between fiscal discipline and public investment is fundamental to sustainable economic development, as disciplined fiscal management creates the environment and resources necessary for productive capital spending. Fiscal deficit management, a key component of fiscal discipline, directly influences the government's ability to fund public investment (Uwaleke, 2018). When budget deficits are controlled and borrowing is strategically managed, more resources are available for infrastructure, healthcare, education, and other development projects. Conversely, uncontrolled deficits increase debt servicing obligations, limit fiscal space, and often crowd out capital expenditures, thereby reducing the scale and effectiveness of public investments. Public debt sustainability further moderates this relationship by determining whether borrowing can support long-term investment without jeopardizing fiscal stability. Sustainable debt levels ensure that interest payments do not consume disproportionate portions

of government revenue, preserving resources for capital projects (Tofan, Onofrei & Vatamanu, 2020). Alongside debt management, revenue mobilization efficiency plays a critical role in funding public investment. Efficient tax collection, improved non-oil revenue, and enhanced compliance reduce reliance on borrowing, enabling governments to finance long-term projects more predictably (Tom & Asian, 2025). In Nigeria, where revenue volatility is often high due to oil dependency, enhancing revenue efficiency is crucial for maintaining both fiscal discipline and consistent public investment. Other dimensions of fiscal discipline such as fiscal transparency, accountability and recurrent expenditure control also influence the quality and effectiveness of public investments. Transparency and accountability ensure that budget allocations for capital projects are properly monitored, minimizing misallocation and waste, while recurrent expenditure control ensures operational costs do not absorb funds meant for development (Otieno, 2024). Together, these mechanisms reinforce a virtuous cycle: disciplined fiscal management improves the availability and efficient use of resources, which enhances public investment outcomes, while well-planned investments contribute to economic growth, expanding the government's revenue base and strengthening overall fiscal discipline.

Theoretical Framework

The standard theory

The conventional perspective on fiscal discipline is intrinsically linked to the scholarship of Richard Musgrave and his extensive analysis within the domain of "theory of public finance" (Sturn, 2007). His scholarly contributions underscored the imperative for governmental bodies to exercise prudent financial management, which encompasses adhering to budgetary constraints and eschewing the accumulation of excessive debt.

The standard theoretical model posits that the substitution of debt or budget deficits for immediate taxation reductions (tax cuts) will precipitate an augmentation in consumer aggregate demand. In more precise terms, the increase in desired personal savings is likely to be less than the corresponding reduction in taxation, thereby resulting in a decline in desired national savings. Within the confines of a closed economy, it becomes essential for the anticipated real interest rate to escalate in order to restore equilibrium between investment demands and desired national savings. The phenomenon of investment is being impeded by the elevated real interest rates, which ultimately results in a diminished accumulation of productive capital over the long term (Berganza, 2012). For example, fiscal indiscipline exhibited in the present can adversely affect future generations by constraining the capital availability for subsequent periods.

In an open economy, the budget deficit of a small country is likely to exert negligible effects on the real interest rates within global capital markets. The anticipated real interest rates for the domestic economy may rise, provided that the country is sufficiently large to influence global markets or if the augmented national debt incites international lenders to demand higher expected returns on the commitments of the domestic nation (Cottarelli, 2012). Thus, there exists a diminished likelihood that a nation's budget deficit will crowd out domestic investment in the short run or deplete its capital stock over the long run. Nevertheless, the deficits observed in the current account will, in the long term, manifest as a contraction in national wealth, alongside an increase in claims held by international residents.

The Ricardian theory

The government can borrow money or impose taxes on current taxpayers to pay for its expenses. If not, they should at least expand taxes beyond what they should have in the future to pay back

the borrowing. Therefore, the choice is between "tax later" and "tax now." While taxpayers will have extra money today, they will understand that they will have to pay a higher tax in the near future and will save the extra money to pay the future tax, according to Ricardo (1817), assuming that the administration will subsidise some additional expenditure from shortages, i.e., tax later. Overall demand would not alter since the more money saved by consumers would precisely balance the additional money spent by the government.

A reduction in today's taxes must be matched by an increase in future taxes, leaving real interest rates and thus private investment, the current account balance, the exchange rate, and domestic production unchanged. According to Ricardian equivalency, any attempt by the government to stimulate demand through fiscal policy will be ineffective because budget deficits are caused by an expansion in government expenditure, with the total present value of receipts fixed by the total present value of spending (von Hagen, Hughes & Strauch, 2001). As a result, budget deficits do not crowd in or out macroeconomic variables, meaning that there is no positive or negative relationship.

Empirical Framework

With the premise positing that fiscal indiscipline precipitates substantial public debt, Zidiegba (2025) conducted an inquiry into the ramifications of Nigeria's debt burden on investment activities spanning from 1981 to 2022, employing an Autoregressive Distributed Lag (ARDL) methodology to scrutinise both the short-term and long-term interrelations among external debt, domestic debt, debt servicing, and investment. The results elucidated that domestic debt exerts a significant positive influence on private investment and foreign direct investment (FDI), thereby indicating that domestic borrowing functioned as a feasible financing conduit for the augmentation of investment. In contrast, external debt adversely impacts private investment, thereby affirming the crowding-out hypothesis, while the debt servicing component did not demonstrate a statistically significant effect on investment determinations. The inefficiencies associated with public investment further highlighted the imperative for prudent fiscal governance. In a parallel investigation, Amu, Kanu and Akuwudike(2025) examined the interconnections between public debt and economic development within Nigeria. Utilising a regression model to facilitate the analysis, the study's outcomes indicated the presence of a significant threshold relationship ranging between 50 and 60 per cent for external debt, alongside a threshold of 15–17 per cent established for domestic debt and the accumulation of debt in Nigeria. Furthermore, the investigation revealed that both external and domestic debts exerted significant and predominantly negative influences on economic growth and development.

Moreover, Nwandu and Ubochi-Nwankwo (2025) explored whether budget deficit spending assumed an extraordinary and expanding role in achieving full employment, sustainable economic growth, price stability, and poverty alleviation in Nigeria. Additionally, it sought to determine whether a causal relationship existed between budget deficits and economic growth in Nigeria, employing the ARDL model with annual time series data covering a span of 37 years from 1981 to 2022. The findings of the research acknowledged that the budget deficit had a positive and significant impact on economic growth in Nigeria. Consequently, the government's budget deficit did not exhibit a crowding-out effect on investment. The study also revealed that the budget deficit had a negative and statistically insignificant impact on private investment in Nigeria. Furthermore, additional analyses indicated that the budget deficit had a positive and significant impact on public investment in Nigeria. The research further emphasised that there existed a unidirectional causality flowing from budget deficit to economic growth, as well as to

both private and public investment.

Again, Oduneka and Oduneka (2025) conducted a descriptive appraisal of the effects of fiscal deficit and its implications for Nigeria's economic development from 1990 to 2025. It was noted that Nigeria's fiscal operations over a period of 37 years had culminated in deficits for 35 years, with surpluses occurring in merely two years. Notably, the escalating fiscal deficit had been disproportionately allocated towards recurrent expenditure, detrimentally affecting capital expenditure. This recurrent nature of deficit spending was deemed insufficient to foster long-term economic development, as advocated by economic theorists. Specifically, the study evaluated the fiscal deficit in relation to several identified developmental indicators, including per capita income, GDP, unemployment rates, inflation, and the balance of payments (BOP). The findings indicated that Nigeria's fiscal deficit positively contributed to the growth of per capita income, economic growth, and stabilisation of the balance of payments, whereas it failed to mitigate unemployment and inflation rate.

Also, Akpanowo and Mbobo (2025) evaluated the impact of the Fiscal Responsibility Act on budgeting processes and fiscal discipline within the Nigerian public sector. The dependent variables analysed in the study included budgeting, corruption, and fiscal discipline, with the Fiscal Responsibility Act serving as the independent variable. The research design employed for this investigation was a survey, utilising primary data collected through questionnaires. The study's population comprised all personnel within the Ministry of Finance, totalling approximately 500 individuals, from which a sample size of 55 was derived using a purposive sampling technique. The selection of these 55 respondents was predicated upon their expertise in accounting and financial matters. The hypotheses posited in the study were subjected to testing via ordinary least squares (OLS) regression analysis. The outcomes of the study indicated that the Fiscal Responsibility Act significantly influenced budget implementation in Nigeria; it also had a substantial effect on fiscal discipline and on the control of corruption within the country. Thus, it was concluded that the Fiscal Responsibility Act had a significant impact on budgeting, fiscal discipline, and corruption in Nigeria.

In a study, Adeyemi-Tijani (2025) investigated the dynamic interrelationship between fiscal policy, public debt, and macroeconomic stability in Nigeria, employing the ARDL model for analysis. Utilising annual time-series data spanning from 1981 to 2022, the study scrutinised both the long-run and short-run interactions among real GDP, total revenue, total capital expenditure, total recurrent expenditure, total public debt, and inflation. The results illuminated that while government revenue and capital expenditure manifested a positive long-run influence on economic growth, recurrent expenditure displayed mixed effects, thereby indicating inefficiencies in fiscal allocations. Furthermore, public debt was identified as a significant determinant of macroeconomic instability, particularly due to its inflationary repercussions. The short-run estimations underscored a state of fiscal disequilibrium, wherein elevated debt servicing costs constrained productive public investment. The ECM corroborated a stable adjustment trajectory towards long-run equilibrium.

Also, Ejigbo, Agbaji, Adejoh, Tukura and Asoya (2025) provided an empirical investigation into the relationship between fiscal discipline and the allocation of public expenditure in Kogi State, Nigeria, during the period 2007-2017. Utilizing secondary data sourced from the Kogi State Annual Reports and the Office of the Auditor-General, an OLS regression model was employed for analysis. The results demonstrated a statistically significant negative impact of fiscal deficits on capital expenditure allocations, indicating that deficit financing crowded out public investment. Conversely, both IGR and federal allocations exhibited positive and significant

effects, though the latter underscores a dependency on external funds.

Similarly, Dikeogu-Okoroigwe, Amanze and Bredino (2024) conducted an investigation into the interplay between fiscal discipline and sustainable economic growth within the context of Nigeria. The findings of this research indicated a notable deficiency in sustainability, as evidenced by the current fiscal orientation of the nation. Consequently, the study advocated for the government to uphold a robust debt-to-GDP ratio, which serves as a critical metric for evaluating the debt repayment capacity of a nation engaged in borrowing. Furthermore, it is imperative for the government to mitigate its budget deficits by reducing certain items within its recurrent expenditure. Essential reforms must be implemented by the government to foster enhanced fiscal discipline.

Gap in Empirical Literature

Existing studies such as Adeyemi-Tijani (2025); Nwandu et al. (2025); Zidiegba (2025) have often focused on individual components of fiscal discipline, such as deficit management, debt sustainability, or revenue mobilization efficiency, without holistically assessing how these factors collectively influence public investment. For example, while some studies like Amu *et al.* (2025); Dikeogu-Okoroigwe *et al.* (2024) and Onyekachi-Onyele *et al.* (2024), highlight the negative effects of high public debt on capital expenditure, they failed to integrate other critical variables such as fiscal transparency, accountability, or recurrent expenditure control. This fragmented approach limits the ability to understand the comprehensive impact of fiscal discipline on public investment outcomes, especially in economies with structural fiscal vulnerabilities like Nigeria. These inconsistencies suggest the need for a comprehensive, context-specific study that integrates multiple dimensions of fiscal discipline and explicitly links them to the quality and effectiveness of public investment in Nigeria. Addressing these gaps provided more robust empirical evidence to guide policy formulation and enhance developmental outcomes.

3.0 Research Methodology

A research design offers guidance on how to apply a selected approach in research. Although the literature contains a wide variety of research design types, the *ex-post-facto* approach was used in this study.

The study relied on secondary data spanning from 1981 to 2024, all of which were obtained from various years of the CBN Statistical Bulletin. These data consist of officially published macroeconomic indicators that provide reliable, consistent, and credible historical records needed to assess the impact of fiscal discipline on public investments in Nigeria over time. Using secondary data is appropriate for this type of analysis because the variables under investigation are recorded annually by the CBN and other government institutions, making them suitable for time series econometric analysis. Data were analyzed using ARDL model is a flexible econometric approach used to analyse relationships between variables that may be integrated of different orders specifically, a mix of I(0) and I(1) without requiring them to be uniformly stationary (Pesaran, Shin & Smith, 2001).

In this investigation of the impact of fiscal discipline on public investments, the empirical specification of Adekunle *et al.* (2021) showed that there is a link between fiscal components and budget implementation as depicted in equation (3.1).

$$BUDI = f(FIDG, PDTG) \quad (3.1)$$

Where,

BUDI = budget implementation

FIDG = fiscal deficit gap

PDTG = public debt gap

The explicit econometric form of equation (3.1) as applied in the study of Adekunle et al. (2021) is as stated in equation 3.2.

$$BUDI_t = \beta_0 + \beta_1 FIDG_t + \beta_2 PDTG_t + \mu_t \quad (3.2)$$

The current study took a leaf from equation 3.2. The model specified by Adekunle et al. (2021) was modified to suit the objectives of this study. The variables introduced into the model were fiscal deficit management, public debt sustainability, revenue mobilization efficiency, fiscal transparency and accountability. Having taken the aforementioned modifications into consideration, the current study's model is as displayed in equation 3.3.

$$PUBI_t = \beta_0 + \beta_1 PDBS_t + \beta_2 FIDM_t + \beta_3 GREC_t + \beta_4 REME_t + \mu_t \quad (3.3)$$

Where,

PUBI = public investment

FIDM = fiscal deficit management

PDBS = public debt sustainability

GREC = government recurrent expenditure control

REME = revenue mobilization efficiency

β_0 = constant

β_1 - β_4 = coefficients of the independent variables

μ = error term

4.0: Results and Discussions

The ARDL model is estimated by regressing the dependent variable on its own lagged values and the lagged and current values of the explanatory variables to capture both short-run dynamics and potential long-run relationships within a single unified framework.

VAR lag selection criteria

Table 1 presents the results of the Vector Autoregression (VAR) lag selection criteria used to determine the optimal lag length for the model based on key information criteria such as the Akaike Information Criterion (AIC), Schwarz Bayesian Criterion (SBC), and Hannan-Quinn Criterion (HQ), which guide the choice of a parsimonious and well-specified lag structure for the analysis.

Table 1. VAR lag selection criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-68.10490	NA	3.405234	4.061384	4.281317	4.138146
1	-56.93924	18.60944	1.938445	3.496624	3.760544	3.588740
2	-54.21381	4.390963*	1.764568*	3.400767*	3.708674*	3.508235*
3	-53.91512	0.464642	1.839313	3.439729	3.791622	3.562549
4	-53.83828	0.115248	1.942478	3.491016	3.886896	3.629188
5	-53.23234	0.875256	1.993755	3.512908	3.952774	3.666433
6	-51.37688	2.577030	1.911074	3.465382	3.949235	3.634260
7	-51.07701	0.399815	1.999470	3.504279	4.032118	3.688509
8	-51.05163	0.032441	2.126868	3.558424	4.130250	3.758006

Source: Author's computations using EViews

The VAR lag selection results presented in Table 1 indicate that lag length 2 is the most appropriate specification for the model, as it is consistently selected by the majority of the information criteria, including the AIC, SC, HQ, and the Final Prediction Error (FPE), all of which attain their minimum values at lag 2. Although the likelihood ratio (LR) statistic shows some variations across lag orders, the dominance of lag 2 across the key selection benchmarks suggests that it provides the best balance between model fit and parsimony. This implies that the dynamics of the variables are best captured within a two-period adjustment framework, where past values up to two lags significantly influence current outcomes. In practical terms, adopting lag 2 helps to avoid issues of overfitting or omitted dynamics, thereby improving the reliability and stability of the estimated model. This selection supports a well-specified VAR structure that is suitable for subsequent ARDL or related time-series estimation.

Bounds test

Table 2 presents the results of the ARDL bounds test for cointegration, which was used to determine whether a long-run equilibrium relationship exists among the variables.

Table 2. Bounds test for cointegration

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	1.304817	10%	2.2	3.09
k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Source: Author's computations using EViews

The bounds test results indicate that the calculated F-statistic (1.304817) falls below the lower bound critical values at all conventional significance levels (10%, 5%, 2.5%, and 1%). This outcome suggests that the null hypothesis of no long-run relationship among the variables cannot be rejected. In practical terms, the variables in the model do not move together in a stable equilibrium over time, meaning there is no evidence of cointegration. The implication of this finding is that any interaction among the variables is likely to be transitory rather than sustained in the long run, and therefore, the system does not adjust towards a common long-run path.

Given this result, the next step in the analysis is to focus exclusively on the short-run dynamics within the ARDL framework. Long-run coefficients and the error correction mechanism should not be interpreted, as they are not supported by the data evidence. Instead, attention should be directed toward the short-run ARDL estimates to understand how changes in the explanatory variables influence the dependent variable in the immediate term.

Short-run estimation of the ARDL model

Table 3 presents the short-run ARDL estimation results, which captured the immediate effects of changes in the explanatory variables on the dependent variable within the current and lagged periods.

Table 3. Short-run estimation of the ARDL model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PDBS)	-0.090666	0.013685	-6.625341	0.0000
D(PDBS(-1))	0.055860	0.014297	3.907166	0.0005
D(FIDM)	-0.624398	0.067583	-9.239047	0.0000
D(FIDM(-1))	0.408712	0.064835	6.303862	0.0000
D(GREC)	0.005471	0.033547	0.163089	0.8715
R-squared	0.843025	Mean dependent var		-0.000280
Adjusted R-squared	0.821223	S.D. dependent var		1.333925
S.E. of regression	0.564011	Akaike info criterion		1.824076
Sum squared resid	11.45189	Schwarz criterion		2.072315
Log likelihood	-32.30560	Hannan-Quinn criter.		1.915066
Durbin-Watson stat	2.144787			

Source: Author's computations using EViews

Hypotheses testing

A clear decision rule for hypothesis testing in the ARDL results is based on the comparison between the p-value and the chosen level of significance (commonly 5% or 0.05).

Decision rule:

- If **p-value < 0.05**, reject the null hypothesis (H_0) and conclude that the variable has a statistically significant effect.
- If **p-value > 0.05**, fail to reject the null hypothesis and conclude that the variable is not statistically significant.

HO₁: Public debt sustainability does not have significant impact on government investment.

The short-run ARDL results indicate that PDBS had a significant impact on the dependent variable (public investments) in the current period, with a negative coefficient of -0.090666 ($p < 0.01$). This implies that an increase in PDBS leads to an immediate reduction in the dependent variable, suggesting a short-run inverse relationship. However, its lagged value, $D(PDBS(-1)) = 0.055860$ ($p < 0.01$), is positive and significant, showing that past changes in PDBS eventually exert a positive influence. Based on this, the null hypothesis of no short-run effect of PDBS is rejected, confirming that PDBS significantly affects the dependent variable, though the effect is dynamic and changes direction over time.

HO₂: Fiscal deficit management has no significant impact on public investment.

For FIDM, the results show a strong and statistically significant negative short-run effect of -0.624398 ($p < 0.01$), meaning that increases in FIDM immediately reduce the dependent variable. Its lagged term, $D(FIDM(-1)) = 0.408712$ ($p < 0.01$), is also significant but positive, indicating a reversal of the initial effect in the subsequent period. Consequently, the null hypothesis of no short-run relationship between FIDM and the dependent variable is rejected. This confirms that FIDM plays a significant role in influencing short-run movements, although its impact is not stable in direction.

HO₃: Government recurrent expenditure control has no significant effect on public investment.

In the case of GREC, the coefficient (0.005471) is statistically insignificant ($p = 0.8715$), indicating that changes in GREC do not have any meaningful short-run effect on the dependent

variable. Since the probability value is far above the 5% significance level, the null hypothesis of no short-run relationship between GREC and the dependent variable is not rejected. This suggests that GREC does not contribute significantly to short-run fluctuations in the model.

HO4: Revenue mobilization efficiency has no significant impact on public sector investment.

From the short-run estimation, the variable REME was automatically removed because it did not possess the same time-series properties required for dynamic adjustment within the ARDL framework. Since lag-zero variable like REME is already stationary in their level form, it may not contribute meaningfully to the lagged short-run differencing process. Consequently, the estimation procedure excluded the variable from the short-run equation to maintain model stability and parsimony.

5.0 Conclusions and Recommendations

Conclusions

The study established that fiscal discipline exerted significant short-run impacts on public investments in Nigeria, although the direction and magnitude of these effects varied across indicators and over time. The findings revealed that fiscal deficit management (FIDM) negatively affects public investments in the immediate period, but its positive lagged effect suggests that the economy gradually adjusts after the initial contractionary impact. Furthermore, public debt sustainability (PDBS) demonstrated a similar dynamic pattern. The current-period negative effect implies that rising debt pressures initially constrain public investments, likely due to increased debt servicing obligations and fiscal tightening. However, the significant positive lagged effect shows that when debt is managed sustainably over time, it can eventually create room for improved investment performance. This confirmed that debt sustainability was not merely a fiscal concern but also an important determinant of the government's investment capacity in the short run. In contrast, government recurrent expenditure (GREC) did not produce any statistically meaningful short-run influence on public investments. This suggests that recurrent spending, within the period covered by the study, was unable to stimulate investment-related outcomes in any significant way. Finally, the exclusion of revenue mobilization efficiency (REME) from the short-run equation reflected the econometric reality that not all variables contribute meaningfully to dynamic adjustment processes within the ARDL framework. Hence, the study concludes that fiscal discipline matters considerably for public investment performance in Nigeria, particularly through fiscal deficit management and debt sustainability mechanisms. However, the effectiveness of fiscal discipline depended not only on the adoption of prudent fiscal measures, but also on the timing, structure, and sustainability of such policies in supporting long-term developmental investments.

Recommendations

Based on the findings and conclusions, the study proposes the following recommendations to enhance overall achievement of the stated objectives.

- a) Government should implement fiscal deficit controls gradually to prevent sudden reductions in public investment activities in the short run.
- b) Policymakers need to strengthen debt management strategies so that borrowing can support productive investments without creating immediate fiscal pressure.
- c) Authorities should redirect recurrent expenditure towards more productive and investment-supportive sectors to improve its contribution to public investments.

- d) Over the long term, institutional reforms that improve data quality, fiscal transparency, and macroeconomic stability should be sustained to ensure that variables excluded from dynamic models can become more relevant for effective policy evaluation.

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