External Debt and Economic Growth in Nigeria: Does the Role of Governance Matter?

Muhammad Ibrahim Abdullahi[1]*, Lawal Kabiru[2], Lawal Shiitu[3]

[1,2]Department of Economics, Bayero University, Kano-Nigeria

[3]Federal College of Freshwater Fisheries Technology New Bussa, Niger State

***Corresponding Author**

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ABSTRACT

This study empirically investigates the effects of external debt on economic growth, and assesses whether effective governance has any influence in this relationship. The scope of the study covers the period from 1996 to 2024. Data are analysed using Autoregressive Distributed Lag (ARDL) Bounds test to cointegration. ADF unit root test shows that all the variables are not stationary at level but at first difference; that is I(1). Findings revealed that, an increase in external debt negatively affects economic growth in the short to long-run in Nigeria. However, foreign exchange reserve (FR) does not seem to have any influence on economic growth both in the short-run and long-run. Meanwhile, foreign direct investment (FDI) impacts negatively on Nigeria's economic growth in the long-run, pointing to the indispensability of domestic investment. Incidentally, deterioration in governance and political stability impact negatively on growth in Nigeria, both in the short-run and long-run. From the findings, the study recommends that government should apply prudential debt management policy to channel it into productive investments. It should also improve on the quality of governance/institutions by ensuring inclusivity, accountability, control of corruption, and enforcing the rule of law. Lastly, Nigerian government should focus on domestic sources of funding public investments rather than external debt.

Keywords: Economic Growth, External Debt, Governance, FDI, Foreign Reserves JEL Code: E23, H63, M48, F21, F34

INTRODUCTION

External debt has since been established as a crucial source of financing both current account and fiscal deficits in developing economies. In fact, external debt is the most prominent source of financing deficits (Dawood, *et al*., 2020). Shockingly, the developing nations have failed to bridge the gap between savings and investment, revenue and expenditure, due to lack of capital or mismanagement and embezzlement of domestic resources. Most of these developing countries have low levels of domestic savings which have made external borrowing a necessity (Manasseh, *et al*., 2022). External debt – the portion of a country's debt that is borrowed from foreign lenders, including commercial banks, governments, or international financial institutions, such as the World Bank and International Monetary Fund – plays a crucial role in financing public sector investments of these nations. While external debt can provide the necessary capital for investment in infrastructure, education, and other key essential sectors in the economy, it also poses significant risks if not managed prudently (Ismael, *et al*., 2024).

Nigeria, like most highly indebted low and middle-income countries, has low economic growth and development, low per capita income and low domestic savings to meet developmental and other national goals. Nigerian exports were mainly primary commodities with low export earnings to finance imports which are mostly capital-intensive manufactured goods that are comparably more expensive (Nwannebuike, 2016). Compounding the problem is Nigeria's drift to mono-cultural economy with the discovery of oil. The oil sector

generates around 90% of foreign exchange earnings. The inability to diversify her revenue sources coupled with corruption, mismanagement and embezzlement of public resources compels Nigeria to have inadequate fund for developmental projects such as roads, electricity, clean water, among others (El-Yakub *et al,* 2024).

The first major borrowing made by Nigeria as a result of oil glut was $1 billion in late 1970s. Without any doubt, the critical and undeniable factor affecting economic growth globally is the excessive external debt taken especially for unproductive projects not meant for sustainable capacity development. But if the excessive external borrowing is being adequately utilized for productive projects which can yield much return through economic expansion, there will not be a cause of regret for obtaining such a huge amount of loan by the time refund is being made. The report from Debt Management Office (DMO, 2025) concerning Nigerian debts indicated that her debt stock at 2017 was N21.68 trillion, which rose to $76 billion (N22.50 trillion) as at end of 2021. From the report collected information, the effect of DMO could be felt on Nigeria's loan stock through monitoring of monetary policy. The report from DMO shows that Nigeria is heavily dependent on external loans for one project or another, and this has resulted in the continuous accumulation of the debt year-in year-out, leading to the country huge external debt (Olasehinde & Afolabi, 2023).

However, in December 2022 Nigeria's external debt stood at $41.69 billion (N18.70 trillion). By first quarter of 2024, external debt had risen to $42.12 billion (N56.02 trillion). But in the first quarter of 2025, Nigeria's external debt reached $45.97 billion (N70.63 trillion), a 26.07% year-on-year increase. Nigeria's external debt has significantly increased from 2022 to 2025, with a notable rise in the first quarter of 2025 (DMO, 2025). But one thing could be discerned that after the COVID-19, there is an increasing trend in external debt ratio to GDP in Nigeria.

Several studies examined the relationship and the impact of external debt on economic growth to make rational policies for sustainable development and economic growth for developing countries. The relationship between external debt and economic growth has been a topic of considerable debate and research. The debate has been empirically investigated with conflicting findings. However, such studies used different estimation techniques and observed different results. Some of the studies conclude that external debt increases economic growth (as observed by: Ismael, 2024; Dawood, et al., 2020; Mohamed, 2018; Ndubuisi, 2017; Musibau, et al., 2018; Zhang, et al., 2020; Zuhroh & Pristiva, 2022; Simidi, et al., 2021; Shittu, et al., 2020). Others observed that external debt affect economic growth negatively (such as the works of: Abdelaziz, et al., 2019; Ashakah, et al., 2025; Manasseh, et al., 2022; Arjun & Mishra, 2024; Asafo, et al., 2019; AL-Tamimi & Jaradat, 2019). Those who argue that external debt has positive effect on the economy do that from the stand point that external debt will increase capital inflow and when used for productive ventures, accelerates the pace of economic growth. The capital inflow may be associated with managerial know-how, technology, technical expertise as well as access to international market. The above is in agreement with the views of the Keynesian Theory of capital accumulation as a catalyst for economic growth. However, external debt may have negative impact on investment through debt overhang and credit-rationing problem (Nwannebuike, et al., 2016).

This debate notwithstanding, institutional weakness and poor political governance in most developing countries likely negate the envisaged positive impact of external debt. This argument borders on the fact, weak institutions, poor adherence to the rule of law, as well as prevalent corruption, culminate into poor fiscal indiscipline which retards growth (Manasseh *et al*., 2022). This prompted many researchers in other climes to investigate the interactive effects of external debt and governance on economic growth (Ring, 2021; Adem, 2024; Arjun & Mishra, 2024; among others). Nigeria is known for its low institutional quality and poor governance. In 2024, the governance index for Nigeria, as provided by the Worldwide Governance Indicators database, was -0.848, in comparison with say New Zealand's +1.53 on the scale of -2.5 to +2.5 (World Bank, 2025). This statistic is a testimony to poor governance index in Nigeria which may jeopardize on the effectiveness of external debt.

It is therefore pertinent to examine the interconnectedness between external debt and governance quality and how the two affect economic growth in Nigeria. Thus, this study attempts to examine the relationship between external debt and economic growth by considering role of governance/institutional quality in Nigeria from 1996 to 2024. The rest of the paper is divided into four sections. Section 2 reviews the relevant literature on external

debt, governance and economic growth. Section 3 presents the methodology used to establish the link, while Section 4 presents the empirical analysis of results. Finally, Section 5 contains the conclusion and policy recommendations.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Empirical Review

In this subsection, we review empirical literature. For clarity and for the purpose of coherence, the review is done in two themes. First, empirical review on the relationship between external debt and economic growth, while the latter part studies on external debt, economic growth, and governance/institutional quality are synthesized.

External Debt and Economic Growth

Mohamed (2018) examined the effect of external debt on economic growth of Sudan. The model built uses GDP as the dependent variable to measure economic growth as a function of the ratio of external debt to exports, exchange rate and foreign direct investments as the explanatory variables using annual time series for the period 1969-2015. Empirically, the study employs the econometric techniques of the ADF unit root test for stationarity, the Johansen cointegration method and the VECM. The cointegration test shows that a long-run equilibrium relationship exists among the variables of the study. Findings from the VECM show that external debt proxied by the external debt to exports ratio has contributed positively to the Sudan economy.

Musibau et al., (2018) employed panel data from 1980 to 2015 to investigate causal effect between external debt and economic growth among ECOWAS member countries using Debt Overhang Theory. The result shows the existence of long and short run causality between external debt and economic growth economic integrated member countries.

Abdelaziz et al., (2019) analysed whether external debt is a driving factor for investment and economic growth in low-income countries. Using data over the period 2000-2017, they performed an analysis using the 23 countries in the sample and a split-sample analysis wherein they separated less indebted countries (12) from more indebted countries (11). Empirical results of the seemingly unrelated regressions model indicate that external debt significantly decreases investment and economic growth for both the total sample and the subsamples.

Zhang et al., (2020) investigated the causal relationship between public and private external debt and economic growth in developing countries. Their model includes 18 selected Asian developing and transition economies from 1995 to 2019. They employ the dynamic heterogeneous panel data methods, pooled mean group (PMG), robust cross-sectional augmented autoregressive distributed lag (CS-ARDL), and pairwise panel causality test. The results of PMG and CS-ARDL show the existence of causality between external debt and economic growth both in the short-run and long-run.

Dawood et al., (2020) examined the impact of total external debt, public external debt, and private external debt on the economic growth of Asian developing and transition economies from 1995 to 2019. They applied the fixed effect model with two robust estimators of the feasible generalized least square estimator-FGLS and Driscoll-Kraay standard error-DSKE estimator to address the cross-sectional dependence, heteroscedasticity, and autocorrelation. The findings of the effect model, FGLS, and DSKE estimators show that the total external debt has a significant and positive impact on economic growth.

In the work of Olasehinde & Afolabi (2023) examined the relationship between external debts and economic growth for sustainable capacity building in Nigeria, from 1981 to 2022. ARDL cointegration form and Granger causality were employed for the research analysis. The results of the study confirmed that there was evidence of long-run relationship among the variables employed in Nigerian economy. The results showed that none of the variables has significant short-run impacts on Nigerian economy growth. The Granger causality revealed that it

is external debt and interest rate that granger caused economic growth (GDP), while (GDP) granger caused only openness of trade.

Ismael (2024) investigated the complex relationship between external debt and economic growth in developing countries. Utilizing a quantitative research methodology, data was collected from three selected developing countries through an online questionnaire distributed to key stakeholders, totaling 189 responses. Various statistical techniques, including t-tests, Chi-square tests, Variance Inflation Factor (VIF) assessment, Partial Least Squares Regression (PLS), and Principal Component Analysis (PCA), were employed to analyze the data. The findings reveal that moderate levels of external debt can positively impact economic growth, while excessive debt levels are detrimental.

Ashakah et al., (2024) investigated the impact of external debt, and debt service on economic growth in the ECOWAS sub-region during the period 1990-2022. The study analyzed a panel data set using the fixed and random effect models. The panel co-integration tests indicated that a long-run relationship existed among the variables in the specified debt-growth model. The results of the model estimation revealed that external debt negatively and significantly impacted economic growth at the 1% level during the period of the study. The results further revealed that debt service negatively impacted economic growth.

Dau et al., (2024) examined the influence of external debt on economic vulnerability. Using an international sample of 96 countries over the period from 1990 to 2018, they find that external debts contribute to spurring economic vulnerability. In particular, they show that a higher level of external debt is associated with a greater economic vulnerability through accelerating the scale and the likelihood of external shocks in the economy. However, this finding is only hold for long-term external debt. Short-term external debt, on the other hand, can actually reduce economic vulnerability.

From the review above, one could easily discern the mixed results. Differences in case studies, methodologies as well as duration compel the absence of consensus in the findings of these studies.

External Debt, Economic Growth and Governance/ Institutional Quality

Sani et al., (2019) investigated the relationship among public debt, institutional quality, and economic growth in 46 Sub-Saharan African countries by using GMM methodology for the period 2000 to 2014. They found that institutional quality affects economic growth, directly and indirectly. The relationship between institutional quality and public debt is found to be statistically influenced by the interaction term of public debt and governance indicators. Government effectiveness, control of corruption, and regulatory quality are the most crucial factors in promulgating negative effect of public debt on economic growth. In the similar studied is also examined by Kemoe & Lartey (2022) for 44 Sab-Saharan African countries using data from 1996 to 2014. Using the GMM method, the study finds that when public debt rises, it negatively affects economic growth. At the same time, this effect is diminished after an upsurge in the institution's quality.

Shittu et al., (2020) investigated the relevance of governance on the relationship between external debt and economic growth in selected five sub-Saharan African (SSA) countries. Using available data from the World Governance and Development Indicators, between 1996 and 2016, the study uses the fully-modified OLS technique after establishing the absence of unit root and existence of long-run relationship amongst the variables of the model. The findings confirm a non-linear relationship between external debt and economic with a positive net effect of $5.05 increase in economic performance for a US$ rise in external debt. While the index of governance depicts a negative association with economic growth, the indicators show mixed results.

Ring (2021) utilized GMM panel data analysis, covering twenty-three samples of countries from 2011 to 2014 to examines the nexus between external debt and economic growth where institutional quality acts as a moderator. The samples for the study are divided into two groups consisting of low and high governance groups of countries. Findings report the importance of institutional quality as a moderator in the relationship between external debt and economic growth for both samples of study.

Simidi et al., (2021) used a lagged multiple linear regression model to establish the effect of governance on the relationship between external debt financing and economic growth in the EAC member countries using the Baron and Kenny moderation testing approach. Premised on the Keynesian, balanced growth and institutional corruption theories, the study embraced a panel longitudinal research design to examine the relationships. The study finds that 80.70% of variations in sustainable economic growth are explained by variations in external debt, governance index and the interaction term between external debt and governance index. The relationship between external debt and sustainable economic growth is positive but not statistically significant.

Manasseh et al. (2022) examined the impact of external debt on economic growth and the role of interactions of governance. The study utilized annual time series data, focusing on thirty selected Sub-Saharan African (SSA) countries for the period 1997 to 2020. The Dynamic System Generalised Method of Moments estimation technique was adopted while controlling for conventional sources of economic growth. Empirical findings from the study reveal that external debt and external debt volatility have a negative and significant impact on economic growth in SSA countries.

Adem (2024) examined the connection between external debt, governance and economic growth in Ethiopia, Kenya and Uganda from 2000 to 2020. To achieve the stated objective, the study used the Autoregressive Distributed Lag (ARDL) co-integration modeling approach. The results show a long-term and short-term relationship between the variables. Effective governance has a positive effect in the long term but has a negative effect on external debt in the short term.

Arjun and Mishra (2024) investigated the impact of external debt on economic growth, and assesses whether institutional quality matters for this influence, using data from 18 emerging countries during 1996 to 2020. The findings indicate that although an upsurge in external debt negatively affects economic growth, this impact is mitigated when there is an improvement in institutional quality, as reflected by three governance indicators: anticorruption perception, voice and accountability, and perceptions of the rule of law.

Although most of the studies reviewed in this subsection are conducted in other climes, however, the findings portray absence of consensus on the nature of the effects of both the external debt and governance quality on economic growth in terms of the magnitude and direction.

THEORETICAL FRAMEWORK

For the purpose of this research, a hybrid of two theories is considered to serve as theoretical bedrock upon which the empirical model is built and a'priori expectations are determined. These theories include the Keynesian Theory of Public Debt and Institutional Corruption Theory which are briefly explained below.

Keynesian Theory of Public Debt

Keynesian theory of public debt was established by Keynes (1935) and the theory assumes that debt adds value instead of a risk for economic growth and development of a country. Keynes (1935) expound that acquiring debt for capital development is basic, like foundation of an organization, which will add to a profitable yield henceforth and positive financial development into the country. Therefore, the Keynesian theory encourages developing nations to borrow for purposes of economic growth and development. The consequence of this theory is that nations that borrow but do not channel the funds towards capital buildup, may not realize the economic gain anticipated. According to the Keynes theory, debt contributes to the economic growth, mainly through capital accumulation.

Institutional Corruption Theory

The institutional corruption theory as explained by Thompson (1995) refers to the use of public office in a manner that negates the foundational principle and purpose of the institution, which can then have negative effect on economic growth of a nation.

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METHODOLOGY

This study investigated the relationship between external debt and economic growth by considering role of governance/institutional quality in Nigeria from 1996 to 2024. The choice of the base period is informed as it marks the era when Nigeria has increasingly relied on external borrowing to finance government spending, including infrastructure projects and budget deficits, while the terminal period reflects the year at which available annual data terminates. The study controls for other external sector variables that may directly affect the relationship.

Model Specification

The study reviews empirical models used by other authors, then adopts and modifies the model used by Arjun and Mishra (2024) to suit it purpose.

The functional relationship between the dependent variable and independent variables can be expressed as:

$$RGDP = f(EXD, FR, FDI, GE, PS) \dots \dots \dots (1)$$

In econometric terms, the representation of equation 1 will be:

$$RGDP_t = \beta_0 + \beta_1 EXD_t + \beta_2 FR_t + \beta_3 FDI_t + \beta_4 GE_t + \beta_5 PS_t + \mu_t \dots \dots \dots (2)$$

Where:

RGDP = Real Gross Domestic Product as a proxy of economic growth, External debt = EXD, Foreign Reserves = FR, Foreign Direct Investment = FDI, Government Effectiveness = GE, Political Stability = PS, β_0 = Constant term, β_1- β_5=Coefficients of explanatory variables, μ_t = Error term.

Taking the natural logarithm of equation 2 yields the empirical model for estimation of the study as represented in equation 3 as:

$$logRGDP_t = \beta_0 + \beta_1 logEXD_t + \beta_2 FR_t + \beta_3 FDI_t + \beta_4 GE_t + \beta_5 PS_t + \mu_t \dots \dots (3)$$

The logarithmic transformation was meant to transform the variables into a dataset that is more normalized to avoid the problem of heteroscedasticity because of highly skewed values of the RGDP and EXD were logged.

We used the Augmented Dickey-Fuller (ADF) unit root tests to check the time-series properties of the data before the estimation of the growth equation. Diagnostic and stability tests were employed to check the goodness of fit and model adequacy of our specification. The estimation of the economic growth equations was done through the Autoregressive Distributed Lag (ARDL) Bounds test to cointegration.

This method shows the short-run dynamics besides the estimated long-run coefficients. The Autoregressive Distributed Lag (ARDL) bounds testing procedure can be mathematically specified in equation 4 as follows:

$$\Delta logRGDP_t = \alpha_0 + \beta_1 \Delta logRGDP_{t-1} + \beta_2 \Delta logEXD_{t-1} + \beta_3 \Delta FR_{t-1} + \beta_4 \Delta FDI_{t-1} + \beta_5 \Delta GE_{t-1} + \beta_6 \Delta PS_{t-1}$$
$$+ \sum_{i=1}^{p} \alpha_1 \Delta logRGDP_{t-1} + \sum_{i=1}^{p} \alpha_2 \Delta logEXD_{t-1} + \sum_{i=1}^{p} \alpha_3 \Delta FR_{t-1} + \sum_{i=1}^{p} \alpha_4 \Delta FDI_{t-1}$$
$$+ \sum_{i=1}^{p} \alpha_5 \Delta GE_{t-1} + \sum_{i=1}^{p} \alpha_6 \Delta PS_{t-1}$$
$$+ \varepsilon_t \dots \dots \dots (4)$$

Where ρ denotes the lag length, Δ represents the difference operator, $\alpha_0$is the drift, $\mu_t$is the error term, $\beta_1$to β_6 are coefficients of the long-run dynamics while α_1 to α_6 are coefficients of the short-run relationship. Hence, equation 4 is the base equation for estimating the long-run and short-run relationship among the variables.

Under the bounds testing approach, the existence of a level relationship between RGDP and its determinants would be examined. The existence of cointegration among the variables is empirically realized through F-test.

In this case, an error correction (ECM) model associated with the long-run and short-run estimates described in equation 5 as:

$$\Delta logRGDP_t = \alpha_0 + \sum_{i=1}^{p} \alpha_1 \Delta logRGDP_{t-1} + \sum_{i=1}^{p} \alpha_2 \Delta logEXD_{t-1} + \sum_{i=1}^{p} \alpha_3 \Delta FR_{t-1} + \sum_{i=1}^{p} \alpha_4 \Delta FDI_{t-1}$$

$$+ \sum_{i=1}^{p} \alpha_5 \Delta GE_{t-1} + \sum_{i=1}^{p} \alpha_6 \Delta PS_{t-1} + \lambda \mathrm{ECM}_{t-1} + \varepsilon_t \ldots . (5)$$

Where α_1 to α_6 are the parameters of the short-run dynamics, λ is the speed of adjustment to long-run equilibrium following a shock to the system and ECM_{t-1} is the error correction term. The parameter λ is expected to be negative and significant to confirm the long-run relationship among the variables.

A Priori Expectation of the variables and Data sources

A Table 1 below of the *a priori* expectation of the variables is drawn from the economic theory. Each of the model parameter estimates is expected to have its own sign as it shows the effect of the independent variables on the dependent variable. The variables used for the research including Real GDP as a proxy of Economic Growth. Other variables include External Debt, Foreign Reserves, Foreign Direct Investment, Government Effectiveness and Political Stability. Sources of data for these variables are also indicated in the Table 1 below.

Table 1: Variables Sources and Expectations

Variables	**Notation**	**Expected Signs**	**Sources**
Real Gross Domestic Product	RGDP	This is the dependent variable and it shows a random behavior because of its stochastic nature.	World Development Indicators (WDI)
External Debt	EXD	This is an independent variable that is meant to have a positive or negative relationship with the dependent variables. That is, β1> 0 or β1< 0 (+/-)	World Development Indicators (WDI)
Foreign Reserves	FR	This is an independent variable that is meant to have a negative relationship with the dependent variables. That is, β2> 0 (+)	World Development Indicators (WDI) & NBS
Foreign Direct Investment	FDI	This is an independent variable that is meant to have a positive relationship with the dependent variables. That is, β3> 0 (+)	World Development Indicators (WDI)
Government Effectiveness	GE	This is an independent variable that is meant to have a positive relationship with the dependent variables. That is, β4> 0 (+)	Worldwide Governance Indicators (WGI)

Political Stability and Absence of Violence	PS	This is also an independent variable that is meant to have a positive relationship with the dependent variables. That is, β5> 0 (+)	Worldwide Governance Indicators (WGI)

Source: Author's compilation (2025) from E-views 10

Presentation and Analysis of Results

Descriptive Statistic of the Variables

The summary of descriptive statistics of the variables is presented in Table 2 below. The mean value, which is a measure of central tendency, represents the average value that a variable assumes over time. All the variables have the mean values range from -1.020560 to 77.99354. However, FR seems to have the highest mean value, while GE has the lowest mean value. Similarly, PS possess the highest standard deviation 6.405795, while, GE has the lowest standard deviation 0.111233. The standard deviation measures the variability of the data and deviation of the actual values from the mean value. All of the variables except GE have the standard deviations less than the mean value. This is indication the low of variability in the data. Thus, the data is consistent, because the mean and median values of most of the variables are within the range of the maximum and minimum values.

Table 2: Results of descriptive statistics of the variables

	LOGRGDP	LOGEXD	FR	FDI	GE	PS
Mean	26.27177	24.47125	77.99354	1.226021	-1.020560	7.822970
Median	26.55067	24.39405	47.11022	1.069539	-1.019715	6.030151
Maximum	27.07622	25.35896	266.3995	2.900249	-0.747907	26.59575
Minimum	24.80326	23.58499	13.78140	-0.039127	-1.213150	2.415459
Std. Dev.	0.668204	0.514277	73.09575	0.845434	0.111233	6.405795
Skewness	-0.836430	0.310557	1.605676	0.327510	0.162721	2.003674
Kurtosis	2.509352	2.163704	4.456365	1.983374	2.748275	5.795086
Jarque-Bera	3.672359	1.311252	15.02416	1.767283	0.204544	28.84455
Probability	0.159425	0.519117	0.000546	0.413275	0.902784	0.000001
Sum	761.8814	709.6663	2261.813	35.55461	-29.59624	226.8661
Sum Sq. Dev.	12.50189	7.405470	149603.7	20.01324	0.346440	1148.958
Observations	29	29	29	29	29	29

Source: Author's compilation (2025) from E-views 10

Unit Root Tests Results

It is essential to carry out unit root test in order to check the stationarity for the time series data to produce the spurious results. Therefore, the Augmented Dickey-Fuller (ADF) was employed in this study to check stationarity of the data.

Table 3: Augmented Dickey-Fuller (ADF) Results

Augmented Dickey-Fuller (ADF)				
Variable	**Level**	**First Difference**	**Second Difference**	**Order of Integration**
LOGGDP	-1.316744	-4.254607	-	I (1)
LOGEXD	-0.410154	-3.835546	-	I (1)
FR	-2.521768	-3.060736	-	I (1)
FDI	-1.477220	-7.594166	-	I (1)
GE	-2.530671	-6.981030	-	I (1)
PS	-1.745736	-2.754700	-	I (1)

Source: Author's compilation (2025) using E-views 10.

From the Table 3 above test result shows that, all the variables are stationary at first difference I(1). Since the variables had integrated at order one I(1), the application of the ARDL procedure to our economic growth model was justified.

ARDL Long Run Form and Bounds Test

Results of the Bounds Test for Cointegration

The Autoregressive Distributed Lag (ARDL) bounds test was used to test for cointegration among the variables in the model.

Table 4: Bounds tests for the existence of cointegration

Test Statistic	**Value**	**Significance Level**	**Bound Critical Values**	
			Lower Bound	**Upper Bound**
F-statistic	16.17667		**I(0)**	**I(1)**
		1%	3.06	4.15
		5%	2.39	3.38
		10%	2.08	3

Source: Author's compilation (2025) using E-views 10.

The Bounds tests for the existence of cointegration were shown in Table 4 above. These results of the computed F-statistic for the joint test of the variables coefficients $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ and β_6, was 16.17667. The critical value bounds were 2.39 and 3.38 at the 95 per cent significance level. This means the null hypothesis of no cointegration between the variables in the model cannot be accepted since the computed F-statistic was above the 95 per cent upper bound I(1) of the critical value band computed by Narayan (2004) and Pesaran *et al*. (2001).

The rejection of the null hypothesis shows the existence of a long-run relationship among the variables in our model. The existence of the long-run relationship among the variables in the model justifies the estimation of the short-run and long-run coefficients of the growth equation through the ARDL cointegration method.

Results of the Short-run Relationship

The results for the short run estimates of effects of external debt and governance on economic growth in Nigeria are reported in Table 5 below.

Table 5: Results of the short-run estimates and error correction coefficient

Dependent Variable: GDP				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(LOGEXD)	-1.061046	0.147346	-7.201033***	0.0004
D(FR)	-0.000912	0.000663	-1.374982	0.2183
D(FDI)	-0.264292	0.026942	-9.809813***	0.0001
D(GE)	-0.785728	0.147549	-5.325209***	0.0018
D(PS)	-0.064869	0.007474	-8.678935***	0.0001
ECM(-1)*	-0.949564	0.063098	-15.04903***	0.0000

Note: *** and ** indicate statistical significance at the 1% and 5% levels of significance, respectively. If ECM is negative and statistically significant, it implies that there is cointegration. Source: Author's compilation (2025) from E-views 10.

The short-run estimates of the relationship between external debt, governance and economic growth are reported in the Table 5 above. Most of the variables does not have the expected signs and were significant in short run. The result revealed that, all the variables included in the model had negative effects on economic growth but statistically significant except foreign reserves in the short-run. The result implies that economic growth would decrease by 1.0610 per cent, should external debt be increased by one per cent and a per cent increase in foreign reserves would lead to decreased in economic growth by 0.0009 per cent.

Furthermore, the foreign direct investment result exerted a negative and significant relationship with economic growth. This implies that economic growth would decrease by 0.2642 per cent, should foreign direct investment be increased by one unit. The result revealed that, government effectiveness had a negative relationship and statistically significance with economic growth in the short-run. This implies that economic growth would decrease by 0.7857 per cent, should government effectiveness be increased by one unit. Hence, the result of political stability exerted a negative and significant relationship with economic growth and implies that if political stability goes up by one unit, economic growth would increase by 0.0648 per cent.

However, the coefficient of the error correction term that measures the speed of adjustment of economic growth to equilibrium is -0.949564 and had the expected negative sign. Based on the coefficient of ECM (-1), 94% of the previous deviation in economic growth from equilibrium is corrected by it within one year.

Results of the Long-run Relationship

The results for the long run estimates combined effects of external debt and governance on economic growth in Nigeria are reported in Table 6 below.

Table 6: Results for estimated long-run coefficients

Dependent Variable: GDP				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**

D(LOGEXD)	-1.061046	0.337311	-3.145597**	0.0199
FR(-1)	0.001873	0.001214	1.542644	0.1739
D(FDI)	-0.264292	0.088307	-2.992873**	0.0242
GE(-1)	-4.633445	0.797128	-5.812674***	0.0011
PS(-1)	-0.085127	0.016924	-5.030027***	0.0024
C	25.17161	9.182118	2.741373**	0.0337

Note: *** and ** indicate statistical significance at the 1% and 5% levels of significance, respectively.

Source: Author's compilation (2025) using E-views 10.

The long-run estimates of the relationship between external debt, governance and economic growth in Nigeria are shown in Table 6 above. The estimates of the long-run dynamics are to a large extent in agreement with the short-run estimates. Most of the variables except external debt and foreign reserves do not have the expected signs. The foreign reserves were insignificant both in short-run and long-run but had a positive relationship with economic growth in the long-run.

However, the foreign direct investment, government effectiveness and political stability was significant but had a negative relationship with economic growth in the long-run contrary to the expectation. This result is consistent with the results of the short-run equation. The result revealed that a per cent increase in external debt would lead to a 1.0610 per cent decrease in economic growth. This agrees with the result of the short-run growth equation. This suggests that external debt does not promote economic growth in Nigeria in the long run. This result concurs with the studies of (Abdelaziz, et al., 2019; Ashakah, et al., 2025; Arjun & Mishra, 2024; Asafo, et al., 2019; AL-Tamimi, & Jaradat, 2019), but is not consistent with the works of (Ismael, 2024; Dawood, et al., 2020; Mohamed, 2018; Ndubuisi, 2017; Musibau, et al., 2018; Zhang, et al., (2020), Zuhroh & Pristiva, 2022).

Interestingly, the result revealed that a per cent increase in foreign reserves would lead to a 0.0018 per cent increase in economic growth in the long-run, contrary with the result of short-run estimated. This suggests foreign reserves promote economic growth in Nigeria in the long run. The result implies that a unit increase in foreign direct investment would lead to decrease in economic growth by 0.2642 per cent.

Shockingly, the long-run result revealed that, if government effectiveness increase by one unit, economic growth would decrease by 4.6334 per cent and a unit increase in political stability would lead to decrease in economic growth by 0.0851 per cent. This agrees with the result of the short-run growth equation. This result concurs with the result of (Manasseh et al., 2022; Shittu et al., 2020; Nguyen & Luong, 2021; Sani et al., 2019). The long- run result revealed that, the contribution of government effectiveness and political stability and absence of violence to economic growth in Nigeria is negative but has a significant impact in economic growth in Nigeria. Again, the finding of the studies further implies that the Real GDP growth in Nigeria is dependent on foreign reserves in the long-run but statically insignificant.

Results of Diagnostic Test for the ARDL Model

The diagnostic tests results reported in Table 7 below shows that, the Autoregressive Distributed Lag (ARDL) model passes all tests including serial correlation and heteroscedasticity.

Table 7: Diagnostic results for ARDL-ECM model

Test	**t-Statistic**	**P-value**	**Null Hypothesis**	**CONCLUSION**
Breusch-Godfrey Serial Correlation LM Test	1.619665	0.3053	Ho: No Serial Correlation	Cannot reject Ho

Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.281009	0.9844	Ho: Homoscedasticity	Cannot reject Ho

Source: Author's compilation (2025) from E-views 10

The result of diagnostic tests for the ARDL model was shown in Table 7 above. The diagnostic tests used to certify that the parameter estimates were consistent and capable of being utilized in making economic deductions, Equation 5 was adequate and had a good fit. The Breuch-Godfrey Lagrange Multiplier (LM) test was utilized to test for serial correlation. However, autocorrelation was not confirmed in the disturbance of the error term as a result of the probability value of 0.3053 in the equation. The p-value of the null hypothesis of no serial correlation cannot be rejected. In the Breusch-Pagan-Godfrey Heteroskedasticity test, a probability value of 0.9844 reported that the errors were homoscedastic and independent of the explanatory variables. Hence, the null hypothesis of homoscedasticity cannot be rejected at the reported p-value in the equation.

Stability Test Result

The CUSUM test is based on the cumulative sum of the recursive residuals. This option plots the cumulative sum together with the 5% critical lines. If the test cumulative sum goes outside the area between the two critical lines, this indicates that parameters are unstable. The cumulative sum is generally within the 5% significance lines, shows that the residual variance is stable. This means that the graph below indicates that parameters are stable in the model.

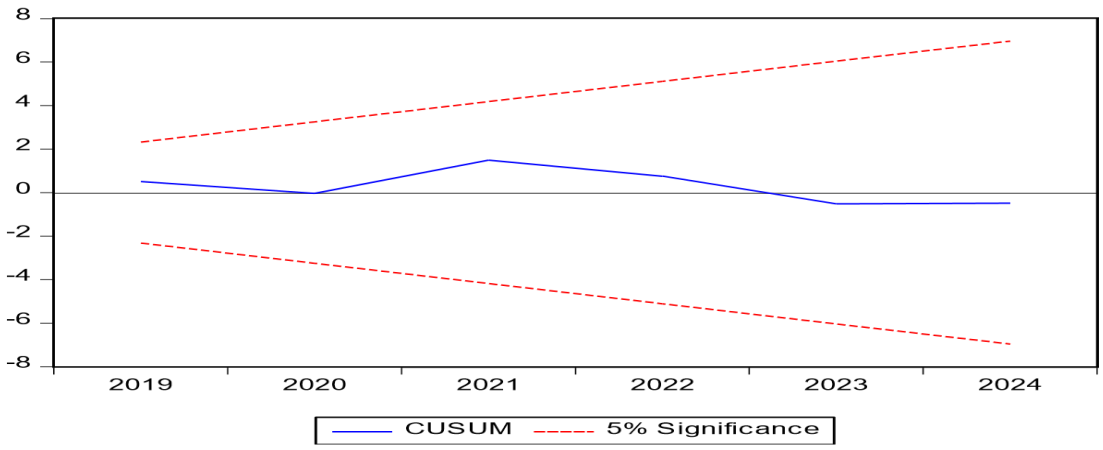

Figure 1: CUSUM stability test result

Source: Author's compilation (2025) from E-views 10.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study was carried to examine the relationship between external debt and economic growth by considering role of governance/institutional quality in Nigeria from 1996 to 2024. It applies the ARDL bound test estimation technique. The findings revealed a direct negative impact of external debt on the economic growth for Nigeria. Nonetheless, the result for the role of governance reported negative relationship between government effectiveness, political stability and economic growth for both short-run and long-run of the estimated model. Furthermore, a control variable which is foreign reserves is found to be statistically insignificant and negatively affect economic growth in short-run but positively related to economic growth in the long-run. In addition, the findings show that the interaction between foreign direct investment and economic growth is statistically significant but negative relationship in both short-run and long-run. Again, the finding of the studies further implies that the Real GDP growth in Nigeria is dependent on foreign reserves in the long-run but statically insignificant.

The finding concludes that the reasons for the observed result could be that, external debt are not channeled into productive government investments, poor governance, political instability and violence, mismanagement, embezzlement, corruption and diversion of external debt funds by government officials and political appointees in Nigeria. The results showed that countries with high external debt and poor governance may face a detrimental impact on economic growth.

Recommendations

This study provides the following suggestions as inputs for policymakers:

Firstly, the external debt needs to be addressed with a sound debt management policy and channel it into productive investments which have positive long-term impact on economic growth in Nigeria. Prudent external debt management is essential.

Secondly, it has been noticed recently that Nigeria still borrows from bilateral and multilateral institutions and misusing debt which results in a high debt burden to the economy. Therefore, authorities need to make extensive policies to use the debt effectively and arrest diversion of public funds.

Thirdly, government of Nigeria should improve on the quality of governance/institutions by ensuring inclusivity, accountability, control of corruption, and enforcing the rule of law. Moreover, political stability should be improved to address civil unrest, insecurity and terrorism in the country.

Fourthly, reduction in budget deficit should be a good measure used by the state to control huge debt inflow to Nigeria. This has to be carefully considered to avoid a negative impact on the overall economy.

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