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ARTICLE

External Debt and Economic Growth in Nigeria

Babatunde O. Binuyo^{1†}; King-Karshak B. Duwong^{1†}; Oluwabukola O. Adesuyi^{1†}; Iyabo M. Okedina^{1†}

¹ Department of Economics, Babcock University, Ilisan Remo, Ogun State, Nigeria.

[†] Authors contributed equally

* Corresponding Author: binuyob@babcock.edu.ng

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Abstract

Over the past few years, Nigeria has experienced a rapid increase in external debt, leading to widespread public concern about its potential effects on the country's economic growth. This study employed an ex-post facto research design to examine the relationship between external debt and economic growth in Nigeria from 1983 to 2022. Data for the study were sourced from the World Bank Development Indicators (WDI) and analyzed using the Autoregressive Distributed Lag (ARDL) model. The findings indicated the existence of a long-run relationship among the variables. The long-run estimates of the variables employed in the study—external debt stock (EDS), debt service on external debt (DSED), inflation rate (INF), and exchange rate (EXR)—on economic growth were as follows: $\beta = 0.0753$, $t = 0.8102$, $p > 0.05$; $\beta = -0.0935$, $t = -1.7669$, $p > 0.05$; $\beta = -0.0281$, $t = -9.0746$, $p < 0.05$; $\beta = 0.1209$, $t = 4.6602$, $p < 0.05$, respectively. The study concluded that external debt has no significant effect on economic growth in Nigeria. It recommended that policymakers should ensure loans are properly monitored and eliminate leakages in the system. Additionally, loans should undergo a comprehensive cost-benefit analysis to ensure that the benefits of the investments exceed the costs associated with debt servicing.

Keywords: Exchange rate, external debt, external debt service, real gross domestic product and inflation rate.

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1. Introduction

The objective of this research is to examine the link between external debt and economic growth in Nigeria. Time series data collected from the World Bank and the Central Bank of Nigeria for the period 1983–2022 were used to explore this relationship. This study is motivated by the lack of previous empirical investigations into the relationship between government external debt and economic growth in Nigeria. Moreover, the study is timely, given Nigeria's growing reliance on external debt to finance its annual budget. In recent years, Nigeria's

external debt has surged significantly due to declining government revenues, largely driven by volatile oil prices in the global market.

Thus, understanding the relationship between external debt and economic growth is important for policymakers, financial institutions, and individuals in Nigeria. This research aims to provide insights into this relationship and its implications. Economic theories suggest that a reasonable level of debt can stimulate

growth in both developing and developed countries. The liquidity constraint hypothesis and the debt overhang theory are traditionally used to explore the effects of debt on economic growth (Krugman, 1988; Sachs, 1989; Cohen, 1992). These theories argue that higher debt levels can hinder growth by increasing government borrowing, which raises interest rates. Higher interest rates make borrowing for investment and consumption more expensive, creating a crowding-out effect. Additionally, poor fiscal management in developing countries has often resulted in borrowing having detrimental effects on both economic growth and financial stability. It is crucial that borrowed funds be directed toward productive investments that generate future income. The key risk of accumulating external debt is that it may exceed a country's ability to repay, making it unsustainable. The primary cost associated with foreign borrowing is debt service, which acts as a heavy tax on future income, savings, and foreign reserves.

According to the "debt-growth nexus" theory, external debt can only be productive if the rate of return exceeds the cost of borrowing (Ijirshar, Joseph, & Godoo, 2016). Funds from external debt should be directed toward sectors that promote productivity, growth, and development. However, Nigeria has a history of mismanaging loan funds, often using them to cover government administrative costs instead of investing in infrastructure and other productive areas of the economy (Favour, Idenyi, Oge, & Charity, 2017; Joseph et al., 2024).

Other factors, such as inflation, insecurity, rapid population growth, and declining oil prices, have also contributed to Nigeria's growing external debt burden (Abdullahi, Aliero, & Abdullahi, 2013). This situation arises because Nigeria is predominantly a mono-economy, relying heavily on oil sales for a significant portion of its revenue. The decline in crude oil prices, which account for approximately 90% of the country's external revenue, has led to an increased reliance on public borrowing (Onakoya & Ogunade, 2017).

Nigeria's external debt history predates its independence in 1960 when it was still a British colony. The country incurred debt while under colonial rule, primarily to fund administrative activities and build infrastructure such as railroads and ports (Akinwale, 2010). These loans were expected to be repaid after independence. However, Nigeria continued borrowing post-independence, and its external debt has steadily increased since then (Umaru, Hamidu, & Musa, 2013).

Over the years, Nigeria's external debt has worsened, raising concerns about its potential impact on the economy. There is a growing debate on whether this debt is beneficial or detrimental to the country. Questions have been raised about whether external loans are being utilized effectively. Aderemi, Fagbola, Sokunbi, and Ebere (2020) opined that Nigeria's large debt is a result of the continued recklessness and selfishness of its leaders. Nigeria's external debt rose from \$1 billion in 1971 to \$33.4 billion in 1991, with little visible infrastructure to show for it. This trend continued, with external debt increasing from \$10.32 billion in 2015 to \$22.08 billion by 2018 (Okoh et al., 2021).

The rising external debt burden poses long-term risks for the economy, particularly the challenge of servicing the debt, which may create problems for future generations. Nigeria's external debt has significantly increased from \$1 billion in 1971 to \$76 billion in 2021 (WDI, 2023). When debt reaches a critical threshold, it begins to have negative consequences. Servicing the debt becomes a significant burden, placing countries on the unfavorable side of the debt Laffer curve, where debt crowds out investment and stifles growth (Soludo, 2003).

Initially, external debt was not a significant concern for Nigeria. In the years following independence, the country's external debt remained low, particularly before 1970 (Ezeabasili, Isu, & Mojekwu, 2011). It wasn't until 1978 that Nigeria secured its first major loan of \$1 billion from the International Capital Market (Ewah, Esang, & Bassey, 2009). However, mismanagement of borrowed funds, corruption, and poor governance over time have contributed significantly to Nigeria's current debt crisis. Loans intended for infrastructure and other productive investments have often been misused, leading to an unsustainable debt burden (Ogunlana, 2005). A weak economy, unable to repay its external debt due to limited profitability in manufacturing and trade, risks falling into a debt crisis (Adubofour, Tinashe, & Mensah, 2021). If Nigeria fails to address these issues, it remains vulnerable to such a crisis.

2. Literature Review

2.1 Theoretical Review

Ricardo introduced his theory of public debt in 1819, arguing that government expenditures, whether anticipated or unanticipated, primarily serve to maintain economic stability, even in the presence of inefficiencies within the labor force. He contended that

such expenditures often result in payments that do not contribute to productivity, but instead act as mechanisms for stabilizing the economy in the short term. In a letter to McCulloch written in 1820, Ricardo emphasized his view of public expenditure as an unproductive economic activity undertaken by the state, drawing attention to how this form of spending increasingly burdens society ([Precious, 2015](#)).

Ricardo's theory critically examined the long-term implications of public spending and public debt, proposing that public expenditures should be financed by drawing funds from sectors and communities with surplus economic resources. He believed that this approach would help to alleviate inequality, as those with excess wealth would contribute to funding government needs ([Joseph & Obikaonu, 2021](#)). However, Ricardo was skeptical about the effectiveness of prioritizing specific sectors for this purpose. He argued that such a strategy fails to foster sustainable economic growth. Instead of generating prosperity, it leads to a depletion of the state's wealth, particularly when public debt and taxation are already high.

In Ricardo's view, excessive reliance on public debt creates an impoverishing cycle, where resources are diverted away from productive investments and channeled into unproductive spending. This, in turn, undermines the state's capacity for future economic growth. For Ricardo, the key to managing public debt lay not in the scale of public borrowing but in how the borrowed funds were allocated. When improperly managed, public debt could become a significant obstacle to economic progress, resulting in higher taxes and reduced overall welfare without generating long-term benefits for society.

2.2 Empirical Literature

[Ogunmuyiwa \(2011\)](#) examined whether external debt promotes economic growth in developing countries, using Nigeria as a case study. Time series data from 1970 to 2007 were fitted into a regression equation using various econometric techniques such as the Augmented Dickey-Fuller (ADF) test, Granger causality test, Johansen co-integration test, and Vector Error Correction Method (VECM). The empirical results reveal that no causality exists between external debt and economic growth, as the causation between debt and growth was found to be weak and insignificant in Nigeria.

[Saad \(2012\)](#) empirically investigated the relationship between economic growth, exports, and external debt in Lebanon over the period 1970–2010, with the inclusion of the exchange rate as a fourth macroeconomic variable. Exports were introduced to test the export-led growth hypothesis for Lebanon. Using Vector Error Correction Models (VECM) and the Granger causality technique, the study found both short-run and long-run relationships among the variables.

[Mahmud, Hasan, Shah, and Pervin \(2012\)](#) examined the relevance of Bangladesh's dependence on external public debt. Using econometric tools, the study investigated the effect of external public debt on economic growth from 1974 to 2010. The long-run analysis revealed a significant negative effect of external public debt service and a positive effect of external public debt stock on GDP growth. In the short run, only external debt service had a negative effect, while the debt stock showed no significant impact. The study found no evidence of a debt overhang, given that the debt stock had no significant adverse effect on GDP growth.

[Jilenga, Xu, and Gondje-Dacka \(2016\)](#) investigated the impact of external debt and foreign direct investment (FDI) on economic growth in Tanzania using time series data from 1971 to 2011. The empirical analysis, based on the ARDL model and the Bounds test approach, revealed that in the long run, external debt promotes economic growth in Tanzania, while FDI exhibits a negative impact on growth. In the short run, no directional causality was found between external debt and economic growth or between FDI and economic growth.

[Ijirshar, Joseph, and Godoo \(2016\)](#) studied the relationship between external debt and economic growth in Nigeria using data from 1981 to 2014. The co-integration results showed a significant long-run positive relationship among domestic investment, exports, and economic growth in Nigeria. In the short run, the Granger causality test indicated a significant feedback loop between domestic investment and economic growth, but no short-run causal relationship was found between exports and economic growth.

[Olasode and Babatunde \(2016\)](#) analyzed the effect of external debt on the viability and growth of the Nigerian economy from 1984 to 2012. To avoid spurious regression, the researchers employed econometric tests of stationarity (unit root test) and co-integration tests. The results indicated that all variables exhibit

stationarity at first differencing, and the Johansen co-integration test showed a long-run relationship between the variables. The ADL model confirmed the existence of dual behavior and effects of external debt on Nigeria's economy.

Babatunde and Olayinka (2017) examined the impact of external debt on bridging the resource gap required for economic growth in Nigeria. After a preliminary evaluation of the data, which indicated non-normality in all variables, the ARDL method was applied using the OLS technique. The results showed evidence of a long-run association between external debt and economic growth. The follow-up error correction mechanism found that 45% of disequilibrium errors were corrected after a short-run shock. External debt was negatively related to economic growth, and the Granger causality test indicated that external debt does not cause economic growth at the 5% significance level.

Favour, Idenyi, Oge, and Charity (2017) analyzed the relationship between public debt and economic growth in Nigeria from 1980 to 2015 using the Vector Error Correction Model (VECM) approach. The results indicated that external debt has a significant negative impact on economic growth. Similarly, domestic debt exhibited a significant negative relationship with growth. Granger causality tests revealed causality running from both external and domestic debt to GDP in Nigeria.

Matandare and Tito (2018) analyzed the increasing public debt in Zimbabwe over the past decade, highlighting the limited literature on the nexus between public debt and economic growth in the country. Their study examined the relationship between public debt and economic growth in Zimbabwe using time series data from 1980 to 2016, applying the Ordinary Least Square (OLS) method. The results revealed a significant negative relationship between external debt and economic growth. Additionally, exchange rates and inflation were also found to have a significant negative relationship with economic growth. However, external debt service showed a significant positive relationship with economic growth.

Munzara (2020) investigated the impact of foreign debt on economic growth in Zimbabwe using time series data from 1980 to 2013. The analysis, which included control variables such as labor force, capital investment, and trade openness, showed that external debt and trade openness negatively impact economic growth, while capital investment and labor force growth have positive effects.

Aderemi, Fagbola, Sokunbi, and Ebere (2020) explored the relationship between external debt and exchange rate fluctuations in Nigeria from 1981 to 2018. They employed the Autoregressive Distributed Lag (ARDL) model, finding that external debt, debt service payments, and foreign reserves had a significant positive impact on exchange rate fluctuations in the short run.

Berhanu and Fikadu (2020) investigated the impact of public external debt on economic growth in Ethiopia from 1983 to 2018, using the ARDL approach. The study revealed that public external debt stock and the ratio of debt service to GDP had significant negative impacts on economic growth in both the long and short run. The debt service stock to export ratio negatively affected economic growth, but only in the short run, providing evidence of the crowding-out effect of public external debt.

Safdari and Mehrizi (2011) examined the long-term effects of five variables (gross domestic product, private investment, public investment, external debt, and imports) on each other in Iran from 1974 to 2007, using a Vector Autoregressive (VAR) model. The study first tested the stability of variables using the Dickey-Fuller test and then analyzed co-integration using the Johansen test. The results showed that external debt had a negative effect on GDP and private investment, while public investment positively influenced private investment.

Butts, Mitchell, and Berkoh (2012) examined the short- and long-run relationships between short-term external debt and economic growth in Thailand from 1970 to 2003, using the ARDL-bounds test for co-integration. The results indicated a positive and significant relationship between short-term external debt and real GDP, as well as co-integration. The study found indirect Granger causality from economic growth to short-term external debt through consumption effects, with economic growth, exchange rates, and international reserves acting as determinants of short-term external debt in Thailand.

Azam, Emirullah, Prabhakar, and Qayyum (2013) studied the impact of external debt on economic growth in Indonesia using the least squares method for parameter estimation. The findings showed that external debt had a negative impact on economic growth during the study period, suggesting that external debt is more of a burden than a blessing for Indonesia.

Ali (2013) explored the relationship between external debt and economic growth in Jordan between 1990 and 2011 using time series econometric techniques. The study revealed a positive and significant relationship between external debt and economic growth, while debt servicing had a negative and significant impact on growth.

Mohd, Halim, and Azman-Sainic (2013) analyzed the contribution of external debt to Malaysia's economic growth. Using the ARDL-bound test to investigate the long-run impact of external debt, the study found that the accumulation of external debt contributed positively to economic growth up to an optimal level. However, any additional increase in external debt beyond this threshold had an inverse effect on the Malaysian economy.

Nor-Eddine and Driss (2019) examined the impact of external public debt on economic growth in Morocco, covering the period from 1988 to 2016. The econometric model used for estimating the parameters was based on the ARDL approach. The results confirmed that high public debt has a negative and significantly large effect on economic growth, both in the short and long term, with the effect being more pronounced in the short term. These findings are consistent with most studies that indicate external debt has a negative impact on economic growth.

Ngangnchi and Joefendeh (2021) investigated the extent to which external debt and public investment contribute to economic growth in Cameroon, focusing on how public investment modulates the effect of external debt on growth. Using time series data from 1980 to 2018 and the Ordinary Least Squares (OLS) method, the study revealed a significant negative influence of external debt on economic growth, consistent with debt-overhang and crowding-out theories. However, the results also showed that public investment had a positive and significant direct effect on economic growth in the long run. Further analysis indicated that public investment and external debt jointly contribute to positive economic growth.

Sharaf (2022) examined the asymmetric and threshold impacts of external debt on economic growth in Egypt during the period 1980–2019. Using a nonlinear autoregressive distributed lag (NARDL) bounds testing approach to cointegration and a vector error-correction model, the study estimated both short- and long-run equilibrium dynamics. The results from the NARDL model showed a robust and statistically significant

negative long-term impact on economic growth from both positive and negative external-debt-induced shocks.

Ochieng Kiprop Kalio and Gisore (2014) explored the impact of external debt on economic growth in the East African Community (EAC) using annual data from 1970 to 2010. They employed a panel fixed-effects model to estimate the effect of external debt as a share of Gross Domestic Product (GDP) on economic growth in the EAC. The study was based on the Solow growth model augmented for debt. The Levin-Lin-Chu (LLC) test was used to investigate the unit root properties of the data, and the Hausman specification test verified the panel fixed-effects model. The findings suggested that external debt has a significantly negative effect on per capita GDP growth in the EAC.

Musibau, Mahmood, Ismail, Shamsuddin, and Rashid (2018) investigated the impact of external debt on the economies of West African countries. Using panel data from 1980 to 2015, the study analyzed the causal relationship between external debt and economic growth among ECOWAS member countries, employing Debt Overhang Theory. The results showed both long- and short-run causality between external debt and economic growth in these economically integrated countries. The study concluded that foreign capital flows from external debt could stimulate investments, provided they are judiciously and productively used.

Mohsin, Ullah, Iqbal, Iqbal, and Taghizadeh-Hesary (2021) analyzed the relationship between external debt and economic growth in South Asia. Using panel data from 2000 to 2018, they employed OLS, fixed-effect, quantile regression, and robust output regression methods to assess the impact of external debt in South Asian countries, including Afghanistan, Bangladesh, Bhutan, India, Pakistan, Sri Lanka, Maldives, and Nepal. The analysis revealed that external debt has a negative impact on economic growth, while external debt stock was found to have a positive impact on growth.

3. Methodology

This study focused on the effect of debt on economic growth in Nigeria, specifically examining the impact of external debt on the country's economic growth. The research covers a period of forty years (1983–2022), using secondary data sourced from the World Bank Development Indicators (WDI). The data was analyzed

using the Autoregressive Distributed Lag (ARDL) model.

The model in this study measures economic growth, represented by gross domestic product (GDP), as the dependent variable, while the independent variables include external debt stock (EDS), exchange rate (EXR), inflation rate (INF), and domestic debt (DMD). External debt is captured in terms of external debt stock (EXD) and domestic debt stock (DMD). The ARDL model, as developed by Pesaran and Shin (1997) and Pesaran, Shin, and Smith (2001), is applied to estimate

$$RGDP = \beta_0 + \beta_1 ESD_t + \beta_2 DSED_t + \beta_3 EXR_t + \beta_4 INF_t + \mu_t \dots \dots \dots 3.1$$

Where: μ_t = Error Term

The Autoregressive Distributed Lag is specified as;

$$\Delta RGDP_t = \beta_{0i} + \sum_{i=1}^p \beta_{1i} \Delta RGDP_{t-i} + \sum_{i=1}^q \beta_{2i} \Delta LNEDS_{t-i} + \sum_{i=1}^q \beta_{3i} \Delta LNSED_{t-i} + \sum_{i=1}^q \beta_{4i} \Delta LNEXR_{t-i} + \sum_{i=1}^q \beta_{5i} \Delta INF_{t-i} + \lambda ECT_{t-i} + \mu_t \dots \dots \dots 3.2$$

Where:

λ = Speed of adjustment parameter

ECT = The error correction term,

$\beta_{1i}, \beta_{2i}, \beta_{3i}, \beta_{4i}, \beta_{5i}$ are the short run dynamic coefficients of the models adjustment to long-run

equilibrium

both the short-run and long-run relationships between the variables.

The functional form of the model is specified as follows:

$$RGDP = f(EDS, DSED, INF, EXR)$$

Where; RGDP = Real Gross Domestic Product; EDS = External Debt Stock; DSED = Debt stock on

external Debt; EXR = Exchange Rate; INF = Inflation Rate.

The model specification in its stochastic form is;

4. Result and Discussion

This section discusses the result of the findings. Unit root test was carried out to determine level of stationarity of the variables. The Augmented Dickey-Fuller (ADF) unit root test and the Phillip Perron (PP) unit root test were used for conducting the unit root test.

Table 4.1 Augmented Dickey-Fuller test (ADF)

Augmented dickey-fuller									I(d)
Variables	At levels				At first difference				
	Intercept		Trend & Intercept		Intercept		Trend & Intercept		
	ADF t-Stat. (5%)	P-value	ADF t-Stat. (5%)	P-value	ADF t-Stat. (5%)	P-value	ADF t-Stat. (5%)	P-value	
LNRGDP	-2.9411	0.8758	-3.5484	0.1143	-2.9411	0.0012	-3.5331	0.0074	I(1)
LNEDS	-2.9411	0.9020	-3.5484	0.8985	-2.9411	0.0002	-3.5331	0.0015	I(1)
LNSED	-2.9411	0.1159	-3.5484	0.2226	-2.9411	0.0000	-3.5331	0.0001	I(1)
LNEXR	-2.9411	1.0000	-3.5484	0.9947	-2.9411	0.0024	-3.5331	0.0022	I(1)
INF	-2.9411	0.0253	-3.5484	0.0543	-2.9411	0.0000	-3.5331	0.0000	I(0)

Source: Authors computation using EViews 10 (2024)

Table 4.2 Optimal Lag Length

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-261.5587	NA	0.852210	14.02940	14.24487	14.10607
1	-55.94018	346.3048*	6.42e-05*	4.523168*	5.815999*	4.983147*
2	-34.53145	30.42294	8.34e-05	4.712182	7.082372	5.555477

*indicates the lag order selected by the criterion.

LR: Sequential modified LR test statistic (each test at the 5% level)

FPE: Final prediction error

AIC: Akaike Information Criterion

SC: Schwarz Information Criterion

HQ: Hannan-Quinn Information Criterion

From the ADF test results, it was observed that, at the 5% significance level, all variables are either stationary at level $I(0)$ or at first difference $I(1)$. This is because the

decision criterion is met at those points, leading to the acceptance of the alternative hypothesis. Given that the time series variables have a mixed order of integration, the Autoregressive Distributed Lag (ARDL) technique, as suggested by [Pesaran and Shin \(1998\)](#), was used for analysis. This method is advantageous regardless of whether the underlying regressors are $I(0)$, $I(1)$, or a combination of both. The ARDL model was employed to estimate the relationships and to examine both the short-run and long-run dynamics of the variables. Additionally, a bound testing approach was performed as part of the analysis.

Based on the results displayed above, a lag length of 1 is selected for the model according to the AIC.

Table 4.3 Bound Cointegration test results

Test statistic	Value	k
F-statistic	4.913489	5
Critical Value Bounds		
Significance	$I(0)$	$I(1)$
10%	2.2	3.09
5%	2.56	3.49
1%	3.29	4.37

Source: Authors computation using EViews 10 (2024)

Cointegration test was conducted to see if there is a long run relationship between variables.

H_0 : There is no long run relationship among variables.

H_1 : There is a long run relationship between variables.

If the F-statistic falls below the lower bound at the 5% critical value, we do not reject the null hypothesis, indicating that no cointegration exists. Conversely, if the F-statistic exceeds the upper bound, we reject the null hypothesis and conclude that cointegration exists between the variables. If the F-statistic falls between the lower and upper bounds, the test result is inconclusive.

In this case, the F-statistic value is 4.913489, which exceeds the upper bound critical value at all significance levels. Therefore, the null hypothesis, which posits that there is no cointegration between the variables, is rejected. We can thus conclude that a long-run relationship exists between the variables. Consequently, both the short-run and long-run models will be estimated using the Autoregressive Distributed Lag (ARDL) model.

Table 4.4 Short run Autoregressive Distributed Lag

Variable	Coefficient	Std. Error	t-statistic	Prob.
C	5.122022	1.015417	5.044254	0.0001
D(LNEDS)	0.014286	0.018018	0.792896	0.4367
D(LNDSSED)	-0.006367	0.009578	-0.664755	0.5134
D(EXR)	-0.117929	0.026469	-4.455409	0.0002
D(INF)	-0.001134	0.000381	-2.980116	0.0071
CointEq(-1)	-0.897969	0.309550	-2.900887	0.0099

Source: Authors computation using EViews 10 (2024)

$$\text{LNRGDP} = 5.122022 + 0.014286 \text{ LNEDS} - 0.006367 \text{ LNDSSED} - 0.117929 \text{ LNEXR} - 0.001134 \text{ INF}$$

Table 4.5 Long run Autoregressive Distributed Lag

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNEDS	0.075257	0.092888	0.810187	0.4269
LNDSSED	-0.093453	0.052895	-1.766781	0.0918
LNEXR	0.120859	0.025934	4.660216	0.0001
INF	-0.028102	0.003097	-9.074626	0.0000
C	26.98194	2.103867	12.82493	0.0000

Source: Authors computation using EViews 10 (2024)

Autoregressive Distributed Lag

The estimated long run model is expressed below:

$$\text{LNRGDP} = 26.98194 + 0.075257 \text{ LNEDS} - 0.093453 \text{ LNDSSED} + 0.120859 \text{ LNEXR} - 0.028102 \text{ INF}$$

The ECM term is 0.8796, indicating that the past disequilibrium associated with external debt financing and economic growth in Nigeria can adjust toward a long-run equilibrium at a rate of 90% per annum. This means that the past issues will be corrected at a speed of 90%, which, although high, is necessary given the current economic conditions.

The model examined the relationship between external debt stock and economic growth in Nigeria, measured by real gross domestic product (GDP). The log of external debt stock has a positive coefficient but is statistically insignificant, meaning that external debt stock does not significantly explain economic growth. Thus, we have evidence to accept the null hypothesis. The coefficient of external debt stock is 0.01, which implies that a 1% increase in external debt stock will lead to a 0.01% increase in economic growth in the short run. Inflation rate has a negative coefficient and is statistically significant, indicating that inflation explains economic growth. Therefore, we reject the null

hypothesis. The coefficient for inflation is -0.001, meaning that a 1% increase in the inflation rate will lead to a 0.001% decrease in economic growth in the short run.

The exchange rate also has a negative coefficient and is statistically significant, meaning that the exchange rate significantly affects economic growth. Therefore, we reject the null hypothesis. The coefficient of the exchange rate is -0.12, indicating that a 1% increase in the exchange rate will result in a 0.12% decrease in economic growth in the short run. The log of external debt stock has a negative coefficient but is statistically insignificant, suggesting that it does not significantly explain economic growth. Therefore, we accept the null hypothesis. The coefficient is -0.006, meaning that a 1% increase in the log of external debt stock will lead to a 0.006% decrease in economic growth in the short run.

The model in this study measures economic growth, represented by gross domestic product (GDP), as the

dependent variable, while the independent variables include external debt stock (EDS), exchange rate (EXR), inflation rate (INF), and domestic debt (DMD). External debt is captured in terms of external debt stock (EXD) and domestic debt stock (DMD). The ARDL model, as developed by [Pesaran and Shin \(1997\)](#) and [Pesaran, Shin, and Smith \(2001\)](#), is applied to estimate both the short-run and long-run relationships between the variables. After conducting the ARDL test, the coefficient of external debt was found to be 0.075257, indicating a positive relationship between external debt and economic growth in Nigeria. However, the probability value of 0.4269 suggests that this relationship is statistically insignificant. This could be attributed to several factors, such as the misallocation of borrowed funds by government officials, especially when the funds are used for non-productive activities.

The results also show that the coefficient of debt service on external debt is -0.093453, indicating an inverse relationship between external debt servicing and economic growth. A unit increase in external debt service leads to a 0.093453 decrease in economic growth. However, the probability value of 0.0935 shows that this relationship is also statistically insignificant. This might be due to the fact that the negative consequences of debt servicing, such as the reduction of resources available for other crucial investments, take time to become apparent. Thus, even with high external debt service payments by the Nigerian government, the effect may not be significant in the short run.

The log of the exchange rate has a positive coefficient and is statistically significant, meaning that the exchange rate has a significant impact on economic growth. As such, we reject the null hypothesis. The coefficient of the exchange rate is 0.12, implying that a 1% increase in the exchange rate will lead to a 0.12% increase in economic growth in the long run.

On the other hand, the inflation rate has a negative coefficient and is also statistically significant, suggesting that inflation explains economic growth. Here again, we reject the null hypothesis. The coefficient of inflation is -0.28, meaning that a 1% increase in inflation will reduce economic growth by 0.28% in the long run.

Comparing these results with other studies, [Ezeabasili, Vincent, Isu, and Mojekwu \(2011\)](#) investigated the relationship between Nigeria's external debt and economic growth between 1975 and 2006, finding a

negative and significant relationship. Additionally, their Granger causality test revealed unidirectional causality between external debt service payments and economic growth at the 10% significance level. In contrast, [Aderemi, Fagbola, Sokunbi, and Ebere \(2020\)](#) found a positive and significant impact of external debt, debt service payments, and foreign reserves on economic development in both the short and long run from 1981 to 2018. Similarly, [Ogunmuyiwa \(2011\)](#) examined whether external debt promotes economic growth in Nigeria from 1970 to 2007 and found a negative and significant relationship between external debt and economic growth.

Meanwhile, [Mahmud, Hasan, Shah, and Pervin \(2012\)](#) explored the impact of external public debt on the Bangladeshi economy from 1974 to 2010, finding a negative and significant relationship between external debt and economic growth in the long run, but a negative and insignificant relationship in the short run. This study aimed to explore the relationship between external debt and economic growth in Nigeria. According to neoclassical growth theory, the three main drivers of economic growth are capital, labor, and technological advancement. When properly utilized, external debt can serve as an additional source of capital for a nation. The study's positive but statistically insignificant correlation between external debt and economic growth suggests that if borrowed funds are used effectively, they could increase capital stock and potentially lead to higher economic growth.

However, neoclassical growth theory also emphasizes the diminishing returns on investment and the importance of efficient capital allocation. The statistically insignificant but negative coefficient for external debt service in this study suggests that debt service payments may hinder long-term growth if excessive, as they could divert funds from important investments in infrastructure and education.

From a policy perspective, the findings present a challenge. The lack of a significant impact from current debt levels suggests that Nigerian policymakers may have more flexibility than previously anticipated. However, this does not mean unrestrained borrowing is advisable. Instead, a more strategic approach to debt accumulation is needed. Policymakers should prioritize investments that have a clear positive impact on long-term economic growth, such as infrastructure and technological advancements, in line with endogenous growth theory. By aligning debt with targeted investments, Nigeria can harness the benefits of external debt while mitigating its risks.

5. Conclusion and Recommendations

This paper aims to explore the relationship between external debt and economic growth in Nigeria. The findings suggest that this relationship could be positive if borrowed funds are used productively. However, both positive and negative outcomes may coexist, particularly if there is a debt-to-GDP threshold. Consequently, no unanimous consensus exists on the relationship between public debt and economic growth, which can be positive, negative, or nonlinear. Even when a positive relationship is observed, governments should remain cautious in shaping fiscal policies, carefully assessing appropriate debt levels over time. Mismanagement of funds could lead to negative economic growth if borrowed funds are not properly utilized.

Given these findings, Nigeria should tailor its fiscal strategies to manage high public debt while encouraging economic growth. The Nigerian government must reconsider its current policies and institutional practices regarding foreign loans. Additionally, there is an urgent need for greater fiscal discipline, especially in light of the recent rise in interest rates in the country.

In Nigeria, there is often a disconnect between policymakers and technical experts responsible for evaluating the cost-risk trade-offs of foreign borrowing. This separation can result in uninformed decisions, as the debt management staff, who handle foreign debts, are frequently excluded from the decision-making process. This approach must change. Moreover, the capacity of debt management personnel should be regularly enhanced and strengthened to ensure more informed and effective decision-making.

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