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Effect of External Debt on Economic Growth in Nigeria: 1981-2023

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Abstract
This study empirically assessed the effect of external debts on the economic growth of Nigeria using annual time series data spanning the period of 1981 to 2023, sourced from the Central Bank of Nigeria, the Debt Management Office and the World Development Indicators. The data was analyzed using the Autoregressive Distributed Lags (ARDL) Approach to analyze the effect of external debt variables on the economic growth. Findings showed that external debt stock has a significant inverse relationship with economic growth, external debt servicing revealed a negative significant relationship with the economic growth, exchange rate showed a positive significant relationship with economic growth and labour force participation rate also showed a significant positive relationship with the economic growth in the long-run. However, the short-run results revealed there exists a negative significant relationship between external debt stocks in the current yea , external debt servicing in the current, exchange rate in the current year and its previous one and two years, the previous one and two years of labour force participation rate and economic growth in Nigeria. However, the previous one, two and three years of external debt stock, the previous one and two years of external debt servicing and the current and previous three years of labour force participation rate has positive significant relationship with economic growth. Therefore, this study among other things recommends that external debt finance should be channeled to only projects with the highest priority. In doing so, defining the purpose, duration, moratorium requirements and commitments, negotiation fees etc., including the conditions under which the government can approve and guarantee external loans. It could also explore debt restructuring or renegotiation options with creditors to improve the terms and conditions of existing debt, such as lower interest rates or longer repayment periods.

I. Introduction

Nigeria, like many developing countries, has long grappled with the twin challenge of financing its developmental needs and maintaining macroeconomic stability. Given the structural weaknesses of its economy, dependence on crude oil exports, and low domestic savings, Nigeria has historically relied on external borrowing to finance budget deficits, develop infrastructure, and stimulate economic growth. However, while external debt can provide a temporary financial boost, its long-term effects on economic growth remain contentious. From 1981 to 2023, Nigeria's external debt profile has undergone dramatic transformations, including periods of accumulation, restructuring, relief, and re-accumulation.

The early 1980s marked a turning point in Nigeria's economic and fiscal history. Following the oil boom of the 1970s, Nigeria entered the 1980s with high public expenditure, supported largely by oil revenues. However, the sharp decline in global oil prices in 1981 exposed the vulnerabilities of an oil-dependent economy. The resulting fiscal crisis led Nigeria to resort to external borrowing to bridge budgetary gaps and finance development projects. According to Ajayi and Khan (2000), Nigeria's external debt increased significantly during this period, largely from multilateral and bilateral

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sources. By the mid-1980s, external debt had become a structural feature of Nigeria's economy. Unfortunately, much of the borrowed funds were mismanaged or misappropriated, leading to limited returns on investment and worsening debt sustainability (Ajayi and Khan, 2000).

To address the growing debt crisis and macroeconomic imbalances, the Nigerian government adopted the Structural Adjustment Program (SAP) in 1986, under the supervision of the International Monetary Fund (IMF) and the World Bank. The SAP introduced wide-ranging economic reforms, including currency devaluation, trade liberalization, and deregulation. These reforms were designed to improve external competitiveness and restore fiscal balance. However, the program also required the government to service its external debts rigorously, often at the expense of social and capital expenditures. Iyoha (1999) and Onwuka (2003) argue that while SAP achieved some stabilization goals, it led to increased poverty, rising inflation, and deteriorating public services, thereby limiting the potential of external borrowing to stimulate long-term economic growth.

Throughout the 1990s, Nigeria remained trapped in a cycle of borrowing and debt servicing. The debt overhang problem, whereby large debt discourages investment and growth became more evident. Krugman (1988) describes this phenomenon as a situation where the expected future debt repayments deter new investments and reduce economic productivity. In Nigeria, the economic growth rate during this period was sluggish, and the debt service-to-revenue ratio became unsustainable. Debt servicing consumed a significant share of export earnings, reducing funds available for domestic development. Hence, Nigeria's external debt during this period exceeded $30 billion, with no clear path toward repayment or reduction (Afolabi, 1999).

Afolabi (1999) further noted that the breakthrough in Nigeria's debt crisis came in 2005 when the country negotiated a comprehensive debt relief deal with the Paris Club of creditors. Under this agreement, Nigeria secured an $18 billion debt cancellation in exchange for a one-time repayment of about $12 billion. This historic deal, led by President Olusegun Obasanjo and Finance Minister Ngozi Okonjo-Iweala, drastically reduced Nigeria's external debt stock from over $35 billion to approximately $5 billion (Okonjo-Iweala, 2012). The debt relief was expected to create fiscal space for the government to increase investment in health, education, and infrastructure. In the immediate aftermath, Nigeria recorded improved macroeconomic indicators, including increased foreign reserves, reduced inflation, and improved credit ratings.

Despite the promising post-relief period, Nigeria gradually returned to external borrowing. From 2010 onward, successive administrations cited the need for infrastructure development and economic diversification as justification for acquiring new external debts. Unlike in the past, much of the post-2010 borrowing came from non-traditional creditors such as China (through the China Exim Bank) and from international capital markets through Eurobond issuances. By 2023, Nigeria's external debt had grown to over $41 billion, raising renewed concerns about sustainability (Debt Management Office, 2023). Proponents of external borrowing argue that it remains a viable tool for financing long-term development projects. For instance, Oke and Sulaiman (2012) contend that external debt, if efficiently used for productive investments, can enhance economic capacity and promote growth. However, critics point to the rising cost of debt servicing, weak revenue mobilization, and inefficiencies in public finance management as key constraints undermining the benefits of borrowing.

More recently, global events such as the COVID-19 pandemic and the Russia-Ukraine war have further complicated Nigeria's debt and growth nexus. In response to the economic fallout from the pandemic, Nigeria secured additional external loans from the IMF, World Bank, and African Development Bank to support its budget and pandemic response. While these loans provided short-term fiscal relief, they also contributed to the growing debt burden. Furthermore, the volatility of the naira, rising inflation, and low economic growth in the post-pandemic years have raised concerns about debt sustainability. According to Ezeabasili, Isu, and Mojekwu (2011), Nigeria's external debt management must focus on enhancing the return on debt-funded investments and aligning borrowing with economic priorities.

1.2 Statement of the Problem

Over the past four decades, Nigeria has persistently relied on external borrowing to finance development initiatives and support its fiscal operations. This reliance has significantly shaped the country's macroeconomic landscape, with external debt becoming a central issue in economic discourse. Despite several periods of substantial borrowing, debt restructuring, and even debt relief, most notably the 2005 Paris Club agreement, the anticipated transformation in economic growth has remained elusive. Nigeria continues to struggle with high

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unemployment, poor infrastructure, weak industrial output, and a sluggish GDP growth rate. This paradox raises critical questions about the effectiveness and efficiency of external debt as a tool for economic development.

Between 1981 and 2023, Nigeria's external debt profile fluctuated dramatically. While the government has often justified borrowing as necessary for infrastructure development and poverty reduction, the rising cost of debt servicing has put immense pressure on public finances. Recent statistics from the Debt Management Office (DMO) show that external debt service consumes a growing portion of Nigeria's revenue, reducing the fiscal space available for social and capital expenditures. Furthermore, global shocks such as oil price volatility, exchange rate depreciation, and the COVID-19 pandemic have exposed Nigeria's vulnerability to external factors, further complicating its debt dynamics.

Despite the scale of borrowing, there is insufficient empirical consensus on whether external debt has had a positive or negative impact on Nigeria's economic growth. Some scholars argue that moderate borrowing, when effectively managed and targeted toward productive investments, can spur growth. Others contend that Nigeria's debt has often been misused, poorly managed, and unsustainable, leading to economic stagnation or even regression. The inconsistency in findings highlights a significant gap in the literature, particularly concerning long-term assessments across different economic regimes and global contexts.

Moreover, limited institutional capacity, governance challenges, and a lack of accountability in public spending have often undermined the potential benefits of debt-financed projects. As Nigeria's external debt approaches critical thresholds once again, there is an urgent need to re-examine the historical trends and assess whether external debt has truly contributed to economic growth or merely deepened the country's fiscal vulnerabilities. This study, therefore, seeks to fill this gap by analyzing the effect of external debt on Nigeria's economic growth from 1981 to 2023.

II. Literature Review

2.2.1 Conceptualization

External Debt

The International Monetary Fund (2023) defines external debt as outstanding liabilities that require future payment of principal and/or interest by the debtor to the non-resident. World Bank (2023) describes it as the portion of a country's overall debt borrowed from foreign lenders, including governments, commercial banks, and international financial institutions, which must be repaid within a certain timeframe and in a foreign currency. External debt can also be viewed as funds borrowed from foreign sources, including bilateral, multilateral, and private lenders, to finance government activities and support economic development (Yusuf and Mohd, 2021).

These definitions generally agree on the fundamental aspects of external debt: it represents the obligations of residents of a country to non-residents, it includes both public and private debt, and it requires future payments of principal and/or interest. Domestic savings may not be able to provide all the required infrastructures that can lead to the industrialization of a developing country. Therefore, developing countries rely on external financing to fill the developmental vacuum and meet economic growth needs that domestic saving is unable to satisfy.

Economic Growth

Economic growth can be defined as an increase in real gross domestic product (RGDP), which is GDP adjusted for inflation. Economic growth can be positive or negative, with negative growth referred to as the economy shrinking, characterized by economic recession or depression and vice versa (Godwin, 2022).

Economic growth simply entails the increase of the national income, gross national income, and gross domestic product. It is usually calculated in real, inflation-adjusted terms to eliminate the distorting effect of inflation on the prices of goods produced (Godwin, 2022). Yusuf and Mohd (2021) describe economic growth as a rise in a nation's productive capacity, typically indicated by increases in GDP, which enhances the standard of living and overall economic well-being. They emphasize that growth stems from improved productivity, driven by investments in physical and human capital, technological advancements, and efficient resource allocation.

Theoretical Review

The relationship between external debt and economic growth has been widely studied, with various theories providing insights into how debt impacts economic growth. The following theories shall provide a framework for understanding how countries, particularly developing economies, can leverage external borrowing to drive growth while managing the risks of debt distress.

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Empirical Literature

Recent empirical studies have explored the complex relationship between external debt and Nigeria's economic growth, revealing mixed outcomes based on different periods, methodologies, and economic conditions. Ohiomu (2020), using the Autoregressive Distributed Lag (ARDL) bounds testing approach, found that external debt and debt servicing significantly hinder investment in Nigeria, thereby suppressing economic growth. His findings support the debt overhang and crowding-out hypotheses, where large debt burdens reduce the incentive for both domestic and foreign investments.

In another study, Fortune (2021) employed Ordinary Least Squares (OLS) and Granger causality tests to examine the debt-growth relationship from 1981 to 2019. The study concluded that external debt had a negative but statistically insignificant effect on economic growth, with no evidence of causality between the two variables. This suggests that Nigeria's external borrowing may not be directly linked to its growth trajectory, possibly due to inefficiencies in public investment.

Ogonegbu and Muthoka-Kagwaini (2025) used an ARDL model to analyze data from 2010 to 2022. Their study found that while external debt initially contributes to economic growth through increased public investment in infrastructure, rising debt servicing costs quickly erode these benefits. They emphasized that the long-term effect of debt depends heavily on how borrowed funds are utilized and whether they are invested in productive sectors.

John (2023) approached the issue using ARDL analysis to investigate Nigeria's economic development indicators in relation to external debt. The results showed that external debt negatively and significantly affects GDP growth and inflation, although its impact on Gross National Income per capita was not statistically significant. These results suggest that external debt, while influential, may not translate into tangible welfare improvements unless complemented by sound macroeconomic policies.

Similarly, Ogbodo, Okafor, and Nwaobi (2022) conducted an OLS regression covering 1990 to 2020 and found a positive and significant relationship between both external and domestic debt and Nigeria's GDP. Their study diverges from many others by highlighting that external borrowing can enhance economic growth, particularly when funds are allocated to productive sectors and supported by fiscal discipline and transparency.

Obasi, Hassan, and Alika (2025) evaluated the combined effects of public debt and infrastructure on growth using data from 1981 to 2022. They discovered that external debt has a negative relationship with economic growth, while infrastructure development has a strong and positive effect. Their findings underscore the importance of channeling debt into sectors that directly stimulate the economy and improve productivity.

A broader regional study by Ashakah et al. (2024) examined the ECOWAS sub-region, including Nigeria, using panel data techniques. Their findings showed that external debt has a statistically significant negative effect on economic growth, though the impact of debt servicing was not significant. This suggests that while debt itself can be detrimental, the burden of servicing it may vary depending on institutional and macroeconomic conditions.

Focusing on institutional dynamics, Iyoboyi and Badiru (2024) emphasized the role of economic governance in the debt-growth relationship. They found that weak institutions in Nigeria amplify the negative impact of external debt on growth. Their research calls for stronger public financial management systems and greater transparency to ensure that borrowing translates into development outcomes.

Akinola and Ohonba (2024) investigated the effects of external debt alongside foreign direct investment (FDI) on Nigeria's economic performance using ARDL and Granger causality methods. Their results showed that both external debt and FDI positively influence economic growth, although excessive debt servicing could eventually offset these gains. They concluded that a balanced approach is required, combining external finance with debt sustainability frameworks.

Further, Ojonye, Jumbo, and Oboh (2024) conducted a long-term study (1981–2022) using ARDL techniques. They found that external debt negatively affects Nigeria's economic growth in the long run due to debt overhang effects, while domestic debt, if well-managed, can play a positive role. Their findings suggest that external borrowing should be cautiously approached, with a focus on improving debt efficiency and reducing dependency on foreign loans.

Okonkwo et al (2023) examined the Sustainability of External Debt on Economic Growth: Econometric Evidence from Nigeria. This study adopted the descriptive ex-post facto research design and the time series data on the variables were obtained from the CBN Statistical Bulletin and the Nigerian Bureau of Statistics. The data were analyzed using the Granger Causality Test and the Ordinary Least Square regression analysis. The findings of the study revealed that external debt has a positive and significant relationship with economic growth while

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external debt service and external debt to export ratio both have a negative relationship with economic growth. The results of the Granger Causality test revealed that unidirectional causality (effect) was found flowing from external debt to exports ratio and external debt to economic growth while there was no causality found between external debt service and economic growth in Nigeria.

Ikubor et al (2022) examined the effect of external debt and infrastructural developments in emerging economies: evidence from Nigeria for the period 1979-2019. The study used Robust least square regression, Autoregressive Distributed lag (ARDL), and the Error Correction Model to test the variables at the 0.05 significance level. The results indicate that external debt has a positive and significant effect on the dependent variable in the short-run but shows no significant correlation with infrastructural developments proxy by capital investments in the long-run and a negatively insignificant nexus with real GDP.

Manasseh et al (2022) examined the impact of external debt on economic growth. Also, the interactions of governance, external debt, and external debt volatility were further investigated with emphasis on the interactive effect of governance as proxied by Kaufmann, D., (2007) quality governance measures such as government effectiveness, political stability, voice and accountability, regulatory quality, and corruption control on economic growth. 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 Generalized Method of Moments estimation technique was adopted. Empirical findings from the study reveal that external debt and external debt volatility have a negative and significant impact on economic growth in SSA.

Agyeman et al (2022) estimated an augmented endogenous economic growth model to investigate the extent to which capital flight affects the impact of external debt on economic growth in selected sub-Saharan African countries. The estimations were done with the aid of a dynamic system generalized method of moment's technique with data from 2000 to 2015. The direct impact of capital flight and external debt as well as their combined effect on economic growth was found to be negative and statistically significant.

III. Methodology

The study employs a quantitative research design, leveraging time series econometric techniques to evaluate the relationship between external debt and Nigeria's economic growth. This approach is ideal for identifying dynamic interactions over time and understanding long-run and short-run effects (Gujarati & Porter, 2009).

3.1 Source of Data

The study used secondary annual time series data. The data for all the variables were obtained from the statistical bulletin of the Central Bank of Nigeria (CBN, 2023) and the Debt Management Office (2023). The variables on which the data was collected from CBN are Real Gross Domestic Product (RGDP), Labour Force Participation Rate and Exchange Rate, while data on external debt stock and external debt servicing was sourced from the Debt Management Office. Note that RGDP is the dependent variable on whose other variables are explained.

3.2 Model Specification

This study adapted the model of external debt as funds borrowed from foreign sources, including bilateral, multilateral, and private lenders, to finance government activities and support economic development. Their study highlights the dual nature of external debt, which can stimulate economic growth in the short term but also lead to adverse long-term effects if not managed efficiently. They emphasize that while external borrowing can address budgetary constraints, its sustainability depends on prudent fiscal management and effective deployment of borrowed resources who investigated the effect of government debt on Nigeria's economic growth using annual data from 1980 to 2018. The functional relationship of the model is thus written as:

RGDP=f (EDS, DDS, DSP, FRP, INTR, GFCF, FDI)
…….....1
Where:
RGDP = Real Gross Domestic Product
EDS = External Debt Stock
DDS = Domestic Debt Stock
DSP = Debt Service Payments
FRP = Foreign Reserve Position
INTR = Effective Interest Rate
GFCF = Gross Fixed Capital Formation
FDI = Foreign Direct Investment

The specific econometric model for estimation is as follows.
$RGDP= \beta_0+ \beta_1EDS+ \beta_2DDS + \beta_3DSP+ \beta_4FRP+ \beta_5 INTR+ \beta_6GFCF+ \beta_7FDI +\mu_t$ 2
Where:
μ_t = Stochastic error term,
β_0 = Intercept of relationship in the model/constant,
β_1- β_7= Slope of the regression equation.

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IV. Results and Discussion

Augmented Dickey-Fuller (ADF) Unit Root Test

Table 1
Results of the ADF Unit Root Test

Variables	ADF @ Level	ADF @ First Diff.	Remark
LRGDP	-0.983375	-4.034236**	I(1)
C.V@5%	(-2.938987)	(-2.936942)	
LEDS	-3.441636**	-8.487484**	I(0)
C.V@5%	(-2.935001)	(-2.936942)	
LEDR	-1.748469	-5.918127**	I(1)
C.V@5%	(-2.935001)	(-2.936942)	
LEXR	-2.144508	-5.444416**	I(1)
C.V@5%	(-2.935001)	(-2.936942)	
LFPR_1	-0.521217	-3.409730**	I(1)
C.V@5%	(-2.960411)	(-2.963972)	

Source: E-views 10, Output (2024)
Note: ** denotes stationarity order, CV means critical value @5%

The unit root test for stationarity was carried out using the Augmented Dickey-Fuller (ADF) unit root test. The result of the ADF tests in Table 1 revealed that LRGDP, LEDS, LEXR and LFPR_1 are stationary at first difference I (1) while LEDS is stationary at level I(0).

The decision rule is that If ADF test statistic is greater than the test critical values or the P-value is less than 5% level of significance, we reject the null hypothesis and conclude that the time series is stationary otherwise the null hypothesis cannot be rejected. More so, if the variables are integrated of order zero I (0), the model will be estimated at levels i.e. without differencing otherwise, they are estimated at whatever level of integration they assumed. Therefore, the variables under study are of mixed order I (0) and I (1). Thereby, the justification for the use of ARDL bounds tests for cointegration to test for long-run relationships among the variables of study.

Lag Length for F- Bound Cointegration Test

Table 2
The lag length criteria for F-Bound Test

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-119.2457	NA	0.002722	8.283048	8.516581	8.357757
1	33.79499	244.8651*	5.49e-07*	-0.252999*	1.148198*	0.195256*
2	52.55015	23.75653	9.69e-07	0.163324	2.732186	0.985125

Source: E-views 10, Output (2024)

Table 2 presents the lag order selection by five different criteria. All the lag selection criteria suggest that a lag length of one (1) is optimal for the F-bound cointegration test. Therefore, this study used a lag length of one (1) for the cointegration test as suggested by AIC information criteria.

Cointegration Test

The cointegration test is a method of modeling non-stationary series. ARDL F-bound for co-integration test shall be applied to this model.

Null Hypothesis

H_0: No Cointegrating equation in the model

Decision Rule: If the F-statistics lie above the upper bound of the critical value for a given significance level, the study will fail to accept the null hypotheses of no co-integration. If the F-statistics lie below the

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lower bound of the critical value for a given significance level, the study will fail to reject the null hypotheses of no integration. However, if the F-statistics lie in between the lower and the upper bound of the critical value for a given significance level, then it is said to be inconclusive.

ARDL Bound Test for Cointegration

Table 3

ARDL Bound Testing for Cointegration Analysis		H0: No cointegration.		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	26.19190	10%	2.45	3.52
K	4	5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

Source: E-views 10, Output (2024)

The result of the F-bound test for the long-run relationship among external debt variables and economic growth is shown in Table 3. The result revealed that the value of F-statistics is 26.19190, which is greater than both the upper bound critical value of (4.01) and lower bound critical value of (2.86) at 5% level of significance. This implies that there is a cointegration (long-run relationship) between economic growth (LRGDP), and independent variables such as external debt stock (LEDS), external debt servicing (LEDR), exchange rate (LEXR) and labour force participation rate (LFPR_1). Therefore, the null hypothesis of no cointegration between the variables is rejected and the alternative hypothesis is accepted. Hence, the variables have a long-run equilibrium relationship with one another.

ARDL Model of Long-Run Effect of External Debt Variables

Table 4: ARDL Long-run estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LEDS	-0.135915	0.024998	-5.437107	0.0006
LEDR	-0.112425	0.021368	-5.261356	0.0008
LEXR	0.397267	0.017973	22.10387	0.0000
LFPR_1	0.006851	0.053476	0.128107	0.9012

Source: E-views 10, Output (2024)

The relationship among the variables is shown in Table 4, where the coefficient of external debt stock (LEDS) in the long run has a significant negative relationship with economic growth (LRGDP). The coefficient of external debt stock (LEDS) is -0.135915 which implies that a percent increase in LEDS will lead to about 0.14% decrease in LRGDP holding other factors constant. This is consistent with the apriori expectation that external debt stock is inversely related to economic growth. The negative relationship between external debt stock (LEDS) and economic growth (RGDP) could be attributed to the fact that the external borrowings have not been channeled to highly productive activities such as capital projects and the development of the real sector of the economy.

Table 4 also revealed external debt servicing (LEDR) variable to have negative significant relationship with economic growth (LRGDP) in the long run with an estimated coefficient of -0.112425. This implies that, all other factors being constant, one percent increase in external debt servicing (LEDR) would lead to a decrease in the economic growth (LRGDP) by 0.11% in the long run. This is affirmed to be consistent with economic theory and apriori expectation as debt servicing in any economy is expected to absolve resources that would have been used for productive expansion in the long run thereby hindering economic growth and development.

The result from Table 4 also shows that exchange rate (LEXR) has a positive significant

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relationship with economic growth (LRGDP) with an estimated coefficient of 0.397267 in the long run. This is consistent with apriori economic expectation, and it implies that a percent increase in exchange rate (LEXR) will increase economic growth by 0. 40%, in the long run. Also, in the long-run, labour force participation rate (LFPR_1) shows a positive relationship with economic growth with an estimated coefficient of 0.006851.

ARDL Short-Run Effect of External Debt Variables of External Debt Variables

Table 5

Results of ARDL Error Correction Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.620547	0.325042	14.21521	0.0000
D(LEDS)	-0.020509	0.003919	-5.232845	0.0008
D(LEDS(-1))	0.017138	0.002932	5.844878	0.0004
D(LEDR)	-0.008502	0.001764	-4.820126	0.0013
D(LEDR(-1))	0.019554	0.002527	7.736680	0.0001
D(LEXR)	-0.002471	0.006270	-0.394111	0.7038
D(LEXR(-1))	-0.093871	0.009008	-10.42096	0.0000
D(LFPR_1)	0.028490	0.011239	2.535053	0.0350
D(LFPR_1(-1))	-0.078395	0.014834	-5.284844	0.0007
ECT(-1)*	-0.328578	0.023444	-14.01568	0.0000

R-squared	0.980699	Mean dependent var	0.043850
Adjusted R-squared	0.956574	S.D. dependent var	0.034893
S.E. of regression	0.007271	Akaike info criterion	-6.714199
Sum squared resid	0.000634	Schwarz criterion	-5.952940
Log likelihood	109.9988	Hannan-Quinn criter.	-6.481475
F-statistic	40.64958	Durbin-Watson stat	2.917939
Prob(F-statistic)	0.000000		

Source: E-views 10, Output (2024)

Table 5 shows the results of the short-run relationship between economic growth (LRGDP) and external debt variables (i.e., LEDS, LEDR, LEXR and LFPR_1). The result revealed that there exists a negative significant relationship between external debt stocks D(LEDS) and economic growth in the current year with a coefficient of -0.020509. This implies that a percentage increase in external debt stocks in the current year will lead to 0.021% decrease in the economic growth. Furthermore, external debt stock in the previous one year (D(LEDS (-1)), has a positive significant relationship with economic growth in the short-run. The coefficient with a value of 0.017138, implies that, keeping all other factors constant, a percent increase in the external debt stocks in the previous one year will cause the economic growth to increase by 0.02% in the short-run.

In the same vein, the short run result also revealed that external debt servicing (LEDR) in the current year (D(LEDR)) has a negative significant relationship with economic growth. Its coefficient is -0.008502, means that a percent increase in (D(LEDR)) will lead a decrease in (LRGDP). In addition, external debt servicing in the previous one year (D(LEDR(-1)) , revealed a positive significant relationship with economic growth at 1% with a coefficient values of 0.019554. It thus mean that a percentage increase in the external debt servicing (D(LEDR(-1)) will lead to 0.02% in the short-run. Furthermore, the exchange rate in the current year (D(LEXR)) has a negative insignificant relationship with economic growth with a coefficient value of -0.002471. This means that an increase in exchange rate by one percent in the current year will lead to a decrease in economic growth by 0.003 percent.

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Additionally, the previous one year of exchange rate (D (LEXR (-1)), revealed a significant negative relationship with the economic growth in the short-run. Its coefficients of -0.093871 which implies that all things being equal, a percentage increase in exchange rate (D(LEXR(-1)), will lead to 0.1 percent decrease in the economic growth (LRGDP) in the short-run. However, labour force participation rate in the current year and the previous one year shows a positive significant relationship with the economic growth (LRGDP) with coefficient values of 0.028490 and 0.086364 which clearly indicate that a percent increase in labour force participation rate (D(LFPR_1, will lead to an increase in LRGDP by 0.03 percent. While labour force participation rate in the previous one year (D(LFPR_1(-1)), revealed a significant negative relationship with the economic growth, with a coefficient value of -0.078395 which indicate that a percent increase in D(LFPR_1(-1)), will lead to 0.1 percent decrease in the economic growth in the short run.

Results from table 5 however shows that the slope coefficient of the error correction term (ECT (-1)) is negative and statistically significant at 0.05 probability level. The slope coefficient which is -0.328578 represents the speed of adjustment from short run dynamics to the long run equilibrium. The coefficient of error correction term (ECT) suggests that in the absence of variation in the specified external debt variables in the short run, that about 0.33% percent of the divergence between actual and equilibrium economic output is corrected annually in the country. Furthermore, the result from the table also shows that 98% of variations in economic growth (LRGDP) are explained by the changes in the explanatory variables (external debt stock, external debt servicing, exchange rate and labour force participation rate). The Durbin-Watson value of 2.917939 indicates the presence of negative serial correlation in the model.

Diagnostic Test

Table 6

The results of the Diagnostic Test

Test	F-statistics	Obs* R-squared	Probability
Serial Correlation	3.348919	9.060824	0.1099
Heteroscedasticity	0.467392	14.73021	0.9170
Ramsey Reset	0.078089	-	0.7880
Jaque Bera	1.865012	-	0.393566

Source: E-views 10, Output (2024)

Table 6 reveals the post estimation statistics in order to check whether the coefficients of the model have the potential for generating inference or not. The first test is the serial correlation LM test developed by Breusch and Godfrey (1978). The null hypothesis is that H_0: there is no serial correlation residual in the regression. The result from the table shows that p-value is 0.1099 which is greater than 5% critical value. This suggests that the null hypothesis of the absence of serial correlation cannot be rejected.

The probability value for the heteroskedasticity test developed by White (1980) is 0.9170, which is greater than 5% critical value, implying that the null hypothesis of no heteroskedasticity in the residuals cannot be rejected. Furthermore, the RAMSEY RESET test, developed by Ramsey (1969) for testing for misspecification of functional form. The null hypothesis of the test is that H_0: the equation has no functional form misspecification. The p-value is 0.7880 which is greater than the 5% critical value, which means there is no functional form misspecification in the regression. Finally, is the Jaque Bera (Normality test) developed by Jaque and Bera (1980) to test for the normality distribution of the residuals. The null hypothesis H_0: The residuals are normally distributed.

V. Conclusion and Policy Recommendations

This study uses annual data spanning 1981 to 2023 to assess the effects of external debt on economic growth in Nigeria**.** The long-run result shows that external debt stock has a significant inverse relationship with economic growth in Nigeria during the period under review. Furthermore, external debt servicing revealed a negative significant relationship with economic growth while exchange rate and labour force participation rate shows a positive significant relationship with economic growth. Meanwhile, the short-run analysis revealed a negative significant relationship between external debt stocks in the current year D(LEDS), external debt servicing in the current (D(LEDR), exchange rate in the current year and its previous one

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year (D(LEXR), D(LEXR (-1))), the previous one year of labour force participation rate D(LFPR_1(-1)) and economic growth in Nigeria. However, the previous one year of external debt stock (D(LEDS(-1)), the previous one year of external debt servicing (D(LEDR(-1)), while the current year of labour force participation rate (D(LFPR_1) has positive significant relationship with economic growth. Based on these findings, it can be affirmed that external debt within the period of study has an effect on economic growth in Nigeria both in the long run and short run. Therefore, the study made the following recommendations.

Since findings revealed that external debt stock has a negative significant effect on economic growth, there is a need for the Nigerian government should adopt a more cautious approach to external borrowing, ensuring that loans are used for productive investments that can generate returns sufficient to cover debt servicing costs. In addition to the first recommendation, the government should enhance the capacity of the Debt Management Office to monitor and manage external debt effectively, ensuring transparency and accountability in the use of borrowed funds.

Also, Debt Management Office (DMO) should set mechanisms in motion to ensure that loans are utilized for the purpose for which they were acquired. This could be achieved through proper monitoring of the use to which the funds are put. In doing so, defining the purpose, duration, moratorium requirements and commitments, negotiation fees, etc., and the conditions under which the government can approve and guarantee external loans. It could also explore debt restructuring or renegotiation options with creditors to improve the terms and conditions of existing debt, such as lower interest rates or longer repayment periods.

Also, the Nigerian government should ensure adequate and effective implementation of macroeconomic policies that promote the diversification of the Nigerian economy, reducing its reliance on oil exports and expanding the productive capacity of other sectors in addition to providing policies that would enhance stable exchange rates, as effective and prudent management of exchange rate policies will significantly ensure the stability of country's exchange rate (naira) and further enhance economic growth.

Lastly, Development activities in Nigeria should be financed through increased export earnings spearheaded by export-led-growth strategy as well as investment in human capital as these would be the best alternative to external debt.

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