THE EFFECT OF EXTERNAL DEBT, EXTERNAL DEBT SERVICE, AND EXTERNAL RESERVE ON ECONOMIC GROWTH IN NIGERIA

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Abstract

Despite numerous efforts to manage external debt, West African countries continue to experience rising debt levels, increasing debt service payments, and concerns about debt sustainability. It is critical to analyse whether external debt positively contributes to economic growth or whether excessive debt and debt service obligations undermine economic progress. This study examines the impact of external debt, external reserves, and external debt service on economic growth in selected English-speaking West and East African countries from 1980 to 2022. Using the Feasible Generalised Least Squares (FGLS) estimation technique, the study analyses how these macroeconomic factors influence Gross Domestic Product (GDP), measured in current U.S. dollars. Additionally, broad money as a percentage of GDP and deposit interest rates are control variables for financial sector dynamics. The empirical findings reveal that external debt, external reserves, and external debt service significantly and positively affect economic growth in the selected countries. The findings hold significant policy implications for regional governments and financial organisations. Responsible management of external debt, strategic accumulation of reserves, and adequate debt servicing policies can strengthen economic resilience and foster sustainable growth.

Keywords: Debt, External, FGLS, Reserve, Service

1.0 INTRODUCTION

The influence of external debt on economic growth is a complex and widely discussed topic, especially in the context of developing economies. Governments in these countries frequently rely on external borrowing to address fiscal deficits, finance critical infrastructure projects, and stimulate overall economic development. Although external debt can supply essential capital to enhance economic activities, excessive accumulation and high debt-servicing obligations can pose significant risks to financial stability (Dinka'a et al., 2023).

West and East African economies often face vulnerabilities due to a significant reliance on commodities, resulting in economic fluctuations that correlate with global market prices. Additionally, Political instability—manifested through conflicts, governance issues, or leadership changes—introduces another layer of uncertainty that can disrupt economic activities and deter investment. The interplay of these factors frequently leads to substantial fiscal deficits, forcing governments to pursue external borrowing to fund their national budgets. Consequently, numerous West and East African countries heavily depend on external debt to promote vital development projects and enhance infrastructure (Were, 2001; Yusuf & Mohd, 2021).

External debt refers to the sum of money a nation owes overseas lenders, including multilateral organisations (like the International Monetary Fund and the World Bank), bilateral lenders (other nations), and private financial institutions. It is a vital component in the economic growth of numerous nations, especially in developing countries where domestic resources often fall short of the requirements for sustainable growth (Babu et al., 2014). In many West and East African nations, for instance, there is a significant dependence on external borrowing to bridge the gap between inadequate savings and the necessary level of investment. This external funding is instrumental in facilitating crucial infrastructural development projects, such as transportation networks, energy production, and healthcare facilities, all of which are essential for fostering economic growth and improving the quality of life for citizens (Kasidi & Said, 2013; Ijirshar et al., 2016).

However, while external debt can be useful for financing development, it also carries inherent risks. If countries become overly reliant on borrowing from foreign creditors, they may encounter economic instability characterised by a growing debt burden that outpaces their ability to repay. A "debt overhang" situation can occur, wherein the weight of existing debt hampers future investments, discouraging domestic and foreign investors. This feedback loop can lead to a stagnation of economic growth, as resources are diverted to servicing debt rather than being invested in productive capacities or social initiatives (Awan & Qasim, 2020; Epaphra & Mesiet, 2021).

Debt servicing involves repaying the principal and interest on foreign debt. Proponents of the argument that external debt servicing positively influences economic growth claim that properly managing and repaying external debt enhances a nation's credit rating, attracting FDI and portfolio investments. This influx of capital leads to job creation, promotes innovation, and facilitates infrastructure development, all driving economic growth. A solid repayment history enables nations to secure additional loans on more favourable terms, crucial for funding public projects and social services that enhance productivity and overall welfare. Furthermore, sound debt management contributes to macroeconomic stability, allowing countries to mitigate risks associated with economic shocks and create a more predictable environment for investment (Were, 2001; Ajayi & Oke, 2012).

Arguments against the notion that external debt service promotes economic growth emphasise that it diverts substantial financial resources away from domestic investment and development. When governments prioritise debt repayments, they face fiscal constraints that limit funding for essential services and infrastructure, ultimately impeding economic productivity. This situation creates a 'crowding out' effect, in which government borrowing restricts the

availability of capital for the private sector. Additionally, rising borrowing costs can suppress private investment and hinder job creation if interest rates increase. Furthermore, external debt is frequently denominated in foreign currencies, which makes countries vulnerable to exchange rate fluctuations. A depreciating currency raises repayment costs, potentially triggering inflation that diminishes purchasing power and discourages investment (Awan & Qasim, 2020; Epaphra & Mesiet, 2021).

Total external reserves are a country's holdings of foreign currencies, precious metals like gold, Special Drawing Rights (SDRs) from the IMF, and other quickly convertible assets. These reserves are crucial for economic stability and growth. Substantial external reserves allow a country to manage economic fluctuations effectively, providing a buffer against external shocks and fostering investor confidence. This stability is essential for maintaining a stable exchange rate, which helps businesses and investors in long-term planning. Additionally, strong reserves enable a country to meet international financial obligations and service external debt, enhancing creditworthiness and allowing for better loan and investment terms, ultimately supporting economic growth (Benli et al., 2022; Gbarawae & Tugwell, 2023).

Arguments against maintaining substantial total external reserves for economic growth include the fact that large reserves are often invested in low-yielding assets, such as U.S. Treasury bonds, which typically do not generate significant returns when compared to investments in critical areas like infrastructure, education, or healthcare that actively promote economic growth. Additionally, if these reserves are built up through the accumulation of foreign currency, this may result in an excess money supply domestically, potentially leading to inflation. Moreover, countries prioritising reserve accumulation may inadvertently neglect domestic investment, causing slower economic development and reduced job creation (Oladunjoye & Akinbobola, 2018; Onah et al., 2022).

The influence of foreign debt on economic growth is especially significant in English-speaking nations of West and East Africa, considering the area's heavy dependence on external loans and global assistance. Although borrowing from abroad can bring substantial benefits, there are rising concerns about its sustainability and impact on macroeconomic stability and long-term development. Critics claim that an overload of external debt could trap economies, damaging their performance and obstructing sustainable progress. Conversely, proponents argue that external borrowing can promote growth by funding vital areas like infrastructure, education, and healthcare if it is appropriately managed.

Furthermore, despite existing research on the effect of external debt on economic growth, there is limited empirical analysis focusing specifically on West and East African English-speaking countries. These regions share unique economic and institutional characteristics, such as dependence on commodity exports, susceptibility to external shocks, and variations in debt management strategies. Additionally, macroeconomic elements like total reserves can improve or reduce external debt's influence on economic growth. It is vital to understand how these macroeconomic factors interact with external debt to affect the economic growth of these nations. This research examines the effects of external debt, the servicing of external debt, and external reserves on the economic growth of selected English-speaking countries in both West and East Africa.

2.0 THEORETICAL FRAMEWORK

The Solow Growth Model

The Solow Growth Model is an important framework for analysing and understanding the dynamics of long-term economic growth in an economy. Developed by economist Robert Solow in the mid-20th century, this model highlights the importance of capital accumulation, labour force growth, and technological advancement as key factors contributing to economic expansion over time.

Foreign debt can be a source of financing for investments in physical capital. According to the Solow Model, such investments can increase the capital stock, resulting in higher output and growth in the short term. However, if external debt becomes excessive, it may create repayment challenges that adversely impact economic growth. High debt levels can divert a significant portion of output towards servicing that debt instead of fostering productive investment. While external debt can initially enhance capital accumulation and stimulate economic growth, sustained growth in the Solow Model ultimately hinges on technological progress. Overreliance on external debt without corresponding improvements in productivity can lead to economic instability.

2.2 EMPIRICAL REVIEW

2.2.1 The effect of external debt and external debt service on economic growth

Were (2001) examined how external debt affected Kenya's economic growth from 1970 to 1985. The research applied the Auto-Regressive Distributed Lag (ARDL) estimation method to conduct its analysis. The findings revealed that external debt significantly negatively influences economic growth. In contrast, the study showed that servicing external debt significantly positively affects economic growth.

Ijirshar et al. (2016) explored the influence of external debt on Nigeria's economic growth from 1981 to 2014. They applied the Johansen co-integrating estimation technique for their analysis. They found that external debt significantly favourably influences economic growth. Conversely, the service associated with external debt significantly negatively affects economic growth.

Epaphra and Mesiet (2021) investigated the impact of external debt on the economic growth of 45 African nations between 1990 and 2017. They employed the fixed-effect estimation technique for their analysis. The results showed that external debt and debt service significantly negatively impact economic growth.

Akanbi et al. (2022) examined the impact of external debt on Nigeria's economic growth between 1981 and 2020. They employed the ARDL estimation technique for their analysis. The findings indicated that external debt and debt service do not significantly affect economic growth.

2.2.2 The effect of external reserve on economic growth

Nwafor (2018) explored the effect of external reserve growth on Nigeria's economy from 2004 to 2015. The analysis used the Ordinary Least Squares (OLS) estimation technique. The findings indicated that external reserves do not significantly affect Nigeria's economic growth.

Benli et al. (2022) explored the influence of external reserves on the economic growth of 41 emerging nations from 1970 to 2019 and employed the panel ARDL estimation technique for analysis. The findings indicated that external reserves significantly affect the long-term economic growth of emerging nations.

Gbarawae and Tugwell (2023) investigated the impact of external reserve growth on Nigeria's economy from 1985 to 2022. The study analysed the data using the Auto-Regressive Distributed Lag (ARDL) and the Error Correction Model (ECM). The findings revealed that external reserves significantly positively influence Nigeria's long-run economic growth.

Nwamuo (2023) explored the influence of external reserve growth on Nigeria's economy from 1981 to 2020. The analysis employed the Auto-Regressive Distributed Lag (ARDL) and Error

Correction Model (ECM). The results showed that, in the long run, external reserves do not significantly affect Nigeria's economic growth.

3.0 METHODOLOGY

3.1 Sample Size and Sources of Data

The dataset includes nine English-speaking nations from West and East Africa: Nigeria, Ghana, Gambia, Sierra Leone, Kenya, Rwanda, Tanzania, Uganda, and Liberia, from 1980 to 2022. The annual time-series data for this analysis was obtained from the World Bank's World Development Index.

3.2 Model Specifications

$LGDP_{it} = \delta_0 + \delta_1 LEXD_{it} + \delta_2 LEDS_{it} + \delta_3 LREV + \delta_4 LBMO_{it} + \delta_5 DIT_{it} + + \mu_{it}$

Where:

LGDP = Natural logarithm of gross domestic product (current US$)
LEXD = Natural logarithm of external debt (current US$)
LEDS = Natural logarithm of external debt service (current US$)
LBMO = Natural logarithm of broad money (% of GDP)
DIT = Deposit Interest Rate
μt = error term
$\delta 0$ = represents the constant $\delta 1$ - $\delta 4$ = represents the coefficient of the independent variables

4.0 DATA ANALYSIS AND RESULTS

4.1 Descriptive Statistics

Table 4.1: Descriptive statistics

Stats	Mean	Min.	Max.	Std. Dev.	Obs. (N)
GDP (current US$)	36,500,000,000	132,000,000	574,000,000,000	88,700,000,000	387
EXD (current US$)	8,790,000,000	137,000,000	103,000,000,000	14,400,000,000	387
EDS (current US$)	647,000,000	187985.1	9,640,000,000	1,370,000,000	387
REV (current US$)	3,230,000,000	267707.400	53,600,000,000	8,390,000,000	387
DIT	11.271	2.433	54.667	6.467	387
BMO	19.644	0.015	57.021	9.944	387

Source: Authors' Computation (2025)

Table 4.1 displays the results of the descriptive statistics.

GDP: The mean GDP of $36.5 billion represents the average across the countries, while the minimum of $132 million shows the smallest economy in the sample. The maximum GDP of $574 billion likely reflects a major economy like South Africa. With a standard deviation of $88.7 billion, the countries have considerable variability in GDP.

EXD: The average external debt among the countries surveyed is $8.79 billion. The country with the lowest external debt has an obligation of $137 million, while the country with the highest external debt faces an enormous obligation of $103 billion. This wide range highlights the significant disparities in external debt levels across the sample. A standard deviation of

$14.4 billion also underscores the considerable variation in these debts. variation in debt levels, revealing economic or financial differences among the nations.

EDS: The mean external debt service (EDS) is $647 million. On the lower end, the lowest recorded EDS is $187,985.1, indicating that some countries face relatively modest external debt commitments. In contrast, the highest recorded EDS is $9.64 billion, implying that at least one country in the sample bears a considerably larger debt burden. Moreover, with a standard deviation of $1.37 billion—more than twice the mean—there is a pronounced variability in external debt service levels among the countries.

REV: The average total reserves among the countries in the sample stand at $3.23 billion, indicating a moderate level of reserves. The lowest total reserve is $267,707.40, while the highest is $53.6 billion—the high standard deviation of $8.39 billion highlights a significant reserve disparity, emphasising regional economic inequality.

DIT: The average deposit interest rate among the sampled countries is 11.27%. The lowest recorded rate is 2.43%, likely due to strong financial stability or low inflation. In contrast, the highest rate of 54.67% suggests high inflation or economic instability. The standard deviation of 6.467% shows moderate to high variation in interest rates across these nations.

BMO: On average, the level of broad money across the countries sampled is approximately 19.64% of GDP, reflecting the general liquidity in these economies. The lowest recorded value is 0.015, indicating some countries have very low broad money relative to GDP. The highest value is 57.021, significantly above the mean, showing that certain countries maintain much higher levels. A standard deviation 9.944 reflects moderate to high variation in broad money levels among countries.

4.2 Test for Multicollinearity

Tables 4.2 and 4.3 present the correlation matrix and the VIF (Variance Inflation Factor) test results.

Table 4.2: Correlation Analysis

	LEXD	LEDS	DIT	REV	BMO
LEXD	1.000				
LEDS	0.814	1.000			
DIT	-0.059	0.085	1.000		
REV	0.701	0.745	-0.139	1.000	
BMO	0.194	0.335	-0.039	0.370	1.000

Source: Authors' Computation (2025)

Table 4.3 Variance Inflation Factor

Variable	VIF
LEDS	**4.170**
LEXD	**3.370**
LREV	**2.700**
BMO	**1.220**
DIT	**1.140**
Mean VIF	**2.520**

Source: Authors' Computation (2025)

LEXD and LEDS (0.814): A strong positive correlation shows that external debt and its service typically fluctuate together. LEXD and LREV (0.701): A moderate positive correlation indicates that higher external debt is associated with increased total reserves. LEDS and LREV

(0.745): A strong positive correlation highlights a close linkage between external debt service and total reserves. The Variance Inflation Factor (VIF) test evaluates the extent of multicollinearity among predictor variables in a regression analysis. A higher VIF score indicates a stronger relationship with other predictors, which can skew the regression results. Since the highest VIF score remains significantly below 5, multicollinearity does not represent a significant issue.

4.2 Empirical Results

4.2.1 Pre-Estimation Checks

Table 4.4 Pre-Estimation Checks Results

Variables	Pesaran CD Test	Im-Pesaran-Shin Test		Westerlund Test
		Level	1st Diff.	
LGDP	33.734***	0.013**		2.677***
LEXD	26.885***	0.627	0.000***	
LEDS	19.416***	0.000***		
DIT	12.131***	0.003***		
LREV	32.096***	0.000***		
BMO	12.531***	0.057	0.000***	

Source: **Authors' Computation, 2025**

Statistical significance levels at 0.10*, 0.05 **, and 0.01 ***

The Pesaran CD (Cross-sectional Dependence) test results indicate that all variables exhibit strong cross-sectional dependence at the 1% significance level. This suggests that shocks experienced by one unit (such as a country) can influence others. The Im-Pesaran-Shin (IPS) test results reveal that LEXD and BMO are non-stationary at the level but become stationary after first differencing. In contrast, LEDS, DIT, and LREV are stationary at level. Additionally, the Westerlund test reported a statistic of 2.677, which is significant at the 0.01 level, indicating a long-run equilibrium relationship among LEXED, BMO, LEDS, DIT, and LREV.

Table 4.5: Empirical results

Variable	Coefficient	Prob.
C	1.670***	0.000
LEXD	0.499***	0.000
LEDS	0.183***	0.000
LREV	0.359***	0.000
DIT	-0.017***	0.000
BMO	-0.013***	0.000
Wald Test	4183.530***	0.000

Source: **Authors' Computation, 2025**

Statistical significance levels at 0.10*, 0.05 **, and 0.01 ***

Table 4.5 presents the Feasible Generalised Least Squares (FGLS) estimation findings. The Wald test results demonstrate a statistic of 4183.530 and a p-value of 0.000. This outcome is statistically significant, allowing for the rejection of the null hypothesis and confirming the overall significance of the model.

External Debt (LEXD = 0.499, p = 0.000): The coefficient of 0.499 for external debt is positive and significant, indicating a strong relationship between rising levels of external debt and increased GDP growth. These findings are consistent with studies by Kasidi and Said (2013) and Ijirshar et al. (2016). However, they contradict the conclusions of Awan and Qasim (2020) and Epaphra and Mesiet (2021), who indicated that external debt significantly negatively

impacts economic growth. This suggests that when a country engages in external borrowing and manages this debt effectively, it can lead to significant economic benefits. Specifically, the funds acquired through external debt can be channelled into critical investments, particularly in infrastructure development, such as transportation, energy, and communication systems, and in various productive sectors of the economy. These investments can, in turn, stimulate economic activity, create jobs, and enhance overall productivity, thereby driving sustained economic growth.

External Debt Service (LEDS = 0.183, p = 0.000): External debt servicing positively and statistically significantly influences a country's GDP. These results are consistent with Were (2001) and Ajayi and Oke's (2012) findings. In contrast, they contradict the conclusions of Awan and Qasim (2020) and Epaphra and Mesiet (2021), who revealed that external debt service has a negative impact on economic growth. This finding implies that timely and effective debt repayment is crucial in fostering economic growth. Fulfilling debt obligations may bolster confidence among investors and creditors, thereby contributing to a more robust and stable financial system. Additionally, consistent external debt servicing can improve macroeconomic conditions conducive to sustainable growth.

Total Reserves (LREV = 0.359, p = 0.000): The analysis reveals that total reserves significantly positively influence GDP, indicating that a rise in total reserves correlates with improved economic stability and growth. These results align with the findings of Benli et al. (2022) and Gbarawae and Tugwell (2023). However, they contradict the conclusions of Nwafor (2018) and Nwamuo (2023), who found that total reserve does not affect economic growth. This correlation may be attributed to several factors. Firstly, higher reserves can bolster investor confidence, as they effectively signal a country's ability to manage economic shocks and external pressures. This confidence can increase domestic and foreign investments, further stimulating economic activity. Secondly, substantial reserves often contribute to exchange rate stability. When a country's reserves are robust, it can intervene in the foreign exchange market to mitigate excessive fluctuations in its currency value, fostering a more predictable economic environment conducive to trade and investment.

5.0 CONCLUSIONS AND RECOMMENDATIONS

This paper examined the impact of external debt, external reserves, and external debt service on economic growth in selected English-speaking West and East African countries from 1980 to 2022, utilising the FGLS estimation technique. The empirical findings indicate that external debt, external reserves, and external debt service significantly and positively affect economic growth in the countries examined. These results suggest that, when managed effectively, external borrowing and foreign reserves play an important role in promoting economic growth. In light of these findings, the following policy recommendations are proposed to enhance the sustainable use of external debt and reserves for economic growth: Policymakers should implement strategic debt management practices to ensure that external debt is allocated towards productive investments instead of consumptive expenditures. This strategy would maximise the positive impact on economic growth while reducing the risks associated with debt distress. Governments should also prioritise maintaining substantial external reserves to protect against external shocks and bolster economic stability. A well-managed reserve portfolio can enhance investor confidence and support exchange rate stability, thus further promoting growth. Furthermore, countries should establish efficient debt servicing strategies to maintain investor confidence and ensure continued access to international credit markets. Meeting debt service obligations without compromising essential development expenditures is critical for long-term economic stability.

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