

A REVIEW OF EXTERNAL DEBT SERVICING AND ECONOMIC GROWTH IN NIGERIA

OLABODE ERIC OLABISI

Elizade University, Ilara-Mokin, Ondo State, Nigeria
olabode.olabisi@yahoo.com

USENOBONG JAMES EFFIONG

Elizade University, Ilara-Mokin, Ondo State, Nigeria
usenjames4@gmail.com

Abstract

The threshold of external debt service toward economic growth is a continuously debatable topic among researchers globally. The issue is widely debated, particularly in highly indebted developing countries such as Nigeria. This paper investigates the impact of external debt service on the economic growth of Nigeria from 1985 to 2021. Using the Ordinary Least Squares (OLS) estimation technique, the result indicates that debt service hampers the growth of the Nigerian economy. This implies that the external debt service burden drains the country's income, which should have been channeled to increase future production. The finding also shows that the stock of external debt promotes economic growth. It is hereby recommended that proper management of the external debt stocks by governments in more productive sectors could bring further growth.

Keywords: External Debt Service, External Debt Stock, Ordinary Least Squares, Gross Domestic Product

JEL Classification: F33, F34, F35, O11

1. INTRODUCTION

There is no doubt that for any country to achieve a substantial expansion of its economy through infrastructural facilities, productivity improvement, sophisticated information communication and technology, profitable investment, and overall economic development, debt as an element of its capital structure has a role to play. The amount of money owed by a nation to creditors abroad, including banks, bondholders, and other nations, is referred to as its "external debt." The payments that a nation makes to its foreign creditors in order to settle the principle and interest on its external debt are referred to as debt servicing (Akanbi et al., 2022). The quantity of the debt, the terms of the debt, and the country's economic situation are a few of the variables that affect how the service of external debt affects

economic growth (Ibidolapo Ezekiel, 2020; Ramzan & Ahmad, 2014). In general, having access to capital for investment and development can help the economy flourish when there is a moderate degree of external debt (Idisi et al., 2019; Law et al., 2021; Thao, 2018). However, the weight of debt repayment can become intolerable and have a negative impact on the economy if a nation takes on too much debt or is unable to service its debt because of economic issues (Law et al., 2021).

Therefore, the question yet to be answered is whether the extent of debt servicing on external debt affects economic growth or not. An increase in the debt service on external debt may impact negatively on long term growth, especially when there is a high level of corruption prevailing in the productive sectors. The propositions of both neoclassical and endogenous growth theories support this negative impact of public debt on long-term economic growth (Panizza, and Presbitero, 2014). However, in another scenario, debt accumulation may have a positive effect on both short-term and long-term growth when little or no corruption prevails in a country where government officials are sincere in allocating the borrowed funds to productive investments. Bulow and Rogoff (1990) argue that poor economic management is a factor: most developing countries' huge external debts are the result of poor economic and resource management, which includes overvaluation of exchange rates, inflation rates, interest rates, taxes, and fiscal deficits. They further argued that when these funds are borrowed; governments of developing countries mismanage them. This is supported further by Kenen (1990), who argue that a country with a large external debt may have very low consistent economic growth rates because repaying the principal amount may be difficult while the focus is on external debt servicing. They suggest that such country should solicit for reduction in external debts through international debt relief facility. Krugman's (1989) further suggests that another means of debt servicing payment may be through increase in taxes which of course may decrease capital accumulation/savings, consumption expenditures, and investments. When this happens, economic growth is negatively affected because savings, consumption, investments, expenditures are all components of national income.

Unlike other papers in the existing literature that concentrated on the impact of public debts on growth relationships (see, Cecchetti, Mohanty and Zampolli (2011); Panizza and Presbitero (2014), the scope of this paper covers a very narrow aspect of the effect of debt servicing on economic growth in Nigeria. The outcome may encourage or discourage further external borrowing, especially when the borrowed funds would yield little or no economic benefits.

Based on this, the following hypotheses are testable:

Hypothesis 1

- The stock of external debt has a positive impact on economic growth.

Hypothesis 2

- External debt service payments have a negative impact on economic growth.

Hypothesis 3

- Gross fixed capital formation has a positive impact on economic growth.

Hypothesis 4

- Inflation has a negative impact on economic growth.

1.1 DEBT SERVICING IN NIGERIA: A HISTORICAL PERSPECTIVE

Nigeria, a nation in West Africa, is home to more than 200 million people. It is a lower middle-income nation whose economic development is mostly dependent on proceeds from oil exports (Ikue et al., 2022). Like many other emerging nations, Nigeria has accumulated a sizable amount of external debt to fund infrastructure and development initiatives. The nation, however, has also struggled with the sustainability of its debt and has undertaken a number of debt relief and restructuring initiatives. Nigeria's external debt load significantly increased in 2013 from US\$8 billion to over US\$11 billion in 2016, in part because of the dramatic decrease in oil prices (Ikue et al., 2022; Pinto, 1987). In order to finance development projects, the nation also borrowed money from international lending organizations like the World Bank and the International Monetary Fund (IMF). Recently, Nigeria external debt stock witnessed a significant increase from US\$27 billion in 2019 to over US \$38 billion in 2021. With this rise in the external debt stock, the country has not experienced a substantial growth rate within the periods.

With a persisting state of unsustainable external debts, Nigeria carried out a variety of economic reforms and reorganization initiatives in the 1990s and 2000s, through debt forgiveness and restructuring agreements under programs and bodies like the Heavily Indebted Poor Countries (HIPC) Initiative of the IMF and the Paris Club, respectively (Idisi et al., 2019). Since then, Nigeria has improved the sustainability of its debt management initiatives, but problems still exist. The nation has experienced economic hardship in recent years as a result of falling oil prices, internal conflicts, and global economic downturns, which has affected its capacity to pay off its debt. In 2020, according to the International Monetary Fund report (Article IV) (2022), the Federal Government of Nigeria's (FGN) interest payments (% of FGN revenue) were set at 88.8% of revenue in servicing external debt payable to bilateral creditors like China and Japan as well as multilateral institutions like the World Bank and the African Development Bank (IMF, 2022; Kalejaiye, 2022). Moderate projections have it that in the not-too-distant future, debt-servicing might gulp up the entire revenue stock (Awa-Kalu, 2022).

According to a Nigerian Punch Newspaper, October 20, 2022, with lower oil prices weighing on Nigeria's economy, expenditures incurred from addressing security issues such as the Niger Delta insurgency, the ongoing conflict with Boko Haram, Islamic State's West Africa Province (ISWAP), the herders-farmers crisis, and biting incidences of corruption and mismanagement of public funds have weighed in on the use of Nigeria's common wealth, leading to more devastating debt

obligations. This comes in addition to the impact of the coronavirus pandemic and associated lockdowns, which dealt dangerous blows to economic activities within the country. Hence, further narrowing the chances of Nigeria ever meeting her debt obligations (OECD, 2020). The continuous devastating effects on the country's macroeconomic indicators and other growth variables, such as growth rates, inflationary rates, exchange rates, interest rates, gross savings, investments, and so on, have made many researchers have an interest in the field of study for policy formulation and implementation.

2. DEBTS AND ECONOMIC GROWTH: A BRIEF LITERATURE REVIEW

The connection between external debt and economic growth in developing nations is a topic that has gathered significant attention in economic discussions. It is worthy of note that the relationship between external debt management and economic growth is not clear-cut. It differs significantly with respect to the contextual situation of the country in consideration.

There are some internal and external factors that interact to determine how a country's economy responds to its debt situation (Ramzan & Ahmad, 2014; Wang et al., 2021). These factors include: the volume of debt, the terms of the debt, the economic and political climate of the nation, the strength of institutions, natural disasters, changes in the world's financial markets, incidences of corruption and mismanagement of public funds, global economic conditions, etc. The different combinations of these factors at diverse magnitudes generate different economic outcomes in terms of economic growth. According to several studies, external debt may be detrimental to economic expansion. For instance, a study published by the International Monetary Fund (IMF) in 2020 indicated that emerging nations with high amounts of foreign debt experience slower economic growth (IMF, 2020).

Developing nations frequently rely on borrowing from foreign sources to fund infrastructure and economic development initiatives. However, these nations may face difficulties as a result of their external debt. The inability of a developing nation to pay its debt can cause a financial crisis and have a detrimental effect on the country's ability to thrive economically (Law et al., 2021). On the flip side, other researchers have found that external debt can as well be beneficial for economic growth under certain circumstances of proper management of the funds and little or no corruption (Olaoye, 2022; Thao, 2018; Wang et al., 2021).

2.1 EMPIRICAL LITERATURE REVIEW

The study by Sulaiman and Azeez (2012) on the debt-growth nexus employed the Ordinary Least Square (OLS), Augmented Dickey-Fuller (ADF) unit root test, Johansen co-integration test, and Error Correction Method (ECM) in an empirical analysis to assess the effect of external debt on the economic growth of Nigeria. Annual time-series data on GDP, external debt, debt-to-export ratio,

exchange rate, and inflation for the period 1970 to 2010 were utilized in the study. The result revealed that a long-run equilibrium relationship exists among the variables. Additionally, the findings from the error correction method show that external debt has a positive impact on the Nigerian economy. The conclusion from Suleiman and Azeez (2012) aligns strongly with the submissions in Thao (2018). The similar study assessed the impact of public debt on economic growth in six ASEAN countries (Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam) over an eleven-year period (1995–2015). Applying a regression analysis based on the General Method of Moments (GMM) on key macro variables, including a set of control variables such as foreign direct investment, gross fixed capital formation, and the real effective exchange rate. In a finding that appeared contrary to popular opinion on the subject, a significant and positive impact of public debt upon the real GDP per capita growth rate was realized. This result, however, does not directly apply in the context of the Nigerian and other African economies, as there are other peculiar endogenous factors that could influence the research outcomes.

Furthermore, Didia *et al.* (2020) in their study examined the impact of public and publicly guaranteed debt on the economic growth of Nigeria by classifying the public debt stock into internal (domestic) and external (foreign), and examining their respective impacts on economic growth in Nigeria. Applying the Vector Error Correction Model (VECM) to macroeconomic data covering 1980–2016, the study revealed a statistically significant positive relationship between domestic debt and economic growth in the long run; while external debt assumed a statistically insignificant negative relationship with economic growth. In addition to the submission above, Ibdolapo (2020) also concluded a positive and significant relationship between domestic debt and economic growth; and a negative relationship between external debt and economic growth. The study analyzed the relationship between public debt and the economic growth of Nigeria using descriptive statistics, the unit root test, the Johansen co-integration test, and a vector error correction model based on secondary historical time series data covering a 37-year period (1982–2018).

Furthermore, Adekunle *et al.* (2021) offered a fresh perspective that lent empirical support to the argument on the crowding-out effect of excessive external debt servicing. Using data from 1981 to 2015, the study investigated the potential role of domestic investment in the non-linear relationship between external debt and economic growth in Nigeria. Results from the threshold regression analysis employed in this study exposed some sensitivities that could influence the findings of studies on the impact of external debt on economic growth; which include measures of external debt used, and whether or not the role of domestic investment is accounted for. Also, using the debt-to-GNI ratio as the dependent variable for analysis, the study recommends a maximum ceiling of 6.81% as the share of external debt stock in gross national income (GNI) that can sustain a positive growth impact in the Nigerian context. In a similar study on the effect of public debt stock on Sub-

Saharan African countries, the threshold of the public debt/gross domestic product ratio beyond which growth potentials are impaired is set at 34% (Olaoye, 2022). Using more recent datasets from 1981 to 2020, Akanbi et al. (2022) did a quantitative investigation on the relationship between external debt service and economic growth in Nigeria. The findings from the Auto-Regressive Distributed Lags (ARDL) model estimation on selected data provided additional evidence to the debate favoring a negative relationship between external debt service and economic growth, citing a resource depletion effect of external debt service on economic growth. The stock of external debt has a positive but not statistically significant relationship with growth.

From the reviewed empirical works, it is evident that the relationship between external debt and economic growth and the attendant impact differ with respect to contextual differences. While studies in ASEAN countries and other more developed economies found positive relationships, studies on the Nigerian economy found negative relationships, with the exception of a few statistically insignificant positive results and the threshold suggested by (Adekunle et al., 2021; Law et al., 2021; Olaoye, 2022). Some of the reasons for this disparity in outcomes in Nigeria have been cited as widespread high-profile corruption, mismanagement or misappropriation of funds (including borrowed funds), internal unrest, and so on. Others cite that excessive external debt servicing coupled with dwindling domestic economic conditions are often a recipe for further disaster (Olaoye et al., 2022; Panizza & Presbitero, 2014; Ramzan & Ahmad, 2014). To bring more evidence and offer more empirical support to the debt-growth debate within the Nigerian context, this study offers fresh insights through analysis of more recent datasets, with attention to nuances that would bring more clarity to the discussion.

3. METHODOLOGY

3.1 VARIABLES AND SOURCES OF DATA

The annual data spanning from 1985 to 2021 was sourced from the World Bank Development Indicators database and the Debt Management Office, Nigeria. Because the goal of this paper is to determine the impact of debt servicing on economic growth in Nigeria, GDP per capita (current US dollars) is used as a proxy for economic growth, while external debt stock (current US dollars), external debt service payments (current US dollars), gross fixed capital formation (current US dollars), and inflation (annual percent) are independent variables.

3.2 ESTIMATION TECHNIQUES AND MODEL SPECIFICATION

In the previous literature, several econometric techniques were employed to investigate the external debt-growth nexus. Bal and Rath (2014) employed the autoregressive distributed lags (ARDL) model to investigate the short-run and the long-run public debt-growth relationships. Owusu-Nantwi and Erickson (2016) used Johansen cointegration and the vector error correction model to investigate the long-

run and causality relationships between public debt and economic growth in Ghana. Arising from various econometric techniques in the literature, this study employs the classical ordinary least squares (OLS) to investigate the effect of external debt service on economic growth in Nigeria. This method allows post-diagnostic tests to be carried out to establish the properties of the Best Linear Unbiased Estimation (BLUE) of the classical ordinary least squares' estimation technique. The paper employs a semi-logarithmic linear growth model and is written as follows:

$$\log GDPPC = \beta_0 + \beta_1 \log EDSE + \beta_2 \log EDST + \beta_3 GCF + \beta_4 INF + \mu \dots (1)$$

where:

- *logGDPPC* is the logarithm of GDP per capita proxy economic growth.
- *logEDST* is the logarithm stock of external debt.
- *logEDSE* are the external debt service payments.
- *GCF* is the gross capital fixed formation.
- *INF* is the Inflation, consumer prices (annual %).
- $\beta_1 - \beta_4$ are the coefficients of the variables.
- μ is the error term.

Table 1 indicates the a priori expectations of the variables estimated in the study

Variables	Sign
<i>logEDST</i>	+
<i>logEDSE</i>	-
<i>GCF</i>	+
<i>INF</i>	-

Source: Authors' assumptions

4. EMPIRICAL RESULTS

From the results in Table 2, the external debt stock is positive and significant in explaining the growth of the Nigerian economy. This implies that a 1 percent increase in external debt stock increases economic growth by 0.2496 percent in Nigeria. This result is not surprising because in the last six years, a lot of funds have been committed to infrastructural development and other sectors of the country. The finding is in line with the expected result. Furthermore, empirical findings by Sulaiman and Azeez (2012) and Thao (2018) support our conclusion that external debt stock and other financial inflows stimulate economic growth if the funds are used efficiently and productively. Contrary to popular belief, Elbadawi (1997) empirical finding demonstrates that debt accumulation inhibits economic growth.

External debt service payments, as expected, have a negative effect on economic growth at the 5% significance level. This implies that a 1 percent increase in debt service payments leads to a 0.0712 percent decline in economic growth. This is not surprising because in 2019 and 2020, 30% and 35% of Nigeria's gross domestic product were used as debt service payments, respectively. The result is in agreement

with the finding revealed in Elbadawi (1997) and Akanbi et al. (2022) that external debt service payments deter economic growth. The result further reveals that gross fixed capital formation has a positive and significant relationship with economic growth. This indicates that a 1 percent increase in gross fixed capital formation leads to a 1.4004 percent increase in economic growth.

Finally, inflationary rates revealed a negative and significant result, as expected. Although this result is not a general consensus among the scholars in the literature. While others revealed a positive or insignificant impact of inflation on economic growth (see Mallik and Chowdhury, 2001), others support the idea that rising inflation reduces people's income, savings, and investment (Valdovinos, 2003 and Tien, 2021), which in turn decreases economic growth.

Table 2: OLS results

Dependent Variable: <i>logGDPPC</i>	Coefficients	Prob. Values
<i>logEDST</i>	0.2496	0.0001**
<i>logEDSE</i>	-0.0712	0.0140**
<i>GCF</i>	1.4004	0.0001**
<i>INF</i>	-0.0085	0.0002**

Note: the asterisk values are probabilities values significant at 5 percent

Source: Authors' estimations using Eviews 12

4.1. DIAGNOSTIC CHECK

Table 3 shows the diagnostic tests for the estimated OLS model. The OLS reveals the BLUE properties of the classical linearity model of no heteroskedasticity and serial correlation issues. This is to show that a suitable regression result was obtained. More so, a model with heteroskedasticity and serial correlation will produce a biased result. From the results, at the 5 percent significant level, the heteroskedasticity test shows a F-statistics value of 0.1688 with a probability value of 0.3429. The guideline says that when the probability value result is less than 5 percent, then there is a presence of heteroskedasticity. Otherwise, there is no heteroskedasticity. This implies that the standard deviation of the values of the independent variables is not constant. Similarly, the result of the serial correlation shows that the F-statistic is 1.1517 and the corresponding probability value is 0.3297, which is greater than 5 percent. From this result, it shows that the observations of error terms are uncorrelated with each other. Figure 1 proofs further that the OLS model is stable at 5 percent significant level. From the figure, the blue line in the middle proofs the stability of the model using Eviews 12.

Table 3: Diagnostic test results.

Test	F-Stat.	P-Values
Heteroskedasticity Test: Breusch-Pagan Godfrey	0.1688	0.3429
Breusch-Pagan Godfrey Serial Correlation LM Test	1.1517	0.3297

Source: Authors' estimations using Eviews 12

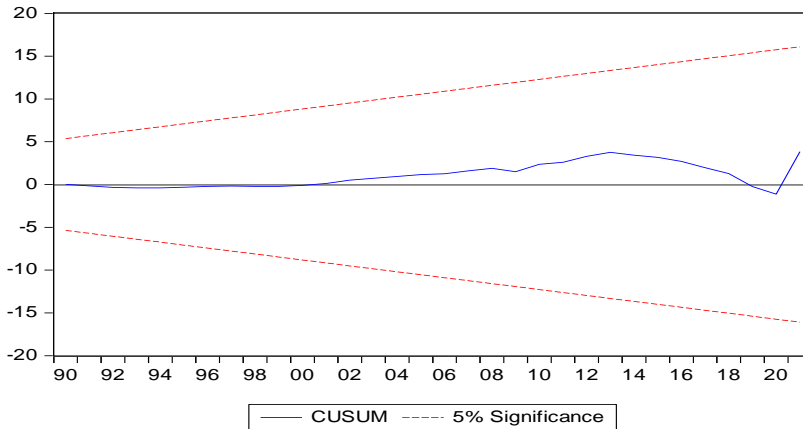


Figure 1: CUSUM Stability result

5. CONCLUSION AND POLICY IMPLICATIONS

Nigeria has been experiencing budgetary deficits for the past ten years. This shows that the country is heavily dependent on external debt to finance major government activities. The paper investigated the impact of external debt service payments on economic growth from 1985 to 2021. Our approach concentrated on the impact of the external debt service payments on economic growth. This differs slightly from previous scholars, who primarily focused on public-debt relationships. In addition, the external debt stock variable was also included in our data estimation and analysis in order to have a broad and in-depth analysis. The use of the Ordinary Least Squares (OLS) technique is an addition to existing debt-growth nexus literature in the context of Nigeria.

The result obtained from the OLS model shows that external debt service payments deter the economic growth of Nigeria. This result confirms the impact of external debt service payments of over 36% of the gross domestic product in 2020. The figure has increased the liabilities of the government as a percentage of the GDP. The result further shows that external debt stocks promote economic growth. The positive result may come from the aftermath of huge government spending on infrastructural facilities in the last five years in Nigeria. Also, gross fixed capital

formation reveals a positive and significant impact on economic growth. Inflation is currently on the high side in Nigeria, which has a negative impact on economic growth. Even though the Central Bank of Nigeria (CBN) is currently putting some monetary policies in place to drastically reduce inflation and its effect, its negative impact has reduced the standard of living of many Nigerians. One of the recent policies introduced by the CBN was to increase the monetary policy rate from 16.5% to 17.5%. Finally, proper management of the external debt stocks by governments in more productive sectors could bring additional growth.

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