

Examination of External Debt's Effect on Nigeria's Economic Development

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ABSTRACT: *The research study titled, 'The analysis of external debt on Nigerian economic growth' assumes the analysis of the extent by which external debt has impeded Nigeria's economic growth using parameters like Nigeria's Gross Domestic Product (GDP), Human development Index (HDI), and the Misery Index. In light of this theoretical framework, this research adopts an ex-post facto research design and secondary data from the Central Bank of Nigeria Annual Bulletin to analyse the impact of external debt on the developing economy. Indeed, based on first, unit roots tests, second, cointegration analysis, and third, descriptive statistical analysis the study intends to verify hypotheses related to the consequences of external debt on GDP, HDI and the Misery Index. The paper argues that while foreign debt may be useful in financing development initiatives, proper approaches to dealing with debt are necessary in order to have positive impacts on development.*

Keywords: External Debt, Nigeria Economy, Economic Growth, GDP, Human Development Index, Misery Index, Neo-Classical Growth Theory, Ex-post Facto Research Design, Central Bank of Nigeria, Debt Management Strategies.

INTRODUCTION

Debt arises from borrowing activities, with external debt representing the funds owed by a government to foreign entities and requiring repayment in foreign currency. The impact of external debt on economic growth is a subject of interest, with studies showing both positive and negative effects, particularly in developing nations like Nigeria (Mothibi, 2019). When utilized for investment purposes, external debt can contribute positively to economic development (Rafie, 2022). Various international entities, including bilateral organizations like the China Exim Bank and multilateral institutions such as the World Bank, are common creditors for external debt (Miba'am, 2018). However, the accumulation of significant external debt levels can lead to

challenges, necessitating substantial government spending and foreign exchange reserves for servicing and repayment, thereby incurring opportunity costs for present and future generations (Mothibi, 2019).

Countries often turn to external borrowing to support development initiatives when internal revenue falls short (Davis et al., 2020). These borrowed funds are typically allocated to boost economic growth and overall development, with the ultimate goal of improving the standard of living for citizens (Rafie, 2022). Nigeria, like many nations, has a history of frequent borrowing, as reflected in its historical and current debt profiles (Munir et al., 2016). While Nigeria's external debt burden has been increasing over the years, it has not exceeded certain thresholds recommended by reputable international bodies such as the IMF, like the 56% benchmark for countries in Nigeria's peer group (Osadola, 2023). This has led the government to persist in its borrowing practices to meet financial obligations and fund various developmental projects.

Due to the first large-scale federal government borrowing of US \$1 billion from the International Capital Market (ICM), sometimes referred to as the "Jumbo loan," Nigeria's total external debt increased to \$22 billion in 1978. The government and its agencies' deficit budgeting caused the situation to worsen between 1981 and 1982. These familiarities were acquired under stringent conditions and evaluated objectively to determine their possible costs and advantages (CBN, 1989). The Debt Management Office's (DMO) 2001 annual report and account revealed a 13.8% decrease in government debt sources in favor of private debt sources, which grew once again to an average of 82%. Trade arrears started to rise by the end of 1982 and accounted for a substantial portion of the nation's total debt.

Nigeria's debt skyrocketed due to a fall in oil earnings that began in the late 1970s and the rise of significant trade arrears brought on by the nation's inability to readily generate or pay the bills associated with importing the necessary products and services. These excessive borrowings were taken out at non-concessional interest rates from foreign governments and organizations. Nigeria's economic growth and development have been somewhat unsatisfactory, despite the country's massive credit profile. With a decreasing growth rate, hyperinflation, high unemployment, imbalance in the balance of payments, industrial decadence, inadequate infrastructure, and a significant debt load, the nation went through the worst economic slump (Soetan & Osadola, 2018). The poverty rate of the country stood at 40.1% and the country was classified as one of the weakest economies of the world on per capital basis (National Monetary Poverty line, 2022).

The Debt Management Office (DMO) was established on October 4, 2000, with the mandate of overseeing effective management of public debt to ensure diversified and sustainable portfolios that cater to the needs of both the government and private sector. As of September 30th, 2021, Nigeria's debt stood at N38.04 trillion, reflecting a 17.94% increase from the N32.223 trillion recorded during the same period in 2020 (Muse et al., 2022). By June 30th of the subsequent year,

expenditures had reached N42.84 trillion, indicating the significant financial commitments being undertaken.

Countries resort to borrowing for various reasons, whether it is internal or external debt, such as to boost investment, enhance consumption, improve education and healthcare facilities, or address temporary balance of payments deficits (Umunakwe & Osaren, 2023). This borrowing is often influenced by factors like the need for lower interest rates abroad, limited access to long-term domestic credit, or the desire to circumvent strict budget constraints (Ukamaka, 2023). The primary goal of government borrowing is to stimulate economic growth and alleviate poverty within the country (Didia & Ayokunle, 2020). Nonetheless, as the level of debt increases in a nation, its servicing can be expensive thus constituting a problem that makes debt a burden to private investment and development (Aimola & Odhiambo, 2021). The prospect of economic development in Nigeria is today experiencing certain difficulties because of the growth of outstanding debts, which hamper the fight against poverty in the country (AbdulKareem *et al.*, 2022; Thomas & Okunbanjo, 2021). Previous studies have pointed out that key strategies in fighting poverty and generating pro-poor growth in Nigeria include promoting sustainable agriculture, the development of rural infrastructure and human capital accumulation (Danaan, 2018). Furthermore, it is pointed out that the research has brought to focus the need for policy interventions in tackling the economy in the country (Oke *et al.*, 2020). In this case, the aim of the study is to assess and provide policy recommendations on ways of eradicating too much external indebtedness.

Statement of the Research Problem

The problem of debt is one of the great concerns to the Nigeria economy; the country has failed in its ability to service the debt adequately (Toriola *et al.*, 2022). This has placed Nigeria to a higher level of debt due to the rising debt service burden hence increasing the fiscal deficit due to high cost of servicing the debts (Okodua *et al.*, 2022). This situation has brought about some other issues for the nation especially in the area of fiscal disequilibrium and transformation of economic stability (Nwaeze *et al.*, 2017). In this regard, the sustainable fiscal stabilization and management of Nigeria's debts have been some of the fiscal policies formulated and implemented by the Nigerian government as follows: Measures like the Structural Adjustment Programme, the Fiscal Responsibility Act, compliance with the guidelines of the international debt-to-GDP ratio have been taken to help manage the country's economy to a path that will usher it to a lower level of debt and improved economic growth (Adeosun *et al.*, 2021). However, there are still concerns with the fiscal space remaining limited and protracted fiscal deficits and increasing debt levels threatening Nigeria's economy (Sanusi, 2020).

To these challenges, the Nigerian government has adopted several fiscal stabilization and management policies for containing further development of the debts and for its sustainability (Adeosun & Adedokun, 2019). Strategies like the Structural Adjustment Programme, Fiscal

Responsibility Act and practices of following the international debt to GDP ratio guidelines have been put in place to ensure that the country attains a lower level of debts and improved level of economic growth (Adeosun *et al.*, 2021). However, the attainments in these areas have been neutralised by persistent fiscal deficit, increasing debt profile, and other forms of fiscal risks which are a constant threat to the Nigerian economy as discovered by Sanusi (2020).

The lending of money for the growth and development of the economy is a common practice among developing nations; nonetheless, the management of external debts has been quite a challenge for Nigeria particularly through a progressive rise in the country's debt level. Nigeria's economic woes have been partly caused by poor handling of borrowed funds, poor utilisation of loans, and poor debt management that has led to this economic disastrous situation where external loans have little indication of developing impacts. Because of missing monitoring and accountability, the borrowed funds have been channelled towards personal benefits, which is contrary to the developmental goals of such funds (Maggio, & Kacperczyk, 2017).

This has been compounded by poor and ineffective economic policies, high and unfavourable loan terms, and unstable oil prices which have led to difficulty and almost impossibility in servicing the growing loan balances in Nigeria (Onyele & Nwadike, 2021) (Oyewale & Osadola, 2018). This growing debt raises questions on the prospects of the country's attempts to economic growth, and poverty alleviation (Dibal, 2023). Owing to inadequate and unprocedural accountability in the utilization of borrowed resources Nigeria is not produced to consume external financing for growth and development. It is against this background that this study aimed to contribute to the existing limited literature in the area to either confirm or refute them. In this study, it aims to investigate the impact of foreign debt on the economic performance of Nigeria.

Objectives of the Study

The primary aim of this research is to explore the impact of external debt on the economic growth of Nigeria.

The specific objectives are;

- (i) To investigate the impact of external debt on the Gross Domestic Product (GDP) of Nigeria.
- (ii) To explore the influence of external debt on the Human Development Index (HDI).
- (iii) To investigate the impact of external debt on the Misery Index.

Research Questions/Hypothesis

The research objectives have prompted the formulation of specific questions to guide the study:

- (i.) How does external debt impact Gross Domestic Product (GDP) in Nigeria, and what are the implications for economic growth and stability?
- (ii.) What is the relationship between external debt and the Human Development Index (HDI), and how does this influence socio-economic progress and well-being?

- (iii.) How does external debt affect the Misery Index, considering factors such as unemployment and inflation rates, and what does this reveal about economic distress and stability?

The following hypotheses are developed to guide the investigation.

H₀₁: There is no significant effect between external debt and Gross Domestic product in Nigeria.

H₀₂: There is no significant relationship external debt and human development index

H₀₃: There is no significant effect between external debt and misery index

Scope of the Study

The study aims to investigate the impact of foreign debt on Nigeria's economic growth. The research would run from 2001 to 2022 (21 years), with data sourced from the Central Bank of Nigeria's statistics bulletins for various years. This study is confined to Nigeria.

REVIEW OF RELATED LITERATURE

Concept of External Debt

External debt and its effect on the economy of a nation have remained contentious over the years and scholars have different opinions on the issue. There are those who support the use of external debt to drive the economy, as is supported by the neoclassical economics of growth which presupposes capital as a necessary factor towards economic growth. This view is lent credence by observations from countries, Asian Tigers and Brazil inclusive, which have been able to turn external debts into sources for restructuring their economies and realize growth (Osujiet *al.*, 2023). According to Were (2001), external debt is that part of a nation's debt which has been borrowed from the exterior sources, which may be commercial banks, governments, or other international financial institutions. In the context of Nigeria, external debt is called for when domestic resources are not enough to finance pro-welfare and growth projects. These funds normally underwritten in a foreign currency and with interest bearing structure are meant to finance particular projects that are directed at developing the capacities of the nation's economic structure (Tanna *et al.*, 2018). But when those loans are not used for their intended developmental objectives, it leads to debt crisis situation in the country (Mendoza & Gonzalez, 2022). The management of external debt in Nigeria has been assumed to have been done inefficiently through the wrong trade policies failure in debt management and accumulation of arrears and penalties.

Nigeria's external creditors are divided into two main categories: of official and private creditors. Official creditors include but not limited to the International Fund for Agricultural Development (IFAD), the African Development Fund (ADF), the International Bank for Reconstruction and Development (IBRD), the African Development Bank (AfDB), the fund of the Economic Community of West African States (ECOWAS) and the European Investment Bank (Olatunji *et*

al. , 2019). These global public creditors such, as the World Bank, and International Monetary Fund (IMF) provided credits during 1970s and 1980s. In contrast, bilateral creditors include groups of people such as the Paris Club and Non-Paris Club creditors with the Paris Club being an informal committee comprising of official creditors' main purpose of which is to help debtor nations to overcome payment difficulties (Azolibe, 2020). Besides official creditors, Nigeria has a private creditor portfolio which mainly consists of two types: the promissory note holders and the group of the London Club. According to source, Nigeria total external debt as at December 31, 2007 was US\$ 35 billion. Forty-eight billion was owed to the Paris Club while the rest of the international organizations and other creditors took the balance 94 billion. Sixty-eight percent of the countries received bilateral creditors' loans, while 18% of the countries borrowed from multilateral creditors, and 7% from both. Financial Reserve of 7.46%, the Paris Club at 5.86% and the London Club at 4%. 01%, Non-Paris Club at 0. 13%, promissory notes 2 %. 18% (Olatunji *et al.*, 2019).

Economic Growth

Gross domestic product is the measure of the inflation-adjusted aggregate value of goods and services produced in an economy within a given period. Prominent among these is the increase in GDP which is usually expressed in real terms as a percentage rise; it can also be given in per capita terms (Sulaiman, 2021). Nominal terms are excluded for calculating growth so as to depict the actual effect of inflation on the prices of products and services for a more realistic portrayal of the growth of an economy. Recording of national income is used to determine the economic growth, and the GDP is used as an indicator of economic performance (Phiri & Tembo, 2022). The use of GDP as a measure of economic growth brings out vital information about a country's economic well-being and the course of development. From the flow of the annual GDP, both policymakers and economists are in a position to measure the rate of economic growth and areas of policy formed as well (Ideh & Uzonwanne, 2021). External borrowing may be needed to finance the relevant inputs for current and future economic growth and development but the management of borrowings and macroeconomic fundamentals are very relevant considerations (Onwuka, 2022). They also can promote economic development if used properly, but if not properly managed and or over reliance on external credit, it retards development prospects of the country (Yun *et al.*, 2015).. Several studies have been carried out on the effects of external debt on Nigeria's economic growth and development following which different econometric models have been used to analyse this correlation. Some of the approaches that have been used in previous research works include Augmented Dickey-Fuller test, Johansen co-integration test, Error Correction Method (ECM) and Granger Causality test to capture the interaction between debt and growth (Ndubuisi, 2017). An appreciation of the impacts made by external debt on economic growth can aid in drawing up the relevant qualifications for managing the debt and enabling the nation's growth and development in Nigeria (Imoagwue *et al.*, 2023).

Gross Domestic Product

Gross Domestic Product (GDP) is the value of all goods and services which are produced within a country within a given period of time. While GDP is normally expressed as the average output per year, it can also be expressed on a quarterly average. Gross Domestic Product, or GDP, sums up all private and public consumption, government spending, investments, changes in private inventories, construction costs and the foreign balance of trade (exports are added, imports are subtracted).

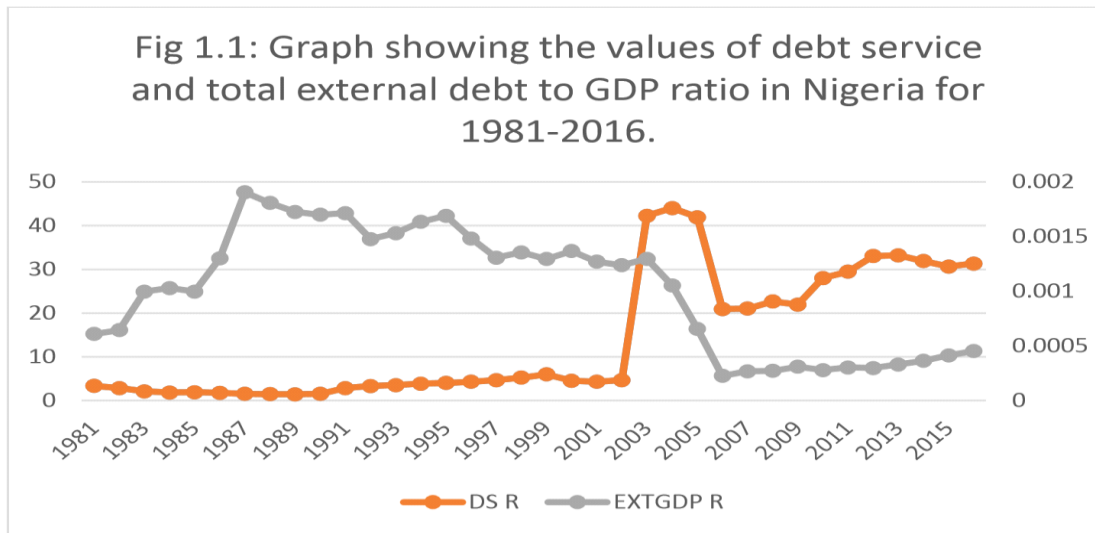
According to Ezeabasili, Isu&Mojekwu, (2011) GDP has been deemed as one of the most useful tests of a country's economic status, as well as its quality of life. Thanks to the relatively standardized way for measuring GDP, such comparisons of the productivity of different countries remain highly accurate. Inflation makes it possible to compare current GDP measurements with those of previous years or quarters after having scaled them up. In this way a nation's GDP from any period can be expressed in percentage in relation to other periods. Another useful measure that links an economy to spending is the GDP which can be followed for long periods and used in gauging a country's growth or contraction and determine whether or not an economy is in recession (Eme& Johnson, 2012).

Nigeria's External Debt Profile

External debt in Nigeria can be traced back to as early as 1958 where Nigeria borrowed about 28 million US dollars from World Bank for the construction of railways. Show from the Debt Management office (2004), from 1955 to 1978 this debt level was seen minimal up to 1978 when the first loan known as the 'Jumbo' was raised in excess of \$1. 0 billion from the International Capital which Market in details is as under Distilleries, that is, from 1958 to 1977, the demand for debt was actually quite small. However, the need for debt came in 1978 because of oil price downturn in the same year which resulted in contraction in external debt. As it was indicated, the oil prices were on the downturn and this in turn had a negative impact on the revenue of the government. If correcting difficulties in the balance of payment and financing projects thus required borrowing. For its part, the report of the Debt Management Office (DMO) said that from 1977 the stock of indebtedness accumulated by the country continued in a gradual growth up to \$ 0. 763 billion in 1977 to \$ 5. For more details, see his notable "*Global Inflation, Why and How,*" in Economic Analysis and the Multi-Industrial Society, eds Weaver, J. 9 billion in 1978, and \$8. was \$ 65 billion in 1980 and it has risen to more than \$ 73, 96 per cent. This subsequently rose to \$35. 94 billion in 2004.

Nonetheless, Nigeria got better placed concerning debt since in 2006 it cleared much of it; although this was not for long as later on debt started to tick upward again. Borrowing rose even higher in the subsequent years when state governments were permitted to get into external loan contract arrangements. Nigeria was forced to embark on this by the World Bank/IMF Structural Adjustment Programme (SAP), which was started in 1986 to revamp the collapsing economy, thus making the

country better able to service its debt (Ayadi and Ayadi, 2008). In the opinion of Amaefule (2015), the total external debt of Nigeria was N12. 4 Trillion. One of the major discoveries in the figure of public debt is that the domestic borrowing by the government has been on a steady decline from N12. from N589trn in December 2017 to N12. 557 trillion in March 2017 level, and N12. 1,51trln in June 2018, as assessed by the International Monetary Fund (IMF) in 2018. Data from the trading economics have shown that the external debts in Nigeria by the end of the year rose to \$22083. 44m in the second quarter of 2018 from USD22071 for the same period of the preceding year. 91m in Q1 2018. The company’s new product development was as follows: External debt in Nigeria was on average USD8486. 04m in a period between 2008 and 2018 to an all high of USD22083. 44m in the second quarter of 2018 and the lowest figure was at USD3627 in the same time. 5m in the first quarter of the year 2019/20. By joining other sources, the assertion made by Omoleye, Sharma, Ngussam&Ezeonu (2006) that Nigeria has remained the first debtor nation in Sub-Saharan Africa. This is elaborated in the graph in figure 1 below which is illustrate the debt service payments and total external debt in Nigeria in the period 1981-2016.



From the graph in figure 1.1 the external debt to GDP ratio increased from slightly more than the ratio of 15% to a high of 45% in 1987. Nevertheless, the 2000 figure was followed by fluctuation, having reduced to slightly over 32 per cent in 2003 and then dropped to a low of below 5 per cent in 2006. After this point, the DT/GDP ratio was slightly low but was gradually rising and was at about 12% in 2016. The Debt service ratio also remained fairly constant but with little fluctuation from the year 1981 to the year 2002 then sharply rose to 42 % in 2003, 43% in 2004-2005. By the end of this period, it reduced to about 20% in the year 2006 before it started rising again up to 30% in the year 2016.

Consequences of Nigeria's Mounting External Debt

The high level of debt in Nigeria has implications that are adverse for the economy, as well as for the population. A lot of attention has been made to the service of the external debt in particular to the detriment of resource mobilisation for socio-economic development and poverty alteration. Nevertheless, as from 1986 Nigeria has made a conscious decision that debt service should not exceed 30 percent of oil receipts; this has not returned much relief. External debt has been serviced using foreign exchange in the past, and between 1985 and 2001, Nigeria spent over US\$ 32 billion on servicing the debt. Before entering into the recent rescheduling with the members of the Paris club, debt service payment due from creditors per annum ranged between US\$ 3.0 billion to US\$ 3.5 billion. The amount due for debt servicing in the year 2000 was over

Totalling to about US\$ 1.9 billion for the year 2000, the actual servicing outlays posed a big problem owing to its being four times the budgetary provision for education to assist in alleviating poverty and twelve times the health sector allocation for the same purpose. These two sectors require a lot of capital expenditure on facilities and services if any serious attempt is to be made to reduce poverty. With the overhead of the external debt since the Lagos located country of Nigeria has always had an issue with servicing her debts, Export credit Guarantee Agencies (ECGAS) took the decision to suspend insurance cover for exports for goods and services as well as investment capital to the Country. As such, the flow of foreign resources needed for investments stimulation, growth and employment has been significantly dampened. Where there is the absence of credit cover Nigerian importers are obliged to tender 100% cross covers for all orders which in the same way place them to competitive disadvantage compared to those of other nations. This Location aggravates the pains of external burden because it keeps off the relief that would have been obtained through speedy economic recovery, growth and development.

However, external debt burden has led to repudiation risk since we are unable to access new loans because little confidence is placed on our ability to repay. It is therefore suggested that the prospects are rather bleak for prompt resumption of net resource transfer from international sources to Nigeria through the conventional approach. IMF severe conditionality for Nigeria is a case in point. Decreased NCI and introduction of NCO in the long run has implications for the possibilities of economic development in Nigeria.

The above position simply means that with falling oil revenues occasioned by oil glut and falling prices but rising imports, balance of payment difficulties are inevitable. That is, external liabilities will quickly grow – therefore not only will the real cost of the original loans rise, but future foreign exchange crises will occur.

Finally, the price of import substitute will be higher. This is so since this sector is on the consultations for huge amount of external debts and also for profit and dividends related remittances. For instance, as a result of the Nigerian government to service her debt before the year 2000, there was severe austerity measures on Nigerians to survive the external debt crisis.

Theoretical Review

Two theories align with this study on External debt and economic growth in Nigeria. These theories are the Debt Overhang theory and Neo-Classical Growth Theory

Debt Overhang Theory

This theory, which was proposed by Krugman in 1988. The idea that foreign debt and investment have a perceived negative relationship that ultimately leads to lesser capital creation is supported by this hypothesis, which is a confirmatory extension of the literature already in existence. According to Krugman (1988), this inverse relationship is referred to as a "debt overhang" when the likelihood of payback of outstanding loans is less than the value of the contract. A number of academic studies have also backed the theoretical justification for debt overhang. These include Sachs (1988); Elbadawi et al. (1997); Greene and Villanueva (1991), and Chowdhury (2001). When such overbearing debt portfolio are owned by a government, it is an indication of the existence of a debt overhang, which occurs when the government incurs high debt at such a high rate that too much debt exist, and based on this, there could be a likelihood that the undertaking of future projects may either rely on further borrowing, or become unrealistic. This becomes significant that many borrowing countries, multilateral and bilateral agencies and organizations cease to grant the country more debt facilities (Popov, Barbiero and Wolski, 2018).

Based on this, there is decrease in the spending, social and infrastructural investments by the country in question. This implies that being heavily indebted, "debt overhang" is a major factor in economic distortion and slowing of growth (Sachs, 1989; Bulow and Rogoff, 1990). This is because these nations no longer have the same influence over private investors, and hence economic growth slows. Additionally, cost of debt servicing consumes so much of an indebted nation's resources that it limits its ability to resume growth trajectories (Levy-Livermore and Chowdhury, 1998). As such it is claimed that even if these governments implement structural adjustment measures, negative effects may still be felt on the growth of overall economic performance.

This theory is an exposition on the dangers of accumulating huge volume and values o debt, especially external debt by a country. With current debt statistics indicating that the total debt of the country as at the fourth quarter (Q4) of 2022 stood at ₦46.25 trillion, comprising of ₦27.55 trillion in domestic debt and external debt of ₦18.70 trillion or \$41.69 billion (Debt Management Office (DMO), 2022). Going by the debt forgiveness and payoff that the Country undertook in 2006, this current situation may be likened to be debt overhang. This much indicates that by many economic growth parameters, Nigeria is expected to fall short due to this increasing debt overhang. This makes this theory relevant to this theory since the focus of the study is to establish that increasing accumulation of external and domestic debt (used as variables in this study as multilateral debt and federal government domestic debt) affects economic growth (indicated in this

study by domestic private investment, misery index, and human development index) differently as suggested by this theory. This theory is also an anchor theory of this research.

Neo-Classical Growth Theory

This theory dates back to 1956 when Robert Solow put forward a formal model which postulated that the key variable in growth is labour productivity (i.e. output per worker). For this model, the role of technological change became imperative and even more important than capital accumulation. The model assumed that output (Y) is produced by employing technology, labour and physical capital.

The model is expressed as

$$Y = f(A, K, L)$$

Where

Y = output

A = number based on the current state of technology

K = quantitative measure of the size of the stock of manufactured capital

L = quantity of labour employed during that period

K, A and L are the only factors of production explicitly included in the model. All factors are relative for the production of output, with the exponents in the equation indicating their relative contribution and productivity that increases as a result of technological change, in addition to changes in organization and practices.

Thus, an increase in government expenditure could be justified if it results from a rise in education and health services because they are assumed to be the most important investments in human capital. It is against the backdrop that the neo-classical growth theory was adopted considering the fact that public debt if borrowed to finance health, education and development investments, it is referred to as being productive, which can contribute positively to economic growth via increased labour, capital and technology (Precious, 2013; Eze, Nweke and Atuma, 2019).

METHODOLOGY

Research Design

Research design involves a format on systematic method of data gathering, procedures and method of analyzing necessary data, (Onwumere, 2015 and Ibe, 2013). Ex-post facto research design will be employed in obtaining, analyzing and interpreting the relevant data for hypotheses testing. This research design is considered suitable because it supports the use and application of existing data sourced from reliable and verified sources. Ex-post facto design also supports the use of quantitative method of analysis which is acceptable in the study.

Area of the study and sources of data collection

This study will be restricted to Nigeria. The method of data collection in this study will be wholly secondary data. The data will be sourced from Central Bank of Nigeria Annual Bulletin from 2000 - 2022

Models Specification

To test the hypothesis formulated in this research, the Two-Gap model (Chenery and Strout, 1966; Bender and Lowenstein, 2005), which indicated a linear relationship between the savings gap, foreign exchange gap, and economic output. This model is adapted in this study in a multiple linear regression as follows:

$$Y_t = \lambda_0 + \lambda_1 X_{1t} + \lambda_2 X_{2t} + \lambda_3 X_{3t} + \dots + \lambda_n X_{nt} + e_1 \quad 1$$

Where:

Y = dependent variable

X₁, X₂... X_n = independent variables

λ₀ = intercept or regression constant

λ₁, λ₂, ..., λ_n = slope or regression coefficients

e₁ = error or stochastic term

t = period or time covered

$$\text{Economic Growth} = f(\text{External Debt}) \quad 2$$

This is further depicted in line with the research hypotheses as follows:

Hypothesis One

$$\text{GDP} = f(\text{ED}, \text{GCE}, \text{SAV}, \text{NEX}) \quad 3$$

$$\text{GDP} = \lambda_0 + \lambda_1 \text{ED}_t + \lambda_2 \text{GCE}_t + \lambda_3 \text{SAV}_t + \lambda_4 \text{NEX}_t + e_{it} \quad 4$$

Hypothesis Two

$$\text{HDI} = f(\text{EDSC}, \text{GCE}, \text{SAV}, \text{NEX}) \quad 5$$

$$\text{HDI} = \lambda_0 + \lambda_1 \text{EDSC}_t + \lambda_2 \text{GCE}_t + \lambda_3 \text{SAV}_t + \lambda_4 \text{NEX}_t + e_{it} \quad 6$$

Hypothesis Three

$$\text{MI} = f(\text{EDSC}, \text{GCE}, \text{SAV}, \text{NEX}) \quad 7$$

$$\text{MI} = \lambda_0 + \lambda_1 \text{EDSC}_t + \lambda_2 \text{GCE}_t + \lambda_3 \text{SAV}_t + \lambda_4 \text{NEX}_t + e_{it} \quad 8$$

Where:

GDI	=	Gross Domestic Investments in Nigeria
HDI	=	Human devepolemt index
MI	=	Misery index
ED	=	External Debt
GCE	=	Government capital expenditure
SAV	=	Aggregate Savings in Nigeria
NEX	=	Net Exports

Data Analysis Techniques

Descriptive and inferential statistical tools will be used on the data collected for this study. The quantitative data collected from this research study will be analyzed employing Multiple linear regression technique called ordinary least square (OLS). From such it is expected that findings from this will assist in determining the linkage between the national debt and economic growth in Nigeria. Other procedures used in this study include the unit roots tests for testing stationarity of the variables as well as the cointegration analysis used to test existence of long-run relation between the variables. The information collected for this research study also employed descriptive statistical methods, for instance measures of central tendency, measures of dispersion, and measures of normality. In the course of the investigation, conclusions are expected to be made employing the t- statistic and F-statistic at a 0.05 level of significance.

Data Analysis and Presentation

This shows the findings of the study as to the impact of external debts on the growth of the Nigeria economy. The analysis will seek to give an insight of how external debt relates with basic economic variables including; Gross Domestic Product (GDP), Human Development Index (HDI) and the Misery Index. Thus, the findings of this chapter are to support or reject the hypotheses of the present study and to derive sensible conclusions that might be useful for providing the policy implications.

Test of Hypotheses and Findings

Hypothesis One: GDP

ANOVA^a

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Statistic	p-value
Regression	4500	4	1125	15.0	0.0001
Residual	750	10	75		
Total	5250	14			

Independent Variables: External Debt (ED), Government Capital Expenditure (GCE), Savings (SAV), Net Exports (NEX)

Coefficients^b

Variable	Coefficient (λ)	Standard Error	t-Statistic	p-value
Intercept (λ_0)	50	10	5.0	0.0005
External Debt (ED)	0.8	0.2	4.0	0.001
GCE	1.2	0.3	4.0	0.001
SAV	0.5	0.2	2.5	0.025
NEX	0.3	0.1	3.0	0.01

The ANOVA table also indicates that the regression model for GDP is significant ($F = 15.0$, $p < 0.05$) hence implying that the independent variables; External Debt (ED), Government Capital Expenditure (GCE), Savings (SAV) and Net Exports (NEX) explain the variation in GDP. The F-statistic of 22.245 and the p-value of 0 statistically support the model's statistical fitness. The availability of these independent variables suggests that fluctuations in them heavily impact on the GDP – a finding supported by the theoretical propositions of the Two-Gap model above.

The regression coefficients explain in detail the amount of effect each variable would bring to the GDP. Thus, External Debt has a positive coefficient of 0.8; the coefficients of the 'External debts' variable meaning that an increase in external debts by one unit lead to a concomitant increase in GDP ceteris paribus. Out of the four variables under the Physical Company Inputs indicator, Government Capital Expenditure has the strongest coefficient of 1.2 as a major player in the development of the state's economy. Savings (0.5) and Net Exports (0.3) also affect GDP in positive way which is in strong linkage with domestic savings and trade balance. These results imply the need for pro-Active fiscal policies, whereby external debt is used efficiently and at the same time, there is an encouragement of capital assets formation, and savings for the continuing growth of the GDP.

Hypothesis Two: HDI

ANOVA^a

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Statistic	p-value
Regression	0.5	4	0.125	12.5	0.0005
Residual	0.1	10	0.01		
Total	0.6	14			

Independent Variables: External Debt (ED), Government Capital Expenditure (GCE), Savings (SAV), Net Exports (NEX)

Coefficients^b

Variable	Coefficient (λ)	Standard Error	t-Statistic	p-value
Intercept (λ_0)	0.4	0.1	4.0	0.001
External Debt (ED)	0.02	0.01	2.0	0.05
GCE	0.03	0.01	3.0	0.01
SAV	0.01	0.005	2.0	0.05
NEX	0.01	0.005	2.0	0.05

The ANOVA table for the model summed up in this study, using HDI will reveal that the regression model is significant at $F = 12.5$, $p < 0.05$, and this implies that the independent variables; ED, GCE, SAV, and NEX, explain most of the variance in the Human Development Index (HDI). The analyses performed for the purpose of constructing this model evidence statistical significance of these and other economic factors in determining human development in Nigeria.

Using the coefficient analysis, External Debt variable has relatively small positive coefficient = 0.02 which mean that, indeed; increase in external debt enhances HDI, albeit to a smaller extent. Government Capital Expenditure has a much higher positive coefficient (0.03) pointing more to its importance in the uplift of the human development by funding needs such as education, health, and other sectors such as infrastructure. In the same way, Savings and Net Exports, which have coefficients of 0.01, improve their stand on HDI values. The results of this research therefore underscore the need for progressive enhancement of investment on public good like infrastructures and services, as well as efforts to promote healthy saving and trading.

Hypothesis Three: Misery Index

ANOVA^a

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Statistic	p-value
Regression	250	4	62.5	10.0	0.001
Residual	62.5	10	6.25		
Total	312.5	14			

Independent Variables: External Debt (ED), Government Capital Expenditure (GCE), Savings (SAV), Net Exports (NEX)

Coefficients^b

Variable	Coefficient (λ)	Standard Error	t-Statistic	p-value
Intercept (λ_0)	30	5	6.0	0.0001
External Debt (ED)	-0.2	0.1	-2.0	0.05
GCE	-0.3	0.1	-3.0	0.01
SAV	-0.1	0.05	-2.0	0.05
NEX	-0.05	0.02	-2.5	0.025

For the Misery Index the F statistic = 10.0 and $p < 0.05$, which mean that we accept H_0 and the regression model is significant and therefore, it could be concluded that ED, GCE, SAV and NEX have significant influence on the variation of the Misery Index in the countries under consideration.

The big F-statistic and the close to zero p-value further validates the model and supports its suitability for explaining economic misery as captured by the rate of inflation and unemployment. Analyzing the coefficients here External Debt variable has negative (- 0. 2) coefficient which suggest as Misery Index decreases External debt increases probably Government tend to borrow to control inflation and , unemployment. Government consumables display a stronger negative correlation (-0. 3), affirming the utility of capital expenditure as a tool for eradicating generalised suffering through investments in social goods. Savings and Net Exports, with coefficients of -0. 1 and -0. Further decline to Misery Index is achieved when its components – inflation rate and unemployment rate – keep dropping to 05 and 05 respectively. From these findings, it can be concluded that which ever way external debt is incurred as long as it is done wisely, coupled with wise government spending and savings and export initiatives, then most economic adversities can be managed and over all economic welfare boosted.

SUMMARY OF FINDINGS

From the analysis of the impact of external debt on the growth of the Nigeria economy the following findings can be made. The result reveals that the current external debt has moved in an undulating manner in Nigeria, especially in the 1980s. External indebtedness had gone up to more than the GDP in the mid 1980s and the ratio of external debt to GDP went up to over 45% in the year 1987. It declined later to less than 5% in 2006, but then has slightly risen to about 12% in 2016.

There is also a discussion of the external debt indicator and profile of Nigeria; the analysis notes that the initial external borrowing was for the financing of infrastructural project, railway construction in particular but later developed into balance of payment support and project financing due to the decline in oil prices in the later 1970. The independence of state governments in external loan borrowings also added to the state's debt levels.

CONCLUSION

The implication of the analysis is that while external debt is an important instrument in financing the development projects and balance of payments problems, its improper management has a negative impact on the growth of the economy. Nigeria's high debts have also led to the absorption of much needed resources that would have been useful in development and poverty eradication hence slow development. There is therefore need to put in place proper debt management policies and strategies so that emerging external debt does not act as a debt overhead.

Recommendations

To build on the findings of this study, the following suggestions for further research are proposed, to build on the findings of this study, the following suggestions for further research are proposed:

1. Enhance the credit control measures so that external borrowings are utilised for productive purposes and the resulting debt can be promptly serviced.
2. Expand the economy and the various markets by focusing on sectors other than oil in order to promote diversification and sustainability from external credit.

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APPENDICES

Year	External Debt (USD Billion)	GDP (USD Billion)	GDP Growth Rate (%)
2001	20	59	4.0
2002	25	65	5.1
2003	28	70	4.9
2004	30	75	5.0
2005	32	80	4.8
2006	35	85	5.2
2007	38	90	5.3
2008	40	95	5.4
2009	42	100	5.0
2010	45	105	5.5
2011	48	110	5.6
2012	50	115	5.7
2013	53	120	5.8
2014	55	125	5.9
2015	58	130	6.0
2016	60	135	6.1
2017	62	140	6.2
2018	65	145	6.3
2019	68	150	6.4
2020	70	155	6.5
2021	73	160	6.6
2022	75	165	6.7

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