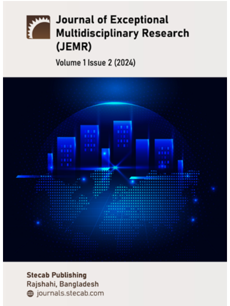

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Research Article

Determinants of External Debt and Its Impact on Socio-Economic Life in Nigeria

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About Article

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ABSTRACT

The research focused on analyzing the factors influencing external debt and its effects on the socio-economic conditions of Nigeria from 1986 to 2021. Data from annual time series were collected from the World Bank Development Indicator (WDI, 2022) and Central Bank of Nigeria Statistical Bulletin (CBN). Variables studied included real gross domestic product, debt service payments, exchange rate, gross domestic savings, trade openness, and misery index used as a proxy for socio-economic status. Stationarity of the variables was tested using the Augmented Deckey Fuller Unit Root Test, showing mixed order of integration me (0) at levels and me (1) at first differences. The Breusch-Godfrey Serial Correlation LM test indicated no serial correlation in the model, while the Breusch-Pagan-Godfrey Heteroskedasticity test revealed no heteroskedasticity in the residual series. The Autoregressive Distributive Lag (ARDL) Bound test confirmed a long-term relationship between external debt determinants and their impact on Nigeria's socio-economic conditions. The study found that real gross domestic product, exchange rate, and gross domestic savings had a negative impact on the misery index, implying that an increase in these variables would reduce the misery index in Nigeria in the long run. The Error Correction test suggested that 87% of equilibrium errors were corrected annually, pointing to a steady adjustment towards the long-term equilibrium. It was recommended that efforts should be made to stabilize the exchange rate to mitigate inflation and enhance the purchasing power of the naira, ultimately reducing Nigeria's external debt burden and improving the misery index.

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1. INTRODUCTION

Developing nations often encounter limitations in resources that hinder their ability to invest in essential infrastructure, consequently restricting their potential for long-term economic growth (Rahaj, 2018). This issue arises from a variety of factors, including inadequate tax systems, a limited tax base, and unpredictable fluctuations in commodity prices, resulting in insufficient tax revenue and income from natural resources to support sustainable development. As a result, many developing countries rely on deficit spending to cover public expenses and address funding gaps caused by shortfalls in tax revenue. Therefore, no nation can be completely self-sufficient; it would require assistance to function efficiently and effectively. External debt is a significant form of aid, defined as debt owed to non-residents and repayable in foreign currency, goods, or services (World Bank, 2014). It is a primary source of financing for resource development in developing nations, where borrowing is deemed appropriate for governments to meet financial needs during deficits to bridge the savings-investment gap (AbdRahman *et al.*, 2019).

Like many other developing economies, Nigeria utilizes deficit spending to stimulate capital formation and long-term production growth. Several studies have suggested that a country's economic success can benefit from public spending funded through domestic or foreign borrowing. This funding aids in financing investments and balance of payments deficits. External debt refers to funding acquired from foreign lenders, including commercial banks, government organizations, or global financial institutions, which incurs a legal obligation to repay the funds at a later date.

Nigeria, similar to other oil-producing countries, engaged in extensive spending during the economic boom period. Following the boom, the government turned to public debt financing to overcome the shortfall in providing basic services due to reduced foreign exchange earnings. The accumulation of debt service prompted by these events exacerbated the nation's debt challenges (Ocampo, 2015; Reinhart & Rogoff, 2010; IMF, 2018).

Nigeria's external debt history dates back to 1958 when funds were borrowed from the World Bank for railway construction. Subsequent to the decline in commodity prices in 1978, Nigeria borrowed additional funds for public projects aimed at improving the quality of life for its citizens. As indicated by the Central Bank of Nigeria (CBN, 2019), the country has accumulated debts from various foreign sources, including the Paris Club of Creditors, the London Club of Creditors, Multilateral Creditors, Promissory Note Creditors, Bilateral Creditors, and Private Sector Creditors. These overseas funds are utilized for projects like the Nigeria Railway Modernisation Project and Nigeria Four Airport Terminals Expansion Project.

While borrowing from external sources may seem logical, the reliance on such loans has become an ongoing burden with severe economic implications for both current and future generations of Nigerians. This has led to a decline in living standards, increased dependence on external sources, reduced socio-economic investments, currency devaluation, balance of payment issues, exchange rate devaluation, and a rise in inflation rates (Ijirshar *et al.*, 2016). Nigeria's substantial debt load poses a significant obstacle to job creation and economic progress, as funds intended for productive purposes are frequently redirected to repay external debt obligations.

Moreover, Nigeria's external debt increased from $71 billion in December 2017 to $74.28 billion by the end of the first quarter of 2018. From the start of 2015 to December 2020, the country's overseas debt rose from $9.7 billion to $27 billion. Although Nigeria experienced an average growth rate of 6.1% between 2010 and 2014, it declined to -1.6% in 2016 (Aiyedogbon *et al.*, 2022), indicating that a significant portion of the country's resources is allocated to non-productive activities, hindering Nigeria's progress and potentially leading to a severe debt crisis. The continual growth in Nigeria's external debt has raised concerns about the future, as the country strives for rapid growth and development to catch up with other emerging nations and the advanced world. While a significant amount of external debt has been acquired, it is anticipated to spur development, improve socio-economic infrastructure, create jobs, reduce poverty, and enhance access to education, electricity, water, and more.

Despite the sizable foreign debt, Nigeria has experienced rising unemployment, inflation, and sluggish GDP growth. This situation necessitates further exploration of the connection between external debt and the issues of unemployment, inflation, and GDP growth, key indicators of the misery index. The escalating misery level among Nigerians, despite previous years of economic growth, challenges the theoretical premise that improved external debt should lead to better living standards, indicating a deviation from the norm. This raises questions about why recent external debt in Nigeria has contributed to increased misery levels and whether economic growth has amplified or alleviated the misery experienced by Nigerians.

While external borrowing may appear justified initially, it often evolves into an enduring burden with severe economic repercussions for both present and future generations, resulting in a marked drop in living standards, heightened external reliance, significant social and economic overhead depreciation, currency devaluation, balance of payment imbalances, poverty rates, low living standards, and a rise in inflation. Considering the vital link between a nation's economic growth and its citizens' quality of life, focusing on education, healthcare services, job opportunities, and good employment is essential in Nigeria. However, the escalating misery index driven by high external debt servicing poses a substantial threat to the country's socio-economic well-being. Hence, thoroughly examining the root causes of external debt in Nigeria is crucial to mitigate its adverse impact on socio-economic life and safeguard the nation against unsustainable external debt and debt crises in the future.

1.1. Statement of problem

External debt plays a crucial role in bridging the gap between domestic savings and global investments. Like many other countries, Nigeria has utilized external debt to fund investments in hopes of boosting economic output and enhancing socio-economic conditions. Noko (2016) argued that the issue with debt lies not in its presence but in a nation's inability to meet debt service obligations, often due to limited understanding of the debt's terms and the financial burden it places on the economy. Despite concerns about the increasing external debt burden and debt service ratio, Nigeria continues to face challenges in developing basic infrastructure and combating poverty.

The mismanagement of external debt has led to negative consequences such as unemployment, inflation, poverty, and unequal income distribution. This study aims to analyze the factors contributing to Nigeria's accumulation of external debt and its impact on various aspects of socio-economic life, including education, healthcare, employment opportunities, and income generation. By exploring the relationship between external debt and socio-economic indicators, this research intends to offer insights for effective debt management strategies and sustainable economic growth.

1.2. Objectives of the study

The main goal of this research is to investigate the factors that determine external debt and how it affects the socio-economic situation in Nigeria from 1986 to 2021. While the specific objectives are to;

i. Identify external debt determinants in Nigeria

ii. Estimate the impact of external debt determinants on socio-economic life in Nigeria

1.3. Research questions

The research questions are formulated as follows;

i. What are the external debt determinants in Nigeria?

ii. What is the impact of external debt determinants on the socio-economic life in Nigeria?

1.4. Research hypotheses

This study is guided by the null and alternative hypothesis:

1.5. Hypotheses

H0: External debt determinants has no significant impact on socio-economic life in Nigeria

H1: External debt determinants has significant impact on socio-economic life in Nigeria

2. LITERATURE REVIEW

2.1. Introduction

This section of the paper focuses on examining pertinent literature related to the research topic. It includes reviews of conceptual, theoretical, and empirical literature, as well as the theoretical framework. Various views, opinions, comments, and statements made by writers and scholars in sources like journals, textbooks, and articles on the factors influencing external debt will also be analyzed.

2.2. Conceptual issues

An individual, company, or governing body that is obligated to repay funds to a creditor is considered to be in debt. Debt arises when an individual, business, institution, or government exceeds its existing income or intentionally decides to borrow money in order to finance a specific purchase. (Collons, 2005). Debt may be categorized as either private or public debt.

2.2.1. Private debt

Private debt is the amount of money owed by individuals or non-governmental businesses. There are various types of private debt, such as a personal loan, credit card debt, corporate bond, or a business loan.

2.2.2. Public debt

Government debt refers to the total amount of money borrowed by a country's central government, which includes bonds and securities. Public debt can be categorized as either internal or external.

2.3. Types of public debt

2.3.1. Internal or domestic debt

Internal public debt, in the context of national finances, represents the amount of the country's total debt that is owed to domestic creditors. It contrasts with external debt, which is the amount owed to foreign entities such as commercial banks and financial institutions that provide funding for internal borrowing. The internal public debt, which is the money borrowed by a government from its own citizens, forms a portion of the nation's overall national debt.

2.3.2. External debt

External debt refers to the money that a country owes to foreign entities, which can be repaid in foreign currency, goods, or services. The currency in which the debt was borrowed must be the same currency used to repay it. Organizations like the World Bank, the International Monetary Fund (IMF), and other governments can offer assistance in this regard.

2.4. Concept of external debt

Countries, particularly developing nations, borrow money to address budget deficits and stimulate economic growth. Essentially, the government borrows funds to invest in public goods that enhance prosperity and facilitate economic development (Ogunmuyiwa, 2011). Due to insufficient domestic financial resources, countries resort to borrowing from foreign sources. The borrowed funds from international sources constitute a nation's external debt. In Nigeria, external debt is obtained from Multilateral agencies, Paris club creditors, London club creditors, Promissory Note holders, and other creditors. External debt is utilized as a means to finance capital formation and contribute positively to the economy; however, the future repayment of debt poses a risk to economic growth (Ayadi & Ayadi, 2008).

Arnone *et al.* (2005) defined external debt as the portion of a country's debt procured from foreign lenders such as commercial banks, governments, or international financial institutions. External debt becomes essential when domestic financial resources are insufficient to support public goods that enhance well-being and drive economic growth. These funds obtained externally, typically in foreign currency and with interest, are earmarked for specific projects. Shabbir (2009) stated that external debt is acquired to address budget deficits and accelerate economic activities, with the intention of fostering economic growth. Countries may be burdened with significant external debt, especially if accompanied by a relatively high level of exports that can help sustain the debt. However, unsustainable external debt poses a significant risk to a nation's economic well-being, as servicing the debt—indicative of a high current account deficit—may result in a debt overhang.

2.5. Categories of external debt creditors

Nigeria's foreign debt can be categorized into two main types official and private. Official debt includes Paris Club debts, multilateral debts, and non-Paris Club bilateral debts. Private debt, on the other hand, consists of uninsured short-term trade arrears obtained through bills for collection, open account transactions, and commercial bank debt acquired through loans and letters of credit, known as London Club debts (Mbanwusu, 2011).

(i) Paris club: The Paris Club is a group of creditor countries that serves as an informal platform for countries struggling to repay their official debts to meet with creditors and work out new payment schedules. It is a non-permanent group that operates based on agreement among its members. Nigeria owed a significant portion of its foreign debt to the fifteen countries that are part of the Paris Club. The debts owed to the Paris Club are either from government-to-government transactions or loans taken from the market with guarantees from export credit agencies in the creditor countries. The member countries of the Paris Club that Nigeria owes money to include the USA, Switzerland, Australia, Germany, Denmark, Italy, the Netherlands, Japan, the UK, Spain, Israel, France, Belgium, Russia, and Finland.

(ii) London club: The London club is classified as commercial debts. It is comprised of a collective of commercial banks who collaborate to discuss the reorganization of their debts with countries in debt. London club debts consist of overdue commercial bank loans, as well as outstanding letters of credit, bills for collection, open accounts, dividends, airline remittances, and other types of financial obligations.

(iii) Multilateral debts: These project loans are borrowed from various multilateral financial institutions such as the World Bank Group, the African Development Bank Group, the European Investment Bank Group, and the ECOWAS Fund.

(iv) Non-paris club bilateral debts: This refers to a different type of debts that countries owe to non-Paris Club member countries and creditors from Paris Club nations whose debts are not backed by Export Credit Agencies.

(v) Promissory notes: Promissory Notes represent another category of commercial obligations and are known as promissory notes issued by the Central Bank of Nigeria (CBN). These notes are debts incurred by regular Nigerians between 1981 and 1986, who paid the local currency equivalent of the value of their imports to their local banks, which then transferred the funds to the CBN, despite the lack of foreign currency reserves for remittance.

2.6. Causes of external debt in nigeria

The Central Bank of Nigeria has pinpointed several factors that have led to the growth of Nigeria's external debt since gaining independence. Some of the main reasons for this debt issue are:

i. Rapid growth of public expenditure, particularly that on capital projects.

ii. Borrowing from the international community at non-concessionary interest rates.

iii. Decline in oil earnings from the late 1970s and the dependence on imports which contributed to the emergence of trade arrears.

iv. Upward movements in the interest rate affected the size of the external debt stock.

"The outcome of these advancements led to the accumulation of debt payments, further exacerbating the country's debt crisis according to (Ocampo, 2015; Reinhart & Rogoff, 2010; IMF, 2018)." These developments resulted in the bunching of debt service, and compounded the debt situation for the country (Kharas & Rivard, 2020; Reinhart & Rogoff, 2010; CEPR, 2019).

2.7. Origin of nigeria's external debt

Before Nigeria gained independence, the country acquired a loan from the World Bank in 1958 for the construction of a railway. This loan amounting to US$28 million was favorable as it was interest-free or offered at rates below market norms. Until 1977–1978, Nigeria had minimal need for foreign aid, thanks to surplus oil revenues from the 1973–1976 oil booms. However, a significant drop in world oil prices led to a decline in oil revenue, necessitating external borrowing to address balance of payment issues and finance projects. In 1978, the international capital market approved a substantial borrowing of US$1 billion known as the JUMBO LOAN to fund infrastructure projects. Despite these efforts, income generated from these projects was insufficient to repay debts due to heavy reliance on imported materials. While the economy showed signs of recovery in 1979 with rising oil prices, heavy importation and underpriced exports strained the economy, leading to challenges in 1982 when global oil prices crashed. Rapid devaluation of the dollar and significant government deficits led to increased borrowing from the international capital market to compensate for the dwindling oil revenues and reserves. Consequently, external debt service payments rose sharply, causing a dramatic increase in Nigeria's debt profile as reported by the Debt Management Office of Nigeria in 2012.

In 1980, Nigeria had an external debt of $8.5 billion, which rose to nearly $19 billion by 1985, an increase of approximately 45.02 percent. The growth in arrears on trade debts was attributed to higher interest rates for debt service payments. By 1997, the country's total debt was $27.0878 billion, with $18.9804 billion owed to the Paris Club, $4.3727 billion to multilateral creditors, $1.6125 billion in promissory notes, and $0.7919 billion in non-Paris bilateral debts. The ratios of external debt servicing, including debt to GDP and debt to export earnings, rose in line with the increase in external debt. As of December 31, 2001, Nigeria's external debt stock was $28.35 billion, roughly 59.4 percent of GDP and 153.9 percent of export revenues. Moreover, Nigeria resumed borrowing in 2008, leading to continued indebtedness to international financial institutions. As of June 2015, Nigeria's external debt stood at $10.317 billion. This amount increased to $22.08 billion by June 30, 2018, as reported by the Debt Management Office. In the first quarter of 2019, Nigeria's external debt rose to $25,609.63 million from $21,591.68 million in the fourth quarter of 2018.

2.8. Nigerian's external debt relief

Ekperiware and Oladeji (2012) gave a definition of debt relief as an agreement between a creditor or country to accept reduced or suspended interest and redemption payments from a debtor. The debt relief deal between Nigeria and the Paris Club in 1956 aimed to assist debtor nations facing challenges with debt repayments. The Paris Club consists of 14 member nations including the United Kingdom, Denmark, France, Italy, Germany, United States of America, Japan, Belgium, Netherlands, Austria, Spain, Switzerland, Russia, and Finland. Nigeria received its initial loan of US$13.1 million from the Paris Club in 1964 for the construction of the Niger Dam (Ekperiware & Oladeji, 2012).

During the oil boom period of 1971-1981, Nigeria experienced a significant increase in borrowing. Following the civil war, various levels of the Nigerian government borrowed funds to initiate large-scale development and reconstruction projects. The Federal Government began to guarantee unprofitable loans taken by private banks, state governments, and government parastatals long after the end of the Second World War. The crash in oil prices in 1982 left Nigeria unable to repay its loans, leading to a rise in interest payments, trade arrears, and penalties. By 1986, creditors refused to extend new credit lines for imports to Nigeria. As a result, negotiations for debt relief with the Paris Club were initiated in 1986, 1989, 1991, and 2000 (Ekperiware & Oladeji, 2012).

Despite these efforts, Nigeria's external debt continued to rise, prompting the country to halt payments to the Paris Club when substantial debt reductions were refused. Nigeria launched a vigorous debt relief campaign after the return to civilian rule under President Olusegun Obasanjo in 1999. The main concern was that the country was spending more on debt servicing than on essential sectors like healthcare and education, hindering the achievement of the millennium development goals. In 2005, when the Paris Club of creditors agreed to forgive 60% (US$18 billion) of the US$30.85 billion owed by Nigeria, the campaign's persistence paid off. This substantial debt relief reduced Nigeria's annual debt service burden by US$2.3 billion (N345 billion) (Ekperiware & Oladeji, 2012).

2.9. Socio-economic life

Social economics focuses on the relationship between social processes and economic activity in a society. It seeks to understand how different social groups or socioeconomic classes behave, including their consumer actions. It explores the interaction between social and economic behaviors of a group of people, with "socio" referring to behavior and interaction, and "economic" referring to income and finances. The study of socioeconomic factors is crucial as it encompasses both economic and social aspects, examining how economic activity is influenced by social processes. It looks at how societies progress, stagnate, or regress due to their local, regional, or global economy. Access to social and economic opportunities, like education, jobs, and networks, is fundamental for a long and healthy life.

Employment, for instance, determines choices related to housing, education, healthcare, and other needs, while unemployment limits these choices and the ability to save for emergencies. Socioeconomic status is not just about income, but also includes education, financial stability, and perceptions of social standing. It influences quality of life and the privileges available to individuals within society. Poverty is complex and involves various physical and psychological stressors. Socioeconomic status is a reliable indicator of various outcomes throughout life, impacting both physical and mental health. Therefore, socioeconomic factors are relevant across behavioral and social sciences, influencing research, practice, education, and advocacy (Aikens & Barbarin, 2008).

2.10. Socio-economic factors

2.10.1. Income and occupation: Income and occupation are important factors that can impact one's socioeconomic status. For instance, a career in medicine typically leads to a higher income and membership in a social class that includes doctors, nurses, and other medical professionals. Gross household income is commonly used as a measure of income in assessments of socioeconomic status, with researchers often categorizing income levels as low, medium, and high based on the federal poverty line. Occupation, regardless of salary, is a traditional indicator of socioeconomic status because it is believed to reflect an individual's power, income, and educational requirements associated with different jobs in the occupational hierarchy. Many socioeconomic status calculations based on occupation categorize and rank types of work, such as the Registrar General's Scale which ranks occupations from lowest to highest socioeconomic status as Unemployed, Unskilled Manual Labor, Skilled Manual Labor, and Professional Labor. This cycle can have negative effects on an individual's health by limiting access to resources, increasing the risk of illness and disability, impacting household income and work status, and ultimately reducing overall quality of life.

2.10.2. Education: Education is a key socioeconomic factor that can reveal the level of academic achievement within a community, including high school graduation and college attendance. It also highlights the percentage of young people aged 16-19 who are not employed or enrolled in school. The level of education a person has can greatly influence their perspective on the world and contribute to societal development. Higher education levels often lead to increased earning potential, which can ultimately enhance quality of life. Those with more education usually earn better salaries, have reduced workplace risks, and enjoy greater access to healthcare. People with higher levels of education tend to live longer and healthier lives, as do their children. Education is widely regarded as a crucial indicator of socioeconomic status as it provides insights into earning potential over a person's lifetime, while income and occupation offer only a snapshot of an individual's social and economic circumstances (Shavers, 2007).

2.10.3. Employment: Employment is a crucial socio-economic factor. Your job is considered as your employment, depicting what you do to earn a living. Your employment standing and specific occupation significantly influence your health. Those with physically demanding jobs like a laborer or personal trainer are more inclined to meet the daily recommended 30 minutes of physical activity.

2.10.4. Environment: The socio-economic status of individuals is not inherently determined by their environment, although it often mirrors it. For example, a grown-up might opt to reside in a less affluent area to cut down on rent costs. Additionally, this individual may prefer to socialize with colleagues rather than with neighbors.

2.10.5. Religion: Religion often has strong connections to culture and is closely linked to socioeconomic factors. Many social connections and activities revolve around places of worship such as churches, temples, and mosques. Religion plays a crucial social role in the lives of many individuals, from community events like barbecues and games to global initiatives like missionary work and outreach programs (Magklara, 2012).

2.11. Empirical reviews

Previous studies have shown that the determinants of a country's external debt levels vary. Some researchers believe that external debt determinants are influenced by domestic factors and are entirely within the control of a country, such as political systems.

Sisay and Kotosz (2020) analyzed the macroeconomic factors affecting Ethiopia's external indebtedness from 1981 to 2016 using two- and three-gap models and an autoregressive distributed lag bound testing approach. They found that the savings-investment gap, trade deficit, budget deficit, and debt service positively and significantly impact long-term external debt, while GDP growth rate, trade openness, and inflation have a negative and significant effect on external debt.

Egungwu (2018) studied the impact of increasing external debt and debt service on human capital development in Nigeria from 1986 to 2015 using OLS regression. The study found that both external debt stock and debt servicing had a significant negative effect on human capital development.

Onyebuchukwu (2018) analyzed the effect of external debt on Nigeria's economic growth from 1995 to 2017 using time series data from the World Bank. OLS statistical tool revealed an insignificant relationship between foreign debt stock (FDSR) and GDP, as well as a positive but weak relationship between foreign debt and GDP.

Waheed (2017) investigated the macroeconomic determinants of external debt in oil and gas exporting and importing countries from 2004 to 2013. For exporting countries, economic growth, foreign exchange reserves, oil prices, and domestic investment reduce external debt, while deficits and inflation increase external debt. For importing countries, economic growth and domestic savings reduce external debt, while deficits, oil prices, interest payments, foreign direct investment, and domestic investment increase external debt.

Shamsuddeen *et al.* (2017) analyzed the empirical determinants of external debt burden in Nigeria from 1973 to 2013 using ARDL cointegration. They found that the CPI, interest rates on external debt, GDP, and money supply are cointegrated with external debt in both the short and long term. CPI and interest rates are negatively correlated with external debt, while GDP and money supply are positively correlated.

2.12. Theoretical framework

This study utilized the Dual Gap Theory as its theoretical framework. The Dual Gap Theory, also known as the two gap theory, was developed in the context of developing countries borrowing capital from foreign sources in order to achieve rapid economic growth. According to the dual gap analysis, development is dependent on investment, and investment is primarily funded by domestic savings, which are often insufficient to support development. Therefore, governments often seek funding from foreign sources to bridge the investment gap, which is usually equal to the savings gap. Furthermore, in order to boost domestic resources, countries may need to rely on foreign sources to cover the deficit between imports and exports (i.e. M>E).

$I - S$

$M - E$

Hence, $I - S = M - E$

3. METHODOLOGY

3.1. Sources of data collection

For this study, the researcher utilized the World Bank Development Indicator (WDI) and the Statistical Bulletin of the Central Bank of Nigeria (CBN) as sources of secondary data.

3.2. Variables measurement

Real Gross Domestic Product (RGDP): Real Gross Domestic Product (RGDP) is determined by adding together the gross value added by all domestic producers, along with product taxes and subtracting subsidies that are not part of the product value. This calculation does not account for the depreciation of manufactured assets or the depletion and deterioration of natural resources. RGDP is expressed in billions of naira according to the World Bank (2022).

Debt Service Payment (DSP): Total debt service refers to the total amount of money, goods, or services used to repay the principal amount and interest on long-term debt, as well as interest payments on short-term debt and repayments to the IMF. This information is presented in current U.S. dollars according to the World Bank (2022).

Total External debt (EXDT): Total external debt refers to the debt that is owed to individuals or entities outside of the country and is meant to be repaid in currency, goods, or services. This debt includes the combined amount of public, publicly guaranteed, and private nonguaranteed long-term debt, as well as any IMF credit utilized and short-term debt. This information was provided (World Bank, 2022).

Exchange Rate (EXRT): The official exchange rate is the rate set by government authorities or the rate established in the officially approved exchange market. It is determined by calculating an annual average using monthly averages of the local currency (naira) against the U.S. dollar. This information is sourced from the World Bank in 2022.

Gross Domestic Savings (GDS): Gross domestic savings is determined by subtracting final consumption expenditure (total consumption) from Gross Domestic Product (World Bank 2022)

3.3. Trade openness

The total value of goods and services exported and imported, expressed as a percentage of the gross domestic product (World Bank, 2022).

3.4. Misery Index (MI) proxy for socio-economic life

The Misery Index evaluates the economic and social hardships experienced by individuals in a specific country. Its purpose is to gauge the level of economic suffering experienced by individuals, resulting from the potential threat of unemployment or existing joblessness, as well as the rising expenses of daily living (Hank's Annual Misery Index 2011).

3.5. Method/techniques of analysis

The research utilized Unit Root Test to assess the trend of the variables, Autoregressive Distributed Lag model (ARDL) Bound test to examine the enduring connection between the dependent and independent variables, Autoregressive Distributed Lag model (ARDL) technique to scrutinize the factors influencing external debt and its consequences on the socio-economic conditions in Nigeria from 1986 to 2021, and Error Correction Mechanism (ECM) to evaluate the rate of adjustment from imbalance error to balance error.

3.6. Model specification

The research adapted the model utilized by Rabiatul (2015) to investigate the factors influencing external debt in Nigeria. The model developed by Rabiatul (2015) was structured in the following manner:

ED = F (GDP, EXR, REXP, CEXP) .....(1)

Where;

ED =External Debt

GDP = Gross Domestic Product

EXR = Exchange Rate

REXP = Recurrent Expenditure

CEXP = Capita Expenditure

Therefore; linearizing equation (1) becomes:

$EDt = \beta 0 + \beta 1GDPt + \beta 2EXRt + \beta 3REXPt + \beta 4CEXPt + \varepsilon t$ .....(2)

Therefore, the research altered the equation model mentioned above. Rabiatul (2015) revised the model due to previous studies (Awan, Anjum & Rahim, 2015) that highlighted government spending on both recurrent and capital expenses as the main influencing factor of Nigeria's external debt. As a result, in order to meet the goals of this study, the models are outlined as follows:

Modified equation: Estimating External Debt Determinants and its impact on Socio-economic life

MI=F(RGDP,DSP,EXRT,GDS, TRDOP) .....(3)

Then the log linear form is given as;

$MIt = \beta 0 + \beta 1LnRGDPt + \beta 2LnDSPt + \beta 3EXRTt + \beta 4LnGDSt + \beta 5LnTRDOP + Ut$ .....(4)

Where;

MIt = Misery index (proxy for socio-economic impact)

LnRGDPt = log of Real Gross Domestic Product

LnDSPt = log of Debt Service Payment

EXRTt = Exchange Rate

LnGDSt = log of Gross Domestic Savings

LnTRDOPt = log of Trade openness

Ut = Disturbance term

3.7. A priori expectation of the variables

$\lambda 2, \lambda 5$ and $\lambda 6<0$, and $\lambda 3$,and $\lambda 4>0$

Real GDP, domestic savings, and trade openness are predicted to be inversely related to the misery index, which serves as a proxy for socio-economic well-being. In contrast, debt service payments and exchange rates are expected to have a positive effect on the misery index.

3.8. Data presentation, analysis

This part employed Unit Root Test to evaluate the stability of the variables, ARDL Bound test to assess the long-term association between the dependent and independent variables, ARDL model to analyze the factors influencing external debt and its effects on the socio-economic conditions in Nigeria from 1986 to 2021, and ECM to investigate the rate of adjustment from imbalance to balance error.

3.9. Hypotheses testing

H0: External debt determinants has no significant impact on socio-economic life in Nigeria.

H1: External debt determinants has significant impact on socio-economic life in Nigeria.

Table 1. Shows the results of stationarity test

Variable	ADF Statistic	5% Critical Value	Prob. Value	Order of integration	Status
Level Variables					
LDSP	-3.811477	-2.951125	0.0065	I(0)	Stationary
LTRDOP	-4.757667	-2.951125	0.0005	I(0)	Stationary
First Differenced Variables					
EXRT	-3.948707	-2.954021	0.0047	I(1)	Stationary
LRGDP	-4.045036	-2.957110	0.0037	I(1)	Stationary
MI	-5.316923	-2.954021	0.0001	I(1)	Stationary
LGDS	-4.365636	-2.967767	0.0018	I(1)	Stationary

Source: E-views 9 Results and Author's Computation 2024

The ADF unit root test indicated that Debt Service Payment (DSP) and Trade Openness (TRDP) are stationary at the level, implying they are integrated of order (0). However, Exchange Rate (EXRT), Real Gross Domestic Product (RGDP), Gross Domestic Savings (GDS), and the Misery Index (MI) as proxies for socioeconomic conditions are stationary at the first difference, suggesting they are integrated of order (1).

Table 2. ARDL Bound Test Result

Significance	l0	l1	Computed F- Statistics
10%	2.08	3	3.625214
5%	2.39	3.38	
2.5%	2.7	3.73	
1%	3.06	4.15	

Source: E-views 9 Results and Author's Computation 2024

The data presented in Table 2 shows that the F statistic value of 3.63 exceeds the critical values of I(0) and I(1) at the 5% significance level. This implies that the null hypothesis of no long-term relationship can be rejected and confirms the presence of cointegration between the variables.

Table 3. Breusch-godfrey serial correlation lm test

F-statistic	1.346276	Prob. F(2,20)	0.2828
Obs*Rsquared	3.915566	Prob.ChiSquare (2)	0.1412

Source: E-views 9 Results and Author's Computation 2024

According to the results from Table 3, the Breusch-Godfrey Serial Correlation LM test indicates that there is no indication of serial correlation within the model as the Chi-squared probability value (0.1412) is higher than the 5% significance level. It is important to note that we are unable to reject the null hypothesis that there is no serial correlation present.

Table 4. Heterokedasticity test: reusch-pagan-godfrey

F-statistic	1.776576	Prob. F(10,22)	0.1255
Obs*R-squared	14.74309	Prob. Chi-Square(10)	0.1417
Scaledexplained SS	6.784898	Prob. Chi-Square(10)	0.7456

Source: E-views 9 Results and Author's Computation 2024

According to the findings from Table 4, the Breusch-Pagan-Godfrey Heteroskedasticity Test indicates that there is no presence of Heteroskedasticity in the residual data over the entire period analyzed. This is supported by the Chi-Square test statistic having a probability or P-value of 0.1417, which is higher than the 5% significance level. As a result, it can be concluded that the data series exhibits Homoscedasticity instead of Heteroskedasticity.

The data presented in Table 5 demonstrates the relationship between dependent and independent variables over a long period of time. The findings indicate that the long-term coefficient for real gross domestic product (RGDP) is negative (-37.528029) and statistically significant at a 5 percent level of significance. This suggests that an increase in RGDP has a

Table 5. Model summary of estimation: estimation of long run coefficient of external debt determinants and its impact on socio-economic life in Nigeria

Dependent Variable: MI				
Long Run Coefficients				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.***
LRGDP	-37.528029	26.245226	-1.429899	0.0468
LDSP	1.658217	5.447263	0.304413	0.7637
EXRT	-0.148267	0.076351	-1.941908	0.0651
LGDS	-30.826376	16.483287	-1.870160	0.0748
LTRDOP	-19.409679	16.355377	-1.186746	0.2480
C	671.273402	401.692050	1.671114	0.1089

Source: E-views 9 Results and Author's Computation 2024

negative effect on the misery index, which serves as a proxy for socio-economic conditions in Nigeria. Essentially, a 1% rise in RGDP is associated with a 37.5% reduction in the misery index. This result aligns with economic theory, which predicts that an increase in RGDP leads to a decrease in the Misery Index, and vice versa.

In the same way, the long-term coefficient of the exchange rate (EXRT) is -0.148267, which is statistically significant at the 10% level of significance. Consequently, the exchange rate (EXRT) negatively impacts the misery index (MI) over the long term in Nigeria. This suggests that a 1% increase in the exchange rate (EXRT) will lead to a 0.15% decrease in the misery index (MI). Therefore, this outcome aligns with a study conducted by Rano-Aliyu (2009), which demonstrated that an appreciation of the exchange rate can alleviate economic suffering by reducing inflation, increasing domestic investments, and savings.

The coefficient for gross domestic savings (GDS) in the long term is -30.826376 and is statistically significant at the 10% level. This means that a one percent increase in GDS results in a 30.8% decrease in the misery index. This is due to the fact that an increase in savings can be seen as a source of capital that is vital for investment, production, and employment, all of which contribute to reducing the misery index.

Moreover, the coefficient for trade openness (TRDOP) in the long term is negative, specifically -19.409679. This suggests that over time, trade openness has a detrimental effect on the misery index. Essentially, a 1 percent increase in trade openness results in a 19.4 percent decrease in the misery index, and vice versa. This aligns with the economic theory of comparative advantage, which posits that trade contributes to the economic well-being of nations by promoting growth, creating employment opportunities, improving living standards, and enabling families to afford basic necessities, ultimately reducing the overall level of misery in the economy.

Table 6. ARDL Error Correction Mechanism (ECM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MI(-1))	0.451865	0.140297	3.220782	0.0039
D(LRGDP)	-116.108233	32.690639	-3.551727	0.0018
D(LDSP)	2.736403	3.099902	0.882739	0.3869
D(EXRT)	-0.340776	0.118625	-2.872717	0.0088
D(LGDS)	-30.080428	12.086652	-2.488731	0.0209
D(LTRDOP)	6.968226	9.296716	0.749536	0.4615
CointEq(-1)	-0.879172	0.149845	-5.867226	0.0000

Source: E-views 9 Results and Author's Computation 2024

The findings in Table 6 indicate that the error correction coefficient is negative as it should be (-0.879172), suggesting the presence of a valid error correction mechanism that can bring the system back to long-term equilibrium. This suggests that around 87 percent of the error causing the imbalance is being corrected every year, gradually moving towards long-term stability at a rate of 87 percent annually.

4. RESULTS AND DISCUSSION

The research explored the factors influencing foreign debt and its consequences on the socio-economic landscape in Nigeria between 1986 and 2021. Specifically, it identified the determinants of foreign debt in Nigeria and analyzed their impact on the country's socio-economic conditions. The study relied on secondary data from sources such as the World Bank Database 2022 and the Statistical Bulletin of the Central Bank of Nigeria (CBN). Various methodologies, such as unit root tests, residual diagnostic checks, ARDL Bound tests, ARDL cointegration and long-run forms, and Error Correction Mechanisms (ECM), were employed to analyze the data and achieve the research objectives.

Based on the outcomes of various tests, it was determined that the Breusch-Godfrey Serial Correlation LM test revealed no serial correlation in the model as the Chi-squared probability values (0.1412) exceeded the 5% significance level. Following this, the results of the ARDL Bound test indicated that the f-statistics value of 3.625214 surpassed the 5% critical value for the lower and upper bounds of 3.38, suggesting the presence of a long-run relationship between the variables. Moreover, the ARDL long-run relationship analysis illustrated that the coefficient for real gross domestic product (RGDP) in the long run was negative and statistically significant at -37.528029. This signifies that the real gross domestic product negatively impacts the misery index, serving as a proxy for socio-economic conditions in Nigeria.

The long-term coefficient of the exchange rate (EXRT) is -0.148267, indicating a significant negative effect on the misery index (MI) in Nigeria. Likewise, the long-term coefficient of gross domestic savings (GDS) is -30.826376, also showing a notable negative impact. The results of the Error Correction Model (ECM) reveal a negative and statistically significant error correction coefficient of -0.879172. It is important to note that around 87% of the previous year's disequilibrium errors are being corrected annually, with the remaining 13% unaccounted for in the model.

5. CONCLUSIONS

Based on the results, it can be inferred that factors such as real gross domestic product (RGDP), exchange rate (EXRT), gross domestic savings (GDS), and trade openness (TRDOP) play a role in determining external debt in Nigeria and have a negative effect on the country's socio-economic well-being. This suggests that an increase in these variables would result in a decrease in the misery index used as a proxy for socio-economic conditions in Nigeria, and vice versa. Additionally, debt service payment (DSP) is shown to have a positive impact on the misery index, indicating that an increase in debt service payments leads to an increase in the misery index.

RECOMMENDATIONS

The study provides some policy suggestions based on the results.

i. Because economic growth, represented by RGDP, influences external debt in Nigeria, it is important for Nigerians to implement policies aimed at boosting economic growth. Specifically, investing in productive sectors of the economy could be a key focus for policymakers; this is expected to stimulate economic growth, if properly monitored and free of any mismanagement. Consequently, the socio-economic conditions of the society or the economy as a whole will also improve. Additionally, economic growth needs to accelerate at a quicker rate to alleviate the relatively high level of suffering in Nigeria.

ii. As the exchange rate is controlled by the monetary authority in Nigeria, efforts should be made to ensure exchange rate stability to mitigate inflationary pressures and enhance the purchasing power of the naira. This will help lessen the external debt burden on Nigeria

iii. It is important to invest domestic savings efficiently and for national economic policies to encourage savings by utilizing various mobilization techniques, as gross domestic savings is a crucial factor for economic growth.

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