# An Exposé Into The Impact Of External Debt On The Standard Of Living In Nigeria

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**Abstract:** *The study investigates the effect of external debt on Nigeria's living standard (1984 to 2014); examining the effect of foreign debt on an average Nigerian's standard of living is the primary goal of the study.The variables of the study are external debt (external debt stock, external debt servicing, exchange rate, infrastructural development (INFR), and per capita income (PCI). Econometric techniques, including Augmented Dickey-Fuller and P.P. for unit root tests, Johansson co-integration technique for a long-run relationship, Granger causality test, and Ordinary Least Square (O.L.S.) regression analysis was used to test the four hypotheses. The study revealed that although external debt stock has a positive effect on economic development, its serving conditions are opposed to the standard of living of an average Nigerian. This position is even aggravated by the unfavorable exchange rate experienced by Nigerian citizens. The study also reveals that the proportion of external borrowing expended on infrastructural development does not significantly affect Nigeria's economic growth. The study thus concludes that external debt harms Nigeria's economic growth and has not helped improve Nigeria's standard of living (per capita income). Among the recommendations is that the nation should commit its external borrowing on priority projects capable of generating revenue that will not only produce a favorable servicing platform but also free resources for improving the standard of living of an average Nigerian citizen.*

Keywords: External Debt, Standard of Living, Nigeria

## INTRODUCTION

The government can borrow money to close fiscal gaps between projected spending and anticipated revenue within a fiscal period. This is particularly useful when the government wants to avoid jeopardizing macroeconomic stability by not printing more money and when its ability to levy taxes is constrained and motivated by the need to give citizens social capital. Claiming that governments borrow money to provide public goods that raise wellbeing and spur economic growth is theoretical. Government spending generally has to be funded through taxation, seignior age (money printing), or debt.

Debt is a result of borrowing. In any economy, external debt is a major source of revenue for the government and funds the accumulation of capital (Adepoju, Salau & Obayelu, 2007). It is a tool nations use to close economic gaps and implement economic initiatives to raise citizens' standards of life and advance sustainable growth and development. According to Hameed, Ashraf, and Chaudhary (2008), borrowing from outside the country should quicken economic expansion, particularly when there is insufficient local funding. External debt is also expected to improve total factor productivity through increased output, which enhances a nation's Per capita income (PCI). It is impossible to overstate the significance of foreign debt as it is a fierce advocate for growth, raising living standards and reducing poverty (Egbetunde, 2012).

The international community knows that most developing nations' high foreign debt poses a serious barrier to their capacity to expand economically and maintain stability (Audu, 2004; Mutasa, 2003). Developing nations like Nigeria have frequently incurred significant external debt, which has resulted in rising trade debt arrears at extremely low interest rates. According to Gohar and Butt (2012), accrued debt service obligations pose several challenges for governments, particularly developing ones, as they must be paid off faster than the debt was originally incurred, which hinders the economies of these countries. The Nigerian economy's incapacity to fulfill its debt service responsibilities has led to an accumulation of debt, or debt service load, which has impeded its progress. Nigeria's debt service load began to accrue in 1978 following a decline in global oil prices. Prior to this, Nigeria had some small debts from the World Bank (1958), which was for a loan of US$28 million for the construction of a railway, and the Paris Club debtor nations (1964), which was for a loan of US$13.1 million from the Italian government for the building of a dam on the Niger River. The International Capital Market (I.C.M.) provided the first large borrowing of US$1 billion, dubbed the "Jumbo loan," in 1978 (Adesola, 2009). However, Nigeria's external debt rapidly escalated in the eighties due to declining oil export earnings (Osuji & Ozurumba, 2013).

The increasing fiscal deficits driven by the high external debt servicing threaten the nation's growth. The resultant effect of considerable debt accumulation exposes the nation to a high debt burden. Nigeria is the richest nation in Africa, but the majority of its citizens live below the poverty line as a result of a number of macroeconomic issues, including inflation, unemployment, a negative balance of payments, a reliance on crude oil as the only major source of income, corruption, and growing external debt and debt service obligations.

The heavy external debt burden associated with disincentives to invest could have contributed to Nigeria's relatively poor growth performance in the past. Other factors that have contributed to the situation are high inflation, persistent depreciation of the exchange rate, and massive fiscal deficits. Additionally, since a portion of export revenue goes toward debt repayment, it is anticipated that as debt obligations increase, export profits available to the domestic economy would decline. This, in turn, might indirectly affect government expenditures and, therefore, negatively affect economic growth. A country's actual per capita GDP growth may experience adverse effects if it is exposed to high international borrowing stock or debt service on public spending (Abud, Abdullah, and Jaffar, 2014).

Although the International Monetary Fund (I.M.F.) proposed (or imposed) structural adjustment programs to reduce the volume of debt liability and ensure debt repayment, these have not worked well in developing African countries, especially Nigeria. In many cases, such programs have affected social welfare spending, as World Bank and IMF reports predicted. Higher taxation and downsizing have led to rising unemployment and income reductions. At the same time, removing subsidies has caused the market prices of food items to increase, with grave implications for poor households. Thus, rather than alleviate poverty in the countries implementing these programs, they have merely aggravated the economic crisis.

For most developing countries like Nigeria, debt accumulation is the root cause of their financial problems, including widening fiscal deficits. During an Organization for Economic Co-operation and Development (OECD) conference Assistance Committee in 1996, some socio-economic targets were set for borrowing countries to be achieved by 2015; that is, the OECD's assistance to developing countries was tied to visible progress in achieving these goals. Subsequently, the U.N. General Assembly approved the Millennium Development Goals (M.D.G.s) agenda in 2003, which aimed to eradicate poverty and hunger and provide better health and primary education accompanied by a sustainable environment. However, most developing countries remain trapped in a vicious debt circle, so the focus will likely be diverted from "welfare" to "survival." This makes achieving the M.D.G.s a matter of chance in countries like Nigeria.

The persistence of heavy outstanding debt is, among other factors, detrimental to economic growth. The reduction in the pace of development, in turn, implies lower household incomes and poor public revenue collection. Consequently, poverty is likely to rise, adversely impacting the social sectors. The dilemma for most developing countries, especially in Africa and specifically Nigeria, is that the rise in non-development expenditure has outstripped spending on the social sectors—to the extent that many governments are divesting themselves of the burden of providing essential health and education and gradually shifting this to the private sector.

However, heavy stock or debt servicing has greatly hindered a country's economic development due to high-interest payments on external debt servicing and heavy public expenditures. Given the rising stock of external debt in Nigeria, the government must critically examine the general implication of the loan on economic growth. It is against this background that it becomes imperative to investigate the effect of external debt on the standard of living in Nigeria from 1984 to 2014.

## STATEMENT OF THE PROBLEM

Large foreign debt does not always indicate a country's economic decline; rather, it might indicate an incapacity to fulfill its debt service obligations, which is mostly the result of a lack of understanding of the form, structure, and extent of the relevant debt (Were, 2001). Today, the Nigerian economy has unprecedented debt crises. The magnitude of the debt and its associated effect has become a concern to the government. In actuality, the effect of Nigeria's external debt on its economic progress is a complicated, multifaceted issue. Despite the government's continuous effort to manage external debt by embarking on several measures such as debt rescheduling, debt conversion, debt equity, debt forgiveness or cancellation, internal embargoes, and limits on new loans, there still exist yet many gaps and problems in respect of the needs, caused and the effect of external debt on Nigeria economic development. Besides, various empirical studies have been conducted to investigate the effect of external debt on Nigeria's economy and have produced conflicting results regarding variables, methodology, findings, and conclusions.

Ezeabasili, Isu, & Mojekwu (2011) used the Granger causality test, the Johansen co-integration strategy, and the error correction method to examine the link between Nigeria's foreign debt and economic development between 1975 and 2006. The result of error correction estimates revealed that external debt has a negative relationship with economic growth in Nigeria. For example, a one percent increase in external debt resulted in a decrease of 0.027 percent in Gross Domestic Product. A one percent increase in total debt service resulted in a 0.034 percent decrease in Gross Domestic Product.

Using the ordinary least square approach, Olanrewaju, Abubakar, & John (2015) investigated the impact of government debt on economic development in Nigeria between 1986 and 2013. The analysis shows that external debt, which has increased significantly over time, has contributed very little to the real gross domestic product, and that the influence of government debt on economic growth throughout the period under consideration has been negligible. The study's conclusions show that if persistent borrowing is not reined in, the economy will continue to deteriorate, forcing people to turn to surplus budgeting, which will raise unemployment, lower overall investment, lower reserves, increase exchange rates, raise inflation, and ultimately worsen poverty.

Besides, other authors posit that external debt positively affects economic development. Ijeoma (2013) assessed the Impact of Debt on selected macroeconomic indicators in the Nigerian economy. The variables used include External Debt Stock, External Debt service payment, and Exchange Rate to determine their effect on Gross Domestic Product (G.D.P.) and Gross Fixed Capital Formation (GFCF) from 1980-2010. According to the study, Nigeria's foreign debt load has a substantial impact on its economic development, and there is a considerable correlation between the country's GDP and its debt service payments.

The findings of the above studies are not conflicting but exhibit a common characteristic, which is the use of G.D.P. as a sub-set of economic development as an economic growth determinant. Thus, this study will use other economic development variables, such as Per Capita Income (PCI), as a proxy for economic development.

Thus, it seeks to examine the extent to which the incurrence of external debt and its servicing requirement could affect the standard of living of an average Nigerian. This is done by isolating the two significant debt indicators and regressing them on economic development starting from the market-based economic era of 1983 when the external debt crisis crept into the Nigerian economy, especially now that oil price fluctuates drastically to warrant borrowing to finance the needed economic development in Nigeria.

## OBJECTIVES OF THE STUDY

Examining how Nigeria's living level is impacted by its foreign debt is the study's main goal.
Other specific objectives include to:
1. To determine whether external debt stock significantly affects per capita income.
2. To determine whether external debt servicing significantly affects the standard of living of an average Nigerian.
3. To investigate whether the interaction between exchange rate and external debt significantly affects the standard of living.
4. To determine whether the application of external debt on infrastructure significantly improves the standard of living of an average Nigerian.

## RESEARCH QUESTIONS

To direct this study project, the following research questions have been developed:
1. Does external debt stock have a significant effect on per capita income?
2. Does external debt servicing have a significant effect on the standard of living of an average Nigerian?
3. Does the interaction between exchange rate and external debt significantly affect the standard of living?
4. Does applying external debt on infrastructure significantly improve an average Nigerian's living standard?

## HYPOTHESES

The investigation will be guided by the following hypotheses:
$Ho_1$: External debt stock has no significant effect on per capita income.
Ho2: External debt servicing has no significant impact on the standard of living of an average Nigerian.
Ho3: The interaction between exchange rate and external debt has no significant effect on the standard of living.
Ho4: External debt commitment to infrastructure has no significant effect on the standard of living of an average Nigerian.

## SCOPE OF THE STUDY

The study covers the period 1984 to 2014, which coincides with the period when those debt crises crept in as a major macroeconomic problem for many developing countries (Ejigayehu & Persson, 2013). The explanatory variables to be considered in the study are debt stock, debt servicing, exchange rate, and infrastructure, and the dependent variable is the standard of living, which is peroxided by Per Capita Income (PCI).

## CONCEPTUAL REVIEW

**External Debt**
Debt is derived from the Latin word "debere," meaning to owe. Debt is defined as financial resources utilized by an organization that do not come from its owners or else pertain to its shareholders. Okoh (2008) noted that there are two types of debt: domestic debt and external debt. Anyanwu (1999) asserts that when a government borrows, the debt is public debt. Public debts may be domestic (internal) or external. Domestic debt is debt incurred by the government through borrowing from within the country. On the other hand, external debt is the amount of a nation's debt that is obtained from foreign lenders, such as governments, commercial banks, or international financial institutions.

This study focuses on external debt, which refers to the part of a nation's debt owed to creditors outside the nation. Arnone, According to Bandierea & Presbiterio (2005), external debt is the amount of a nation's debt that comes from foreign governments, financial organizations, or companies. Ogbeifin (2007) asserts that the disparity between domestic savings and investment is the cause of external debt. Debt grows as the deficit widens, forcing the nation to continuously borrow more money in order to survive. He went

on to describe Nigeria's external debt as the amount owed to citizens and non-residents by the governmental and private sectors of the country's economy, and that debt must be paid in foreign exchange, products, and services.

## SOURCES OF FOREIGN AID/ EXTERNAL DEBT

### The Paris club of creditors

This unofficial coalition of creditor countries seeks practical answers to the payment issues that debtor countries are facing. The majority of the Nordic and Western European nations, as well as the US, UK, and Japan, are among the 19 permanent members of the Paris Club. The Paris Club describes itself as a "non-institution" and emphasizes the casual character of its existence. Despite having no formal start date and no official laws, it is an informal body that met for the first time with a debtor nation, Argentina, in 1956. Monthly meetings of the Paris Club members may involve debt discussions with one or more debtor nations that have satisfied the Club's requirements. A debtor country must meet two primary criteria: first, it must exhibit a clear need for debt relief; second, it must be dedicated to enacting economic reform; This last need effectively means that the nation must already be a part of an ongoing, conditionally agreed-upon arrangement with the International Monetary Fund (IMF).

### The London club of creditors

This informal group of private creditors on the international stage is similar to the Paris Club of Public Lenders. The Club's first meeting occurred in 1976 in response to Zaire's debt payment problems. The Club is also responsible for rescheduling debt payments made by countries to commercial banks. They mainly grant uninsured and unguaranteed loans.

### Multilateral creditors

The European Economic Community, African Development Bank, International Finance Corporation, International Bank for Reconstruction and Development, and International Development Association are a few examples of these international institutions.

### Bilateral creditors

These creditors usually grant loans for development purposes. The European Union, the United States of America, the East European countries, and Japan are members.

### Promissory Note creditors

These creditors grant uninsured trade loans, resulting mainly from trade arrears. In 1982 and 1983, Nigeria had trade arrears and was financed by promissory notes.

## FORMS OF FOREIGN AID/ EXTERNAL DEBT

### Project Aid

The majority of project funding is directed toward programs in the areas of health, education, and rural development, which includes housing, transportation and electricity, agriculture, water supply, and sanitation. Nonetheless, as noted in (Conchesta, 2008), a minor portion of project funding is directed toward commercial, industrial, mining, and cultural initiatives (Riddell, 2007). Numerous development programs supported by ODA seek to accomplish certain goals by giving the recipient nation the tools, systems, and resources it requires.

### Program Aid

The OECD defines program aid as financial contributions not linked to specific activities. The two types of program help are budget support and balance of payments (B.O.P.) support. Aid monies are supplied as part of the budget support in order to raise total revenue and expenditure. Aid money allocated to finance ministries is known as Sector Budget Support (S.B.S.), whilst funding going to specific sectors are known as General Budget Support (G.B.S.). Under the G.B.S., donors give money to pursue initiatives for development and poverty alleviation while taking into account the recipient governments' ability to manage the funds effectively.

### Technical Assistance

Technical Assistance (T.A.) includes providing skills, knowledge, know-how, and advice. Teaching personnel has also been a source of technical support for many years, particularly in basic and secondary education in underdeveloped nations. In addition, more specialist trainers have consistently carried out skills training tasks in order to satisfy their demands and accomplish their short-term goals.

### Humanitarian Aid or Emergency Aid

To preserve human dignity during and after natural catastrophes and man-made disasters, to save lives, to lessen suffering, and to help those in need of it; this defines humanitarian aid. Humanitarian relief has produced observable results, including the saving of lives, the feeding of the hungry, the provision of water, sanitation, and shelter to those whose houses have been destroyed, as well as medical attention and medication to those at risk of acute illness. However, ongoing internal disputes in locations where violence is likely to occur divert resources away from development goals and toward meeting humanitarian needs.

**Food Aid**
Food aid comprises Programme food aid and humanitarian food aid. Program food aid may relieve the foreign exchange constraint to import the necessary intermediate inputs or provide fiscal resources through counterpart funds generated by the local sale of Programme food aid (Barret, 1998) as cited in (Conchesta, 2008). These resources can be

## EXTERNAL DEBT BURDEN

External debt burden reflects the difficulties and strains arising from external debt servicing. This might be the outcome of not being able to produce enough income to fulfill debt payment obligations. The burden is measured by the current resources (income) proportion devoted to financing past consumption (Ogunlana, 2005). Therefore, the burden increases when a disproportionately large share of existing resources is deployed to serve external debt. The reverse is the case when external debts can be serviced without compromising the requirements of domestic economic development.

Cholifihani (2008) revealed that an increase in external debt creates problems. Whenever a country accumulates debt, a high proportion of public expenditure and foreign exchange earnings are absorbed by the debt burden with heavy opportunity costs. Furthermore, external debt may negatively affect investment financing through debt overhang and credit-rationing among investors in the international market (Eduardo, 1989; Cholifihani, 2008). Similarly, external debt service (in contrast to the total debt stock) can also potentially affect growth by crowding out private investment or changing the composition of public spending. However, Ubok-Udom (1978) lists the costs of borrowing from outside sources, including the debt service burden. This includes costs implied by the external loans' term structure, costs associated with the ensuing liquidity crisis, costs associated with the debt's vicious accumulation, costs associated with managing the debt, costs associated with debt rescheduling, and costs associated with import substitution, among other things.

## ECONOMIC DEVELOPMENT

In his very popular book The Competitive Advantage of Nations, Porter (1998) argues that economic growth aims to raise a country's quality of living over the long run by increasing each citizen's per capita income, adjusted for purchasing power parity. The term sustainable, as defined by Soubbotina at the World Bank (2004:), could "be otherwise called equitable and balanced, meaning that, for development to continue indefinitely, it should balance the interest of different groups of people…in three major interrelated areas–economic, social, and environmental. Two influential American planners, Fitzgerald and Leigh (2002), propose that "…economic development preserves and raises the community's standard of living and an improved per capita income through human and physical infrastructure development based on principles of equity and sustainability. Leszek Balcerowicz (former Minister of Finance, Poland) thinks that economic development has four dimensions: the first state of development (as measured, for example, by per capita income) or the state at which the rhythm of development is first established; the degree of education and professional training of the populace, or their human capital; the structures of the economy or its internal economic situation; The external financial situation Improvements are brought about by economic growth in various areas of a country.

Economists use different indicators to measure a country's economic development: Declining poverty rates, increasing literacy rates, declining infant mortality, and increasing life expectancy. Thus, it can be concluded that economic development creates more opportunities in the education, health sector, research, human development, and environmental conservation sectors. It equally implies an increase in the per capita income of the citizenry.

Amartya (1999) considers economic development to strengthen autonomy and substantive freedoms, allowing individuals to participate in economic life fully. Therefore, when individual agents are able to acquire the skills necessary to actively participate in and contribute to the economy, economic growth takes place. In the aggregate, this should lower transaction costs and increase social mobility. Rather than being reduced to a static factor in a production process, individuals become the agents of change in economic development. They have the freedom to realize their potential; the greater the number of individuals able to participate in the economy and society, the more excellent the opportunity for new ideas to circulate and be put into action. Economic development is measured by rising real per capita income in coefficients and other measures of the distribution of income and wealth, as well as indicators of quality of life that range from life expectancy to crime statistics to environmental quality. From this standpoint, economic development differs from growth in terms of a focus on a broader set of metrics.

## PER CAPITA INCOME

Per capita income measures the money earned per person in a particular area. Income per capita, which is the average income per person for a city, region, or country, is a useful metric for comparing the level of living and quality of life across different places. It can be calculated for a country by dividing its national income by its total population.

entire resources divided by entire population is per capita income. The average income of a nation is frequently determined using its per capita income. This is employed to assess how wealthy a population is in relation to others. The per capita income of a nation is frequently used to gauge its level of life. Typically, it is stated in a widely accepted foreign currency, such the US dollar or the euro.

It is useful because it is well-known, simple to compute using readily accessible GDP data, divideable by population estimates, and yields a useful statistic for comparing living standards among sovereign nations. This aids in determining the level of development of a nation. It is one of the three metrics used to determine the human development index of a nation.

According to the U.S. Census Bureau, per capita income in the United States is the average amount of money earned during the previous year for each man, woman, and kid living in a certain region (children are considered if they are at least 15 years old).

## EXCHANGE RATE

The price of one country's currency represented in terms of another currency is known as the exchange rate. It establishes the strength of the external sector's involvement in global commerce as well as the relative costs of local and foreign commodities. With more economies seeing trade liberalization as a requirement for economic progress, exchange rate regimes and interest rates continue to be crucial topics of discussion in international finance and developing countries (Obansa, Okoroafor, Aluko, et Millicent, 2013). The currency rate in Nigeria has shifted throughout time from controlled to deregulated regimes. According to Ewa (2011), the naira's exchange rate was reasonably constant during the oil boom era, from 1973 to 1979, when agricultural goods made up over 70% of the country's gross domestic product (G.D.P.). The nation transitioned from a pegged to a flexible exchange rate system in 1986 with the federal government's adoption of the Structural Adjustment Program (SAP), which left the exchange rate completely up to the will of the market. However, the controlled float system remains in place, in which monetary authorities regularly engage in the foreign exchange market to achieve certain strategic goals (Mordi, 2006). The naira rate's volatility was caused by a combination of inconsistent policy and a lack of continuity in exchange rate policies (Gbosi, 2005).

## INFRASTRUCTURAL DEVELOPMENT

The entirety of the resources, both personal and institutional, that are at the disposal of economic agents and that help achieve equal compensation for comparable inputs—that is, total integration and maximum level of economic activity—are collectively referred to as infrastructure development (Jochimsen 1966).

I The foundation of the production and distribution system is built by capital-intensive projects that are mostly owned and governed by the government across the majority of the world. Because they offer the framework for production and distribution, they are frequently referred to as the "wheel of economic development" (Economic Reflection, 2008). By establishing facilities, supplying consumer goods (such as transportation, electricity transmission and distribution, and communication services), and fostering national economic growth, infrastructure development helps to improve living standards and quality of life. The lack of infrastructure in the sub-Saharan region, and particularly in Nigeria, is evident in a number of ways, including heavy traffic, major city power outages, poor road conditions, difficulty accessing capital and the money market, inadequate telecommunications, irrigation, and industrial water. Even schools lack basic infrastructural facilities that enhance human capital development. Since the availability of infrastructure facilities encourages investment in less developed areas, infrastructure development in some remote regions may operate as a catalyst to draw specific amounts of industrial activity to such areas. With adequate electricity power transmission and distribution, rural farmers can quickly process their harvested cassava roots into garri flour. Infrastructural facilities are, therefore, fundamental for successful rural transformation and agricultural development, which will enhance the standard of living of an average citizen in the country.

## THE MAGNITUDE AND SEVERITY OF NIGERIA EXTERNAL DEBT

Nigeria's debt originates from the time before its independence. Up until 1978, the debt's amount was insignificant. Prior to 1978, the majority of the debt was incurred through long-term loans from governmental and multilateral sources, including the World Bank and the nation's principal trade partners. Because the loans were received on favorable conditions, the debts did not significantly impact the economy. Furthermore, the government received a large amount of money from the oil industry, particularly during the 1973–1976 oil boom. In the past, Nigeria had a few small loans from the World Bank, which lent it $28 million to build a railroad, and the Paris Club debtor nations, which borrowed $13.1 million from the Italian government to build the Niger dam, in 1964. The International Capital Market (I.C.M.) provided the first large borrowing of US$1 billion, dubbed the "Jumbo loan," in 1978 (Adesola, 2009). From that time till the end of the decade, Nigeria's borrowing from foreign lenders was generally insignificant. However, between 1971 and 1981, Nigeria witnessed an era of extensive lending. Various tiers of government acquired loans as Nigeria embarked on significant development and reconstruction projects in the aftermath of the civil war.

The borrowing continued as the Federal Government launched to guarantee many unviable loans from private banks, state governments, and parastatals. Nigeria's debt stock between 1970 and 1977 was negligible, especially the external debt, which stood at less than US$600 million. In the early 1970s, Nigeria experienced an oil boom, which availed the economy of many resources for financing government-planned activities. However, between 1980 and 1982, oil prices slumped, resulting in a decline in oil revenues from US$25 billion in 1980 to US$12 billion and US$6 billion in 1982 and 1986, respectively. During the 1980s, Nigeria witnessed wasteful consumption, white elephant projects, uneconomic projects, etc. For instance, 63 projects were undertaken for which US$2.6 billion was borrowed, while only one was viable (Baba, 2012). The period from 1986 to 1992 was characterized by debt rescheduling and a strategy for debt reduction.

The Nigerian government made several trips to the Paris Club in 1986, 1989, and 1991 to reschedule US$7.0 billion, US$6.0 billion, and US$ 3.0 billion debts, respectively.

Furthermore, the Nigerian government also made a trip to the London Club to exchange US$5.6 billion commercial bank debt for US$2.1 billion of Par Bonds at a discount of about 60 percent. By 1992, Nigeria's debt profile ballooned due to new borrowing from the Paris Club, high-interest charges, penalties, and arrears due for payment.

Meanwhile, Nigeria's economic policies could not meet the I.M.F.'s benchmarks as a requirement for debt reduction. Between 1993 and 1998, Nigeria faced a severe debt overhang as payment to the Paris Club dropped remarkably below the scheduled amount after substantial payment in 1992. However, no new credit arrears accumulated, while further disbursements came from the multilateral creditors.

Consequently, Nigeria's total debt service burden (of external and domestic debt) by 2004 exceeded the Federal Capital Budget. For instance, US$ 1.0 billion was paid to the Paris Club in 2004, representing 70 percent of the total expenditure of the education budget. As of December 2005, Nigeria's entire debt stock stood at over US$32.0 billion, with US$30.8 billion owed to the Paris Club. When Nigeria returned to democratic administration in 1999, it launched an unrelenting push to reduce its debt. Before 2005, Nigeria's public debt was about US$ 46.2 billion. External debt stood at $35.9 billion, while the domestic debt stock amounted to $10.3 billion. Following the debt write-off, external debt fell to $3.5 billion, while household debt rose to $13.8 billion in 2005, giving a total public debt of $ 17.3 billion and a debt-to-GDP ratio of 11.8%. Nigeria's public debt stood at $58 643.18 million as of September 2013 (D.M.O., 2014). Official statistics from the D.M.O. showed that the country's total debt rose from N11.24trn as of December 31, 2014, to N12.6trn as of December 31, 2015.

In terms of segmentation, the external debts of both tiers of government rose from $9.71bn as of
December 31, 2014, to $10.7lbn as of December 31, 2015. This shows a rise of $1bn or a growth rate of 10.37 percent within one year.

## PUBLIC DEBT MANAGEMENT

Public debt management in Nigeria embraces the management of external and domestic debts. External debt management refers to establishing the conditions for the issue and redemption of foreign loans. It involves the process of administering external public debt. It provides for the interest payment and arranges maturing bonds/debt refinancing. It entails obtaining, using, and repaying loans contracted for development or to sustain the balance of payments according to a deliberate and well-planned timetable. The specific measures used by Nigeria to reduce the burden of her debt in the past include the following:

   a) Limit on debt service payments: In order to satisfy debt service commitments and fund internal development, a percentage of export revenues must be set aside.
   b) The State Government being given orders to limit its external borrowing to the bare minimum and a ban on additional loans. The purpose of the embargo was to prevent further debt accumulation and to stop the growth of the overall debt stock. When state governments borrowed money from outside sources in 1984, this approach was put into place. These haven't really worked, though, because the heedless pursuit of outside loans hasn't stopped. While rescheduling has provided some temporary respite from debt service requirements, the debt overhang has not decreased despite a large rise in the debt stock.
   c) Debt restructuring: This entails finding new funding sources, rescheduling, buying back, issuing collateralized bonds, and refinancing in order to lessen the burden of current debt. Debt rescheduling is the process of delaying, extending, and rearranging the current debt's repayment schedule. Debt rescheduling or refinancing is the agreement between creditors (government agencies and participating commercial banks) and debtor to postpone payment from the latter for a certain amount of time and under new terms and circumstances. In order to replace maturing debt, fresh money must be provided. There are four components to debt restructuring:

   1. Rearranging maturities and grace periods, or rescheduling the principle or a portion of an existing loan by delaying repayment, entails rescheduling interest payments.

   2. Refinancing an existing loan by obtaining more cash to cover present commitments, i.e., creating space for new credits whose earnings will be utilized to pay off existing debts;
   3. Restoring trade-related bank credit lines and
   4. It is influencing the banking sector to reinstate interbank credit lines at a specific minimal quantity. Official debt restructuring under the Paris Club entails rescheduling official medium- and long-term debt, including arrears, that is due within a specified time frame. In general, Paris Club rescheduling terms are not concessionary.

Furthermore, Paris Club strongly opposes delaying payments for short-term debt having a one-year or less original duration. A first round of debt rescheduling negotiations with the Paris Club was held in October 2000 as part of Nigeria's efforts. The second talk in December 2000 resulted in an agreement to reschedule Nigeria's debt under the Houston Terms. This led to the rescheduling of Nigeria's Paris Club debt totaling US$20.5 Billion in 2000 over an 18–20-year period. Credits would be rescheduled over 20 years at concessional interest rates and enjoy ten-year grace periods. Over an 18-year period, commercial credits were to be rescheduled

at market-based interest rates, with a capitalized three-year moratorium interest of about US$1.063 billion. Subsequently, it was decided to maintain the debt service payment at $1 billion in 2001. Nigeria and around fourteen creditor nations engaged in bilateral negotiations to determine the particulars of each deal. In the agreement minutes from December 2000, Nigeria reaffirmed her position with the Paris Club for more negotiations beyond July 31, 2001. However, the agreement was subject to a good track record in implementing the IMF-supported stand implementation of follow-up medium-term Programme funded by the I.M.F. The final point is the effective execution of the 2002 Paris Club minutes, which includes prompt debt repayment.

## STRATEGIES OF DEBT MANAGEMENT IN NIGERIA

An external debt stock G.D.P. ratio of 20% was recommended by The Debt Management Office (D.M.O.). The D.M.O. also set up guidelines for borrowing, which Include:

(i) Any government that wants to borrow money, along with its agencies and parastatals, must explain why the money is needed and show how it will help achieve developmental goals.

(ii)Any arm of government in the federation or its agencies and parastatals can only obtain external loans through the federal government.

(iii)New loans must have a grant element of at least 35% when calculated with an appropriate discount rate. D.M.O., between 2007 and 2012, implemented a debt management strategy at the sub-national level of government, leading to the establishment of a debt management department in each state of the country; the departments were saddled with the responsibility of reconstructing the domestic debt data of the respective states, facilitating of the enactment of public finance management laws and development of debt management capacity.

## THE CONCEPT OF DEBT SUSTAINABILITY

One of the primary goals of a public debt policy is to create debt continuously and maintain it over time. This can be described as debt sustainability. A sustainable debt is the product of several market development actions, debt policy, and debt management factors.

The International Monetary Fund (I.M.F.) in 2002 posited that debt is sustainable if it satisfies the solvency condition without a significant correction in the primary balances (fiscal and current account), given the cost of financing. A nation can be said to be debt sustainable, according to the World Bank in 2005, if it can completely satisfy its present and future debt payment commitments without having to resort to debt rescheduling or jeopardizing its economic development. In other words, a country's debt is sustainable when it is expected to be able to continue servicing its debts without an unrealistically large correction to its income and expenditure balance. Thus, Debt Sustainability reflects a country's solvency, liquidity, and adjustment capacity.

A country is said to be solvent if the present value (P.V.) of its current and future primary expenditure (net of interest) is not greater than the P.V. of its current and future stream of income receipts. An economy is considered liquid if it can roll over its maturing debt obligations in an orderly.

## THE RELATIONSHIP BETWEEN EXTERNAL DEBT AND PER CAPITA INCOME

The research intends to link that the high debt levels affect the standard of living through the debt overhang mechanisms – macroeconomic instability, political instability, higher interest rates and capital flight, less investment, higher inflation, lower demand, and lower productivity- affecting economic growth. Economic distress creates the conditions necessary for governments to reduce labor standards, slash social expenditure, and restrict the right to strike in order to draw in new investment and provide the conditions necessary for economic development by cutting the costs of production for businesses. The research intends to undertake two principal tasks in this section. First, a broad introduction of the decreased standard of living revealed by the U.N. derived from debt and structural adjustment programs. Second, the link between the standard of living and external debt needs to be developed. The first traces of the link between external debt and the standard of living appeared in 1991. With the U.N. resolutions 1991/27 and 1992/29 of the Submission on Prevention of Discrimination and Protection of Minorities, the preliminary U.N. report of Danilo Turk 7 (U.N., 1991) and its final version (U.N., 1992) resulted in an official recognition of structural programs as a barrier upon the realization of a favorable standard of living. The structural adjustments were in response to the economic imbalances in the debt crisis. Economic progress generates the conditions for a favorable standard of living for its citizens, and it can be attributed that the government needs resources to increase the standard of living and requires proper personal legislation and means to enforce them (Abouharb & Cingranelli, 2007). Elevated debt levels impede economic expansion and progress, leading to an issue with the debt

overhang. A debt overhang is "the presence of an existing inherited debt sufficiently large that creditors do not expect with confidence to be fully repaid" (Krugman, 1988). Solving the debt crisis requires the elimination of the debt overhang, which is achieved by applying structural adjustment policies (Diwan & Rodrik, 1992). The objectives of these measures are: i) reduction of inflation, ii) re-establishment of equilibrium in the balance of payments, and ii) promotion of growth (U.N., 1995, p. 4). They are intended to apply a sequence of economic policies to "export their way out of the crisis" through liberalization, deregulation, and reduction of the state's role in the economy. The U.N. report E/CN.4/Sub.2/1992/16 stated that the standard components of adjustments are:

i)      devaluation of the local currency,
ii)     decrease of government expenditure on public services,
iii)    abolition of price controls
iv)     imposition of wage controls
v)      reduction of trade and foreign exchange controls,
vi)     restrictions on domestic credit;
vii)    reduction of the role of the state in the economy;
viii)   increasing the basis for the export economy
ix)     decreasing imports and
x)      privatization of public enterprises.

The austerity measures generated economic stagnation (Easterly, 2001), lower standards of living (Abouharb & Cingranelli, 2006a), and workers' rights (Abouharb & Cingranelli, 2006b), hence creating concerns among scholars and the international community. The applications of structural adjustment programs have jeopardized rights to i) food, ii) education, iii) shelter, and iv) health (U.N., 1999). The U.N. resolution 1994/11 of the Office of the High Commissioner for Human Rights revealed the effects of the economic adjustment policies arising from foreign debt on the full enjoyment of a favorable standard of living and on implementing the right to development. It affirms that debt payments should not take precedence over the fundamental rights of the people of debtor countries to food, shelter, clothing, employment, health services, and a healthy environment (U.N., 1994). The U.N. report of the Economic and Social Council (U.N., 1997) identified constraints posed by adjustment programs to the fulfillment of economic, social, and cultural rights contained in the Universal Declaration of Human Rights to High Living Standards and in the International Covenant on economic, social and cultural rights in developing countries. The programs are meant to conduct a series of economic policies to "export their way out of the crisis" through liberalization, deregulation, and reduction of the state's role in national development. Since 2001, several resolutions have addressed the effects of structural adjustment policies and foreign debt on the full enjoyment of favorable per capita income, particularly economic, social, and cultural rights. The latest report by Dr. Cephas Lumina to the U.N. establishes the link between external debt and per capita income: "excessive debt burdens reduce the maximum resources available to states for the fulfillment of increased standard of living… and to establish and strengthen the institutions that promote and protect civil and political rights" (U.N., 2014). The Resolution of Human Rights Council 26/16 acknowledges that "excessive debt servicing has severely constrained their (countries) capacity to promote social development and provide basic services to create the conditions for realization of economic, social and cultural rights" (U.N., 2014).

The identified violations of international treaties related to human rights are i) Articles 23 and 25 of the Universal Declaration of Human Rights. The first mentions that "everyone has the right to work…and protection against unemployment" and that the workers' wages have to ensure themselves and their families an "existence worthy of human dignity and supplemented, if necessary, by other means of social protection." In articles 25 "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing, medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control."; ii) Article 7 and 8 of the International Covenant on Economic, Social and Cultural Rights. According to article 7, "the right to everyone to the enjoyment of just and favorable conditions of work which ensure in particular, a remuneration which provides all workers, as a minimum with iii) a decent living for themselves and their families." the second states that "States should undertake, at the national level, all necessary measures for the realization of the right to development and shall ensure, inter alia, equality of opportunity for all in their access to basic resources, education, health services, food, housing, employment and the fair distribution of income; iii) Paragraph 13 of the Vienna Declaration expresses that states must "eliminate all violations of favorable living standards and their causes as well as obstacles to the enjoyment of these high standards". Debt overhang constrains economic growth, and economic growth is linked to improvements in the standard of living; this makes us infer that economic contraction constrains living standards. Krugman's early theory of debt overhang has been further developed, and now, some authors have provided systematic ideas of the transmission mechanisms of the effects of external debt on growth. Debt overhang constrains economic growth and leads to a low standard of living. According to the existing researchers, there are seven mechanisms through which debt can affect economic development; the causal mechanisms are the following:

i)      **Macroeconomic Instability** (Dornbusch & de Pablo, 1990) (Elmendorf & Mankiw, 1998) (Hjertholm, 1999,) (Sutherland, et, al., 2012)
ii)     **Political Instability**;
iii)    **Investment**;
iv)     **Interest Rate** (Baum, et, al. 2012) (Laubach, 2007). (Elmendorf & Mankiw, 1998) (Dornbusch, 1989);

v)  **Capital Flight** (Pastor, 1990) (Ajayi, 1997) (Boyce, 1992) (Fofack, 2009) (Ajayi, 1997) and (Boyce J., 1990) (Fry, 1993), (Ndikumana & K. Boyce, 2003) (Dornbusch, 1985) (Eaton, 1987) and (Khan & Ul Haque, 1985);

vi)  **Inflation** (Ardagna, Caselli, & Lane, 2006), (Engen & Glenn Hubbard, 2004) y and (Laubach, 2009) (Elmendorf & Mankiw, 1998,) and;

vii)  **Poverty**.

The following explains the causal mechanism of political instability, investment, and poverty, with debt overhang most related to a low standard of living. An overview of them is as follows:

### *i. Political Instability*

The scholars (Alesina & Guido, 1989) and (Servén, 1997) identify the connection between high debt and political instability. In countries facing economic distress due to high external debt payments, the private sector fears change in fiscal policy and tax increases due to the government's high financing needs that might negatively upset their wealth. This scenario entails various measures that affect citizens' wealth; a few examples of these measures can be the rise of taxes or the introduction of new taxes, currency devaluation, expropriation of private enterprises, and capital flow control measures. All of the measures exposed previously promote legal uncertainty for investors. The emergence of the high debt burden linked to the idea of higher debt service obligations undermines the political foundation of the tax system because it compromises the limited state resources and undermines public spending. The economic situation leads to a drop in public investment and public services for citizens. These measures are because of popular discontent that can lead to critical levels, strikes, and public manifestations of the various groups affected groups, exacerbating the state's fiscal stance, paralyzing economic activity, and undermining the government's social support. This creates a dilemma: on the one hand, the increase of popular discontent towards the ruling party puts it into question, but on the other hand, if they continue to pay creditors, they will lose further support for the next political elections. The future of the political party in office in the next elections and the other political parties trying to benefit politically by gaining public support exacerbates these fears. This dilemma generates fear of suspension of debt payments and unpredictable public policies.

### *ii. Investment*

Suppose a country's external debt level is believed to exceed its ability to pay. In that case, the expected costs of debt service will discourage private investment (Savvides, 1992), public investment (Seriux & Yiagadeesen, 2001) and (Clements, Bhattacharya, & Nguyen, 2003) foreign direct investment, causing a slowdown in economic growth as noted by (Krugman, 1988), (Sachs, 1989), (Cohen, 1993) (Green & Villanueva, 1991) (Servén, 1997) and confirms this linkage.

The effect on private investment is double because we have to take into account that generally speaking, private and public investments are complementary, intensifying the financial impact since the lack of one can affect the efficiency of the other, as exposed by (Lora, 2007) and (Kumar & Woo, 2010) the marginal productivity of private investment (Nguyen, Bhattacharya, & Clements, 2003). The volume of investment is altered by investors who may prefer to wait -in uncertain scenarios with irreversible investment projects, hoping to get more information and avoid costly mistakes (Garciandía & Garmendia, 2011). This is based on the principle that an uncertain environment discourages fixed investment because if it is impossible to reverse the investment, there is an incentive to postpone financial obligations pending more information.

### *iii. Poverty*

The relationship between debt and poverty was exposed by (Kemal, 2001), (Loko, Mlachila, Wallari, & Kalonji, 2003) and (Maier, 2005). They found that the high external debt level increases poverty. (Maier, 2005, pp. 7-11) Identifies the following mechanisms. First, a highly leveraged impact on poverty through the state budget and the increase in debt service leads to changes in priorities and the level of public investment to the detriment of the most vulnerable sectors of the population. In other words, the state budget constraint requires changes in public investment, further hurting low-income people.

The impact on poverty of debt is due to lower economic growth, inflation, unemployment, government revenues falling amid falling economic activity, and increases in regressive taxes and restrictive fiscal policies. Fiscal contraction of social spending further harms the most vulnerable. The education and health coverage affect human capital assets and transfers: grants, unemployment insurance, etc. The government employs macroeconomic policy adjustments to balance the external imbalance resulting from the high level of indebtedness; among them, we can mention the labor reforms to lower the employment cost and unemployment benefits and currency depreciations that would lead to a more balanced budget.

## THEORETICAL REVIEW

The theoretical review of this study reviews specific theories that explain a better understanding of the view that external debt burdens the economies of low-income developing countries, making them the so-called highly indebted countries. This exertion is described using the "Debt Overhang" theory and the "Crowding out effect" theory.

The Debt Overhang theory is based on the premise that if the debt exceeds the country's repayment ability with some probability in the future, expected debt servicing will likely be an increasing function of the country's output level. Thus, some of the returns from

investments in the domestic economy are effectively 'taxed' away by existing foreign creditors, and investment by domestic and new foreign investors is discouraged (Claessens, 1996). Under such circumstances, the debtor country shares only partially in any increase in output and exports because a fraction of that increase will be used to service the external debt. The theory implies that debt reduction will lead to increased investment and repayment capacity, and, as a result, the portion of the debt outstanding becomes more likely to be repaid. When this effect is strong, the debtor is said to be on the 'wrong side' of the debt Laffer curve. The debt Laffer curve refers to the relationship between the amount of debt servicing and the size of the debt. However, the debt Laffer curve also implies a limit at which debt accumulation stimulates development (Elbadawi, Ndudu & Ndung'u1 1996). About debt, Laffer curve, Lensink & White (1999) argue that there is a threshold at which more debt is detrimental to development.

The liquidity constraint is captured as a 'crowding out' effect, by which the requirement to service debt reduces funds available for investment and development. Reducing the current debt service should, therefore, lead to increased recent investment for any given level of future indebtedness (Cohen. 1993). Other channels through which the need to service a large number of external obligations can affect economic performance include lack of access to international financial markets and the effects of the stock of debt on the general level of uncertainty in the economy (Claessens, 1996). Three reasons could be advanced as to why debt may be preferred to taxation or money printing. Firstly, debt encourages a more equitable manner in which a country can exploit investment with long gestation periods, and secondly, by smoothing a more efficient procedure for conducting counter-cyclical policies or meeting emergency spending needs. Adjusting taxes frequently may lead to efficiency losses and economic uncertainty. Third is the stability advantage of debt over taxation and senior age. However, debt has to be repaid. Funds borrowed are postponed taxation. Hence, the use to which the funds are put and the returns relative to the cost of borrowing becomes crucial. If the government invests in infrastructure, such investments can lead to faster growth and socio-economic development (Were, 2001; Soludo, 2003).

The scope of debt overhang is much broader in that the effects of debt affect not only investment in physical capital but any activity that incurs costs up-front for increased output in the future. Such activities include investment in human capital (regarding education and health) and technology acquisition, whose effects on development may be more potent over time.

The measure for debt overhang is the ratio of external debt stock to per capita income, which measures the extent to which total domestic output can be deployed to wipe out outstanding external debt obligations. A high or increasing ratio will indicate problems with external debt management. Moreover, Debt Service to per capita income is used to explain the debt crowding out effect and show the proportion of income committed to the service of debt incurred in the past. In particular, debt service/ per capita income is a liquidity measure. The debtor's ability to meet debt servicing obligations declines as the ratio increases. This directly shows that the debt is likely to be unsustainable. This situation can be costly as it can require more significant adjustments to compensate for adverse economic developments.

**The Dual Gap Theory**

Gap analysis explains that development is a function of investment and that such investment, which requires domestic savings, is not sufficient to ensure that development takes place. There must be the possibility of obtaining external debt stock from abroad; the debt stock that can be invested in any country is identical to the amount saved. Furthermore, if the domestic resources are to be supplemented from abroad, such as excess of import over export (i.e., M> E), then; I> S and M> E Hence, I – S = M – E.

In national income accounting, an excess investment over domestic saving equals an excess import surplus over export. Income = consumption + import + savings Output = consumption + export + investment. Since income = output, then Investment – Saving = Import – Export. Omoruyi (2005) states that most economies have experienced a shortfall in trying to bridge the gap between the level of savings and investment and, therefore, resorted to obtaining external debt to fill this gap. This gap provides the motive behind external debt, as Chenery (1966) pointed out, which is to fulfill the lack of savings and investment in a nation as an increase in savings and investment would vis-à-vis lead to a rise in economic growth (Hunt. 2007). The dual-gap analysis provides a framework that shows that the development of any nation is a function of investment and that such investment requires domestic savings, which is insufficient to ensure that development takes place (Oloyede, 2002).

Ajayi & Oke (2013), in their work, asserts that the basis of the dual gap theory asserts that countries that require saving and investment could import to achieve a particular growth rate. A savings-investment gap is said to exist if the available domestic saving falls short of the level necessary to achieve the target growth rate. Similarly, if the maximum import requirement to complete the growth target is greater than the top possible export level, this is an export-import-of-origin exchange gap.

Borrowings by countries occur as a result of their inability to generate enough domestic savings to carry out productive activities. Such external borrowings by countries are meant to supplement domestic savings and allow such countries to carry out productive activities (Ezeabasili,2006).

## NONLINEAR EFFECTS OF DEBT ON SOURCES OF DEVELOPMENT

This theory suggests that "reasonable" borrowing levels by a developing country are likely to enhance its living standards, both through capital accumulation and productivity development. Countries at the early stages of development have small capital stocks and are likely to have investment opportunities with higher rates of return than in advanced economies. As long as they use the

external debt stock for productive investment and do not suffer from macroeconomic instability, policies that distort economic incentives, or sizable adverse shocks, growth should increase and allow timely debt repayments.

## THE MONETARY APPROACH THEORY TO EXCHANGE RATE

The monetary approach to exchange rate determination postulates that the relative supply of and demand for finances between two countries is the basis for determining the exchange rate. It views an increase in money supply as generating inflation, resulting in exchange rate depreciation. The model opines that falling prices with a given nominal money supply depreciate the exchange rate. In contrast, the traditional flow model is essentially based on the principle of the interplay of demand and supply. The forces of the market (interaction between demand and supply) determine the exchange rate.

However, speculation or expectation of a change in the exchange rate could lead to disequilibrium without changing the initially determined factors. The exchange rate can adversely affect the ability to import and, therefore, manufacturing output. Volatilities in the exchange rate will cause instability in purchasing power, negatively impacting investment in importing manufacturing inputs. On the other hand, the effect on manufacturing output and overall income level will also affect investment in the import of inputs and, invariably, the exchange rate. This is because among the determining factors of the exchange rate are the demand for foreign exchange and the supply itself being influenced by an economy's productivity level.

In macroeconomic management, exchange rate policy as an essential tool derives from the fact that changes in the exchange rate have significant implications for a country's balance of payments position and even its income distribution and growth. It is not surprising since its behavior is said to determine the behavior of several other macroeconomic variables (Oyejide, 1985). It is even more so for Nigeria, which has embarked on rapid economic growth with attendant high import dependency. The manufacturing sector is catalytic in a modern economy and has many dynamic benefits crucial for economic transformation and sustainable economic growth. Nigeria is an import-dependent nation, particularly for her capital goods, and considering the centrality of the rate of exchange of such a Country's currency to her trading partner's currencies, a good number of writers have expressed their interest and position on this critical subject. Interest in this area has significantly increased over the years as generated by the volatilities and the depreciating nature of such an important economic variable and its effect on other sectors of the economy.

## EMPIRICAL REVIEW

Different empirical studies exist on the effect of external debt on Nigeria's economy, with mixed and conflicting results regarding variables, methods of analysis, findings, and conclusions reached. However, this study will review those empirical studies, variable by variable, using the study's objectives.

### External Debt Stock and Standard of Living

External debt stock has become a significant impediment to the development and stability of developing countries. The sustainability of external debt stock and its management in Nigeria has never been encouraging. The lack of understanding of the nature, structure, and magnitude of external debt stock has not allowed the Nigerian economy to manage the debt stock effectively and meet its debt servicing obligations appropriately.

In their study, Ezeabasili, Isu & Mojekwu (2011) investigated the relationship between Nigeria's external debt and economic growth between 1975 and 2006 using the Johansen co-integration approach, error correction method, and Granger causality test. The result of error correction estimates revealed that external debt has a negative relationship with economic growth in Nigeria. For example, a ten percent increase in external debt resulted in a decrease of 0.027

percent in Gross Domestic Product, while a 10 percent increase in total debt service resulted in 0.034 percent (decrease) in Gross Domestic Product. These relationships were both found to be significant at the 10 percent level. In addition, the pair-wise Granger Causality test revealed that unidirectional causality exists between external debt service payment and economic growth at the 10 percent significance level. Also, external debt was found to granger external debt service payment at the 1 percent significance level. Statistical interdependence was, however, found between external debt and economic growth. Based on the findings, the author recommended that project debt accumulation be matched with the timing of repayment. In contrast, the debt portfolio must be diversified in terms of source and types to avoid harmful concentration and a reoccurrence of the past, among others.

Ejigayehu & Persson (2013) analyzed the effect of external debt on the economic development of eight selected heavily indebted African countries (Benin, Ethiopia, Mali, Madagascar, Mozambique, Senegal, Tanzania and Uganda using the debt overhand and debt crowding out effect with ration of external debt to gross national income as a proxy for debt overhand and debt service expert ratio as a proxy for debt crowding out. Panel data covering the period 1991-2010 was used. The empirical investigation was carried out on a cross-sectional regression model with tests for stationarity using Augmented Dickey-Fuller tests, heteroskedasticity, and ordinary regression. The concluding result from the estimation showed that external debt affects economic development through debt crowding out rather than debt overhang.

Using the O.L.S. method, Fosu (1996) tests the relationship between economic development and external debt in sub-Saharan African countries from 1970-1986. The study examined the direct and indirect effects of the debt hypothesis. Using a debt-burden measure, the study reveals that the immediate impact of the debt hypothesis shows that diminishing marginal productivity of capital negatively influences G.D.P. The study also finds that, on average, a high-debt country faces about a one percent reduction in GDP growth annually.

Malik & Hayat (2010) explored the relationship between external debt and economic growth in Pakistan for the period 1972-2005, using a time series econometric technique. Their result indicates that external debt is negatively and significantly related to economic growth. The evidence suggests that an increase in external debt will lead to a decline in economic development.

Audu (2004) looked at how Nigeria's external debt affected the country's economic expansion and government investment between 1970 and 2002. The Co-integration test and the Error Correction Method were used in the empirical inquiry. According to the report, the nation's growth process has been severely impacted by the demand to service debt, and public investment has been adversely impacted by historical debt buildup.

Sulaiman and Azeez (2012) examine the effect of external debt on Nigeria's economy. Ordinary Least Squares (O.L.S.), Augmented Dickey-Fuller (A.D.F.) Unit Root test, Johansen Co-integration test, and Error Correction Method (E.C.M.) were employed in the analysis. The findings from the error correction method show that external debt has contributed positively to the growth of the Nigerian economy. The study recommends that the government ensure economic and political stability and that external debt be acquired mainly for economic rather than social or political reasons.

Egbetunde (2012) examines the relationship between external debt and economic growth in Nigeria. Using a double-log equation within the context of the Ordinary Least Square (O.L.S.) framework and co-integration test, the study finds that economic growth is co-integrated with external debt, domestic debt, and debt services in Nigeria. Within the O.L.S. framework, the evidence of a positive relationship between economic growth and external debt, as well as domestic debt and economic growth, was found at $p < 0.05$ in the economy. In contrast, debt services negatively impacted economic development at $p < 0.05$.

Olanrewaju, Abubakar & Abu (2015) examine the effect of government debt on economic growth in Nigeria between 1986 and 2013 – using the ordinary least square method. The analysis shows that external debt, which has increased significantly over time, has contributed very little to the real gross domestic product, and that the influence of government debt on economic growth throughout the period under consideration has been negligible. The study's conclusions show that if persistent borrowing is not reined in, the economy will continue to deteriorate, forcing people to turn to surplus budgeting, which will raise unemployment, reduce overall investment, cause reserves to decline, increase the exchange rate, raise inflation, and ultimately worsen poverty. It is therefore recommended, among others, that borrowing should be a last resort by the government to revitalize the economy, and if necessary, the loans are paid back, it will serve as a crowd-in-effect, further accelerating economic activities in the country.

**External Debt Servicing and Standard of Living**

Due to penalties and unpaid interest arrears, Nigeria has continued to groan under heavy debt servicing. Aluko (2005) posited that the bulk of Nigerian debts outstanding are due to unpaid fines and penalties. Over 34% of Nigeria's GDP per capita is channeled to yearly debt servicing. Recently, efforts have been made to reduce this burden and develop a framework for sustaining the nation's external debt balance. Doing this effectively requires a sound understanding of the factors that could strengthen such a mechanism and also an appreciation of the underlying factors responsible for the precarious situation that is being redressed in Nigeria (Yesufu, 2014).

Ayadi & Ayadi (2008) investigate how the massive external debt, together with its service obligations, affects the economies of South Africa and Nigeria. The Ordinary Least Square (O.L.S.) and Generalized Least Square (G.L.S.) techniques were used to examine the Neoclassical growth model, which takes into account external debt, debt indicators, and some macroeconomic factors. Their findings demonstrated the detrimental effects of debt and the need to service it on South Africa's and Nigeria's economic development.

Sulaiman & Azeez (2012) examine the effect of external debt and its servicing on the Nigerian economy. Ordinary Least Squares (O.L.S.), Augmented Dickey-Fuller (A.D.F.) Unit Root test, Johansen Co-integration test, and Error Correction Method (E.C.M.) were employed in the analysis. The results of the error correction technique demonstrate that Nigeria's economy has grown as a result of its external debt. The study recommends that the government ensure economic and political stability and that external debt be acquired mainly for financial rather than social or political reasons.

Ajayi & Oke (2012) investigate the effects of the external debt burden and servicing on the economic development of Nigeria. They adopted the Ordinary Least Square (O.L.S.) regression technique on secondary data and variables like National Income, Debt Service Payment, External Reserves, and Interest rate, among others. The results showed that the burden of external debt had a negative impact on both the country's overall income and per capita income. Nigeria's economy suffered as a result of the high level of external debt, which also caused the country's currency to devalue, worker layoffs to increase, ongoing industrial strikes, and a subpar educational system. They recommended that the loan should be invested in productive projects that would create a suitable amount of money for debt payment, and that the debt service requirement should not be permitted to climb higher than foreign exchange earnings.

Karagol (2002) looks at the link between economic progress and the servicing of Turkey's external debt over the long and short terms, from 1956 to 1996. A typical production function model was used in the study, and multivariate co-integration techniques were used for analysis. There is just one co-integration equation, according to the Vector Autoregression estimations. It also demonstrated the long-term negative relationship between debt service and economic growth. The results of the causality test indicated a one-way relationship between debt repayment and economic expansion.

Imimole, Imoughele, and Okhuese (2014) investigate the relationship between Nigeria's foreign debt and ability-to-pay indicators in order to determine the sustainability of the external debt and to pinpoint the primary factors that contributed to it between 1986 and 2010. The study concluded that Nigeria's external debt is unsustainable in terms of willingness and ability to pay back due to the accumulation of external debt and that capital flight is a result of this process, as evidenced by the ratio of the nation's reserves to its external debt. These conclusions were drawn from the available data and the application of statistical methods. After performing a stationarity test using the Augmented Dickey-Fuller test, we estimate our model based on a theoretical framework that explains why developing nations need to borrow money from outside sources. We also depend on an error correcting mechanism and the Johansen co-integration test. The result from the cointegration test showed the presence of a long-run relationship between external debt and the explanatory variables. The study also discovered that the gross domestic product, debt service, and currency rate are the primary factors influencing Nigeria's foreign debt. The study suggests that an examination of the economic and social profitability of all external debt financing projects be conducted to ensure that the returns would be more than the interest and principal repayment in order to lessen the negative effects of external debt on the Nigerian economy and make it sustainable.

Ekperiware & Oladeji (2012) examine the relationship between external debt relief and Nigeria's economy from 1980 to 2009 to examine the effect of external debt relief on Nigeria. It is thought that the massive foreign debt of less developed nations obstructs investment opportunities. This led to 2005 external debt reduction as well as other forms of debt restructuring in Nigeria with some concessional loans. Ten years following the debt release, key economic sectors including exchange rates, healthcare, energy, education, and transportation are expected to provide proof of or sources for the debt relief. According to certain research, there is debate over the impact of foreign debt reduction, particularly for Nigeria's economy. Therefore, a rigorous analysis of the Paris Club's 2005 debt relief to Nigeria is assessed in terms of its impact on the country. To ascertain the structural break impact of external debt on economic development in Nigeria as a result of debt relief, the study employed a quarterly time series of external debt, external debt service, and real gross domestic product. The Chow test result indicated that Nigeria's connection between foreign debt and economic development was structurally broken by the external debt reduction in 2005. The study further showed that resources were freed for economic development projects in the health and education sectors besides reducing aid.

In conclusion, external debt relief did make resources available for economic development in Nigeria. Therefore, it is advised that nations borrow discretionarily and view foreign debt reduction as a viable way for impoverished, unsustainable nations to free up funds for economic growth. Value creation should center around the real sector, not be impeded by debt servicing and poor management.

The effect of external debt on Tanzania's economic development between 1990 and 2010 was examined by Kasidi & Said (2013). Time series data on foreign debt and financial performance were utilized in the study. It was believed that although debt servicing aims to promote development by regaining the trust of both new and current creditors, external debt assists emerging nations in meeting their demands. The analysis shows that external debt and debt servicing have a major effect on GDP growth. Debt service payments have a negative impact of around 28.517, whereas the total amount of external debt stock has a positive effect of about 0.36939. Long-term association: There is no long-term link between GDP and external debt, according to the co-integration test.

Colaco (1985) uses three situations to show how developing nations' susceptibility to debt service is affected. First, there is an imbalance between debt and equity as a result of external loans reaching a considerably bigger level than equity financing. Second, borrowers are immediately impacted by increases in interest rates due to the sharp increase in the percentage of debt with variable interest rates. Thirdly, a significant portion of the maturities have shortened due to the decrease in the percentage of official flows. All the above factors are relevant to Nigeria. Mehran (1986) argues that adequate debt management is essential in an increasingly complex financial environment. Mehran also identifies the critical components of debt management as policy coordination, regulatory environment, accounting, and statistical analysis. The above is accurate as the debtor country's adoption of structural reform and fiscal adjustment is a prerequisite for the success of policies aimed at achieving a balanced level of debt that fosters

development. Other features are transparency and anticorruption policies, the creation and improvement of debt management structures, and decision-making processes.

## Exchange Rate, External Debt and Standard of Living

Nigeria's currency rate system was too rigid to react to changes (both upward and downward) in the foreign exchange market as a result of ineffective exchange rate policy, which resulted in ongoing external borrowing.

Ibi & Aganyi (2015) analyze the impact of external debt on economic development in Nigeria. It tests whether or not external debt, the ratio of external debt to exports, and other economic control variables like the exchange rate, inflation rate, and public investment stimulate economic development proxy by gross domestic product (GDP). It does this by using the variance decomposition and impulse response from Vector Auto-Regression (VAR), a time-series econometric model. The results of the two stages of data processing show that there is no correlation between foreign debt and economic development in the Nigerian context, making it impossible to predict when Nigeria's economic growth would accelerate or slow down. As a result, changes in external debt cannot be used to forecast changes in GDP. The study's policy implications include that rather than taking on debt to support economic development, the majority of Nigerians do so out of self-interest. Fiscal restraint and a strong sense of accountability when managing public monies should be the watchwords of Nigerian leaders if debt is to promote progress in the country.

In his 2013 study, Ijeoma evaluates the effect of debt on a few key macroeconomic variables in the Nigerian economy. The researcher employed exchange rates, external debt stock, and external debt service payments as variables to ascertain their impact on GDP and GFCF over the 1980–2010 timeframe in order to fulfill the study's objective. The Debt Management Office, the CBN Statistical Bulletin, and online resources provided the secondary data for the study, which were then subjected to linear regression analysis. According to the study, Nigeria's level of foreign debt has a big impact on its economic expansion. Additionally, it demonstrated a strong correlation between Nigeria's gross fixed capital formation and its debt service payments. Thus, the researcher suggests that the government should refrain from borrowing as much as possible. However, since developing nations occasionally need to borrow money to supplement their internal savings, borrowing should only be an option when highly important projects are being considered. Additionally, borrowed funds should be closely monitored and assessed to make sure they are used for the intended purpose. The government should make policies promoting industrialization, which will, in turn, attract foreign direct investment.

Adejuwon, James & Adebayo (2010) investigate the debt burden and Nigerian economic development. In Nigeria, the debt issue has grown to crisis proportions. Nigeria continues to hold the unfortunate distinction of being among the world's poorest nations, which exacerbates the debt situation. The paper examines the nature and causes of debt burden in Africa and Nigeria. It argues that the debt crisis has profound implications for the development of the Nigerian economy. It noted that debt has affected the proper conduct of monetary policy and other macroeconomic variables like exchange rate and inflation, which make valuable predictions in the country's economic development. It, therefore, suggests that Nigeria needs to devise means of promoting a sustainable debt management strategy through prudent management of resources and investing in entrepreneurial development to boost trade and investment, thereby improving its economic growth.

## Infrastructure, External Debt, and Standard of Living

The weight of debt service has hindered Nigeria's rapid infrastructural development and exacerbated the country's economic growth. Key institutions' efforts to improve the living conditions of vulnerable populations have been impeded by deteriorating infrastructure as a result of inadequate funding. Reduced government spending on social and economic infrastructure seems to have limited private sector investment and growth through lost externalities. Since public investment makes up a large share of all investments made in the nation, this has decreased overall investment (Audu, 2004).

Saibu & Abogan (2014) examined the macroeconomic determinants of external debt burden in Nigeria to investigate whether macroeconomic variables such as export, exchange rate, infrastructural development, and foreign interest rate were significant determinants of external debt burden in Nigeria. The study used annual time series data from 1970 to 2004 and specified an Error Correction Model (ECM) to analyze the external debt burden's main determinants and draw policy inferences. The stationery and co-integration properties of the variables were also examined. In this way, a provision was made to correct the spurious inferences that may likely occur if the variables used in the study were not stationary or co-integrated at levels. The empirical results showed that external debt service payment was positively determined by existing external debt stock and negatively by export and exchange rates. In contrast, total external debt stock was affected positively by fiscal deficit, economic growth, and infrastructural development. The study concluded that the external debt burden in Nigeria depends significantly on the fluctuations in export growth, real exchange rate, fiscal deficit, infrastructural development, and level of economic activity.

Okolie & Romanus (2014) examine the Nigerian external debt crisis and efforts to obtain debt relief in 2005. The study seeks efficient debt management strategies to prevent future debt crises. It argues that the substantial external debt was responsible for the country's slow economic growth and development. The results show that the Nigerian debt issue in the past was caused by a lack of fiscal discipline, a lack of honesty and accountability, an excessive reliance on oil money, and inadequate project research and execution.

Aminu, Ahmadu, & Salihu (2013) examine the relationship between Nigeria's external debt, domestic debt, and economic growth. The primary goal of the study is to examine how Nigeria's foreign and domestic debts affected the country's economic growth between 1970 and 2010 by utilizing the Augmented Dickey-Fuller approach to evaluate the time series' unit root feature. Granger causality test, and Ordinary least square (OLS) method, to establish a simple relationship between the variables under study. Additionally, the OLS results showed that although domestic debt had a beneficial influence on GDP growth, external debt had a negative impact.

Tarek & Taek (2013) investigate the external debt and financing of economic development using evidence from North African countries. Considering the economies of North Africa, the research aims to study the role of external debt in financing economic development. The study specifically looks at the connection between external debt and economic expansion in North African nations. Significant changes have occurred in the southern Mediterranean region in recent years, mostly brought about by the European sovereign debt crisis and the noticeable social manifestations in several Arabic nations. The primary concern among these obstacles is the matter of foreign debt and its function in funding economic growth. The study makes use of the technological panel and was inspired by Patillo (2002). They confirmed the existence of an ideal threshold beyond which foreign debt slows economic development (there is a curve for Laffer debt) by combining the leading ratios of external debt and the primary drivers of economic growth. The empirical study demonstrates that, as long as it is kept within appropriate bounds, external debt does not impede the growth of North African nations.

On the contrary, it can help those countries strengthen their growth. On the other hand, higher debt servicing costs are detrimental to economic growth; the degree to which this effect is transmitted relies on the investment's quality and the amount of debt incurred. The results suggest a nonlinear relationship between debt and growth: a critical threshold would cause negative economic growth. The threshold, corresponding to the marginal impact of debt on growth, reached 47% of GDP. Whether public debt is associated with higher growth below this turning Point remains.

## Summary of Empirical Review and Implications

The empirical literature review has shown conflicting and mixed findings on the relationship between external debt and its servicing on economic development in Nigeria. However, Fosu (1996), Karagol (2002), Malik, Hayat and Hayat (2010), Audu (2004), Ayadi and Ayadi (2008), Ezeabasilj, Isu and Mojekwu (2011), Ajayi and Oke (2012), Ejigayehu and Persson (2013), Ibi and Aganyi (2015) have found that external debt and its servicing have adverse effect on economic development of developing countries including Nigeria. Other authors posit that external debt has a positive impact on economic growth (Sulaiman & Azeez, 2012; Egbetunde, 2012; Kasidi& Said, 2013; Imimole, Imoughele & Okhuese, 2014; Olanrewaju, Abubakar& Abu, 2015). The conflicting& position has called for further investigation into the effect of external debt and its servicing requirement on economic development in Nigeria, especially now that oil prices have drastically dropped to warrant external borrowing to finance the needed infrastructural development in Nigeria.

## RESEARCH DESIGN

An ex post facto research design is used in the study, because the data for the study are secondary data that already exist in the archive of well-acclaimed financial publications such as the Annual Reports/ Accounts from the Central Bank of Nigeria, Statistical Bulletins, and Nigeria Bureau of Statistics (NBS). However, the data covered the period from 1984 to 2014 under review.

## Variables of the Study

The variables the researcher uses include per capita income (PCI), the dependent variable, external debt stock, external debt servicing, exchange rate, and infrastructural development, which are independent variables. The model aims to regress several selected external debt variables on Nigeria's economic development. Economic development will be peroxide by per capita income (PCI), the dependent variable (Y). At the same time, external debt stock, external debt service, exchange rate, and infrastructure are the independent variables(X).

## Model Specification

The model used for the study was the adaptation and modifications from the work of Utomiohunma (2012), which examines the impact of external debt on economic growth in Nigeria.

The model was adapted and modified.

The model is stated thus:

PCI = f (EXDPC, EXDSPC, EXR, INFRAS)

Where:

PCI = annual rate of Per Capital Income

EXDPC = external debt stock measured as the ratio of external debt to Per Capital Income

EXDSPC = external debt servicing calculated as the ratio of external debt to per capita income

EXR= Exchange rate

LnINFRAS = Natural log of Infrastructural development.

$\beta_0$ and $\mu$ are the constant and error term respectively while $\beta_1$, $\beta_2$, $\beta_3$, and $\beta_4$ are the coefficient of external debt on economic development.

The equation form of the model is:

PCI = $\beta_0$ + $\beta_1$EXDPC + $\beta_2$EXDSPC + $\beta_3$EXR + $\beta_4$INFRAS $\mu$

Where:

$\beta_0$ and $\mu$ are the constant and error terms, respectively, while $\beta_1$, $\beta_2$, $\beta_3$, and $\beta_4$ are the coefficients of external debt stock, external debt servicing, exchange, and infrastructure, respectively.

## METHOD OF ANALYSES

The data is analyzed with econometric techniques involving Descriptive statistics, Augmented Dickey-Fuller and Philip Peron test for unit roots, Johansson technique for co-integration test for a long run relationship, Granger Causality Test, and the ordinary least square (OLS).

## DATA PRESENTATION

**Table 1: The Descriptive Statistics**

|  | PCI | EXDPCI | EXDSPC | EXR | INFRAS |
|---|---|---|---|---|---|
| **Mean** | 6.587155 | 75.68479 | 5.138190 | 13.18276 | 22.21594 |
| **Median** | 4.887400 | 78.48770 | 4.887400 | 13.70000 | 22.39550 |
| **Maximum** | 20.85860 | 228.6423 | 33.73580 | 14.20000 | 22.81330 |
| **Minimum** | 0.076600 | 2.062700 | -10.75170 | 8.600000 | 20.87170 |
| **Std. Dev.** | 6.478485 | 64.03453 | 7.704120 | 1.345381 | 0.463541 |
| **Skewness** | 1.442398 | 0.505305 | 1.442398 | -2.375729 | -0.994807 |
| **Kurtosis** | 8.342689 | 2.614791 | 8.342689 | 7.447787 | 3.605874 |
| **Jarque-Bera** | 44.54687 | 1.413411 | 44.54687 | 51.18399 | 5.226829 |
| **Probability** | 0.000000 | 0.4931267 | 0.000000 | 0.000000 | 0.073284 |
| **Sum** | 149.0075 | 2194.859 | 149.0075 | 382.3000 | 644.2624 |
| **Sum Sq. Dev.** | 1661.897 | 114811.8 | 1661.897 | 50.68137 | 6.016364 |
| **Observations** | 29 | 29 | 29 | 29 | 29 |

The study variables shown in Table 1 above indicate that the per capita income (PCI) has a mean of 6.58% with a minimum value of 0.07% and maximum values of 20.85%, respectively. However, the standard deviation is 6.47%, indicating high variation in the Nigerian economy's per capita income (PCI). This means that the Nigerian economy is relatively unpredictable and risky. This is capable of discouraging investment in the country.

Again, the ratio of external debt to per capita income (PCI) measures the extent to which total per capita income can be deployed to wipe out outstanding external debt obligations. A high or increasing ratio will indicate problems with external debt management. From the result, it can be seen that EXDPC is 75.68%. This suggests that variations in external debt stock account for 76% of the changes in per capita income; the extent to which external debt servicing can free resources to improve the standard of living is measured as the ratio of external debt servicing to per capita income. The debtor's ability to meet debt servicing obligations declines as the ratio increases. This directly shows that the debt is likely to be unsustainable and will, therefore, undermine the improved welfare of the citizens. From the results in Table 1 above, the ratio of external debt servicing outstanding to per capita income (EXDSPC), which measures the external debt servicing effect 5.14%, with a minimum value of -10.75170 and maximum values of 33.73580, respectively.

## UNIT ROOT

The data gathered would be subjected to the Unit root test. Since carrying out regressions on non-stationary time series data would lead to spurious regression outcomes, we employed the widely used Augmented Dickey-Fuller (ADF) and Philip and Peron test to ascertain the stationary of the data.

**Table 2: The Unit Rood Test**

| At Level | | | | |
|---|---|---|---|---|
| **Variables** Augmented Dicker Fuller Test t-Statistic | Prob. | **Philip and Peron Test** Adj. T-Stat | Prob. | **Decision** |
| **PCI** | -2.133424 | 0.2339 | -1.996650 | 0.2865 | Not Stationary at Level |
| **EXDPCI** | -1.156835 | 0.6783 | -1.023858 | 0.7305 | Not Stationary at Level |
| **EXDSPCI** | -4.109778 | 0.0036* | -4.046948 | 0.0042* | Stationary at Level |
| **EXR** | -8.662571 | 0.0000* | -9.114547 | 0.0000* | Stationary at Level |
| **INFRAS** | -2.364762 | 0.1603 | -2.364762 | 0.1603 | Not Stationary at Level |
| **PCI** | -6.415193 | 0.0000* | -6.423403 | 0.0000* | Stationary at first difference |
| **EXDPCI** | -3.128281 | 0.0378* | -5.654047 | 0.0001* | Stationary at first difference |
| **INFRAS** | -7.491444 | 0.0000 | -7.491444 | 0.0000 | Stationary at first difference |

The unit root test results show that PCI, EXDPCI, and INFRAS are non-stationary at levels while EXDSPC and EXR are stationary at levels. However, all the variables (PCI, EXDPCI, EXDSPC, EXR, and INFRAS) attained stationarity at 1st difference. This is indicated by the probabilities of the test values, which are below 0.05 significance levels. Since the variables are stationary, at least at first differences, it is suitable to go on with the co-integration test for the long-run relationships among the study's variables.

## CO-INTEGRATION

The test for co-integration comes after the test for the sequence of integration. This test determines if the variables in the model have a long-term connection (Ogundipe & Alege, 2013). This will be carried out using the Johansen technique for co-integration.

**Table 3: Co-integration Test for Long-run Relationship between External Debt and Economic Development**

**Unrestricted Co-integration Rank Test (Trace)**

| Hypothesized No. of CE(s) | Eigen value | Trace Statistic | 0.05 Critical Value | Prob. ** |
|---|---|---|---|---|
| None * | 0.857689 | 135.3988 | 95.75366 | 0.0000 |
| At most 1 * | 0.716711 | 82.75585 | 69.81889 | 0.0033 |
| At most 2 * | 0.484159 | 48.70113 | 47.85613 | 0.0415 |

| At most 3 * | 0.410603 | 30.82830 | 29.79707 | 0.0379 |
|---|---|---|---|---|
| At most 4 * | 0.347869 | 16.55460 | 15.49471 | 0.0345 |
| At most 5 * | 0.169413 | 5.011821 | 3.841466 | 0.0252 |
| **Unrestricted Co-integration Rank Test (Maximum Eigen value)** | | | | |
| **Hypothesized No. of CE(s)** | Eigen value | Max-Eigen Statistic | 0.05 Critical Value | Prob. ** |
| **None *** | 0.857689 | 52.64297 | 40.07757 | 0.0012 |
| **At most 1 *** | 0.716711 | 34.05472 | 33.87687 | 0.0476 |
| **At most 2 *** | 0.484159 | 17.87282 | 27.58434 | 0.5057 |
| **At most 3 *** | 0.410603 | 14.27370 | 21.13162 | 0.3430 |
| **At most 4 *** | 0.347869 | 11.54278 | 14.26460 | 0.1290 |
| **At most 5 *** | 0.169413 | 5.011821 | 3.841466 | 0.0252 |

*Max-Eigen value test indicates two co-integrating eqn(s) at the 0.05 level*
*\*Signifies a 0.05 level rejection of the hypothesis;*
*\*\*Mackinnon-Haug-Michelis (1999) p-values*

The co-integration indicates that, for trace statistics, six co-integration equations exist at 0.05 level. In contrast, two co-integration equations are obtained at 0.05 for the Max-Eigen statistic. Thus, the null hypothesis of no co-integrating equation is rejected using the Trace statistics and the Max-Eigen value tests. This suggests that the variables have a long-term connection at the 5% level of significance. Thus, the study posits that there is a long-term relationship between external debt and economic development in Nigeria.

## GRANGER CAUSALITY TEST

This is employed to verify if two variables are related in some way. We aim to test for a causal relationship between external debt and economic development in this case. According to the criterion, a causal link exists if the probability value falls between 0 and 0.05.

**Pair-wise Granger Causality Tests**
**Table 4**

| Null Hypothesis: | Obs | F-Statistic | Prob. | Remark |
|---|---|---|---|---|
| **EXD does not Granger Cause PCI** | 27 | 1.28346 | 0.2970 | No causal |
| **PCI does not Granger Cause EXD** | | 1.18583 | 0.3243 | relationship |
| **EXDS does not Granger Cause PCI** | 27 | 0.71888 | 0.4984 | No causal |
| **PCI does not Granger Cause EXDS** | | 1.54511 | 0.2356 | relationship |
| **EXR does not Granger Cause PCI** | 27 | 2.01232 | 0.1575 | No causal |
| **PCI does not Granger Cause EXR** | | 0.79163 | 0.4656 | relationship |
| **INFRAS does not Granger Cause PCI** | 27 | 0.18032 | 0.8362 | No causal |
| **PCI does not Granger Cause INFRAS** | | 0.28686 | 0.7534 | relationship |

The result of the Granger causality has shown that none of the explanatory variables (EXDPCI, EXDSPCI, EXR, and INFRAS) has a causal relationship with PCI in Nigeria. This indicates that external debt in Nigeria is not related to the standards of living in Nigeria. Instead, other factors unrelated to the purpose of borrowing might have influenced Nigerian external debt.

## THE ORDINARY LEAST SQUARE REGRESSIONS

The benchmark test for determining the independent variables' relevance in elucidating the impact of foreign debt on Nigeria's economic development is presented in this section.

**Table 5. Ordinary Least Square Regressions**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| **C** | 15.73210 | 5.435973 | 2.543973 | 0.0003 |
| **EXD** | 1.668951 | 0.991508 | 2.683245 | 0.0001 |
| **EXDS** | -1.342700 | -0.099069 | 1.339468 | 0.2052 |
| **EXR** | -0.145270 | -0.695746 | 0.208798 | 0.8381 |
| **INFR** | -0.537317 | -0.785673 | -1.274907 | 0.6423 |

| R-squared | 0.909033 | Mean dependent var | 6.897917 |
|---|---|---|---|
| Adjusted R-squared | 0.898550 | S.D. dependent var | 1.094669 |
| S.E. of regression | 0.601022 | Akaike info criterion | 2.096940 |
| Sum squared resid | 4.334733 | Schwarz criterion | 2.444891 |
| Log-likelihood | -12.92093 | F-static | 7.951898 |
| Durbin- Watson stat | 1.668708 | Prob (F-statistic) | 0.001265 |

*Computed by the Authors with E-View Software*

From the above regression coefficients, we can express the model as follows:
PCI = 15.73210, EXD = 1.668951, EXDS = -1.342700, EXR = -1.14547, INFR – 0.5373171 + u
From the results of the OLS, it is evident that the constant parameter (Bo) is positive at +15.73210. If all the independent variables are held constant, PCI as a dependent variable will grow by 15.73210 units annually.

**External Debt Stock:** For external debt stock, the coefficient of (EXD) is +1.668951. This means that there is a positive effect between external debt stock and standard of living (PCI); a unit increase in external debt stock (EXD) will cause the standard of living (PCI) to increase by 1.668951 units. The probability value is 0.0001, which indicates the external debt stock significantly affects the standard of living of an average Nigerian citizen.

**Eternal Debt Servicing:** The coefficient of external debt service (EXDS) is negative at -1.342700. This means that external debt service has a negative effect on the standard of living (PCI). A unit increase in external debt service will decrease the standard of living (PCI) by 1.342700. This result is in line with expectations. The probability value is 0.2052, implying that external debt servicing has an insignificant effect on the standard of living of an average citizen in Nigeria.

**Exchange Rate:** For the exchange rate, the coefficient of (EXR) is -0.145270. This means that the exchange rates have a negative effect on the standard of living (PCI). A unit increase in the exchange rate (EXR) will cause the standard of living (PCI) to decrease by -0.14527 units. The probability value is 0.8381, which indicates that the exchange rate has an insignificant effect on the standard of living of an average Nigerian citizen.

**Infrastructural Development:** Finally, the coefficient of infrastructural development (INFR) on the standard of living is negative at -0.537317. This means that infrastructural development is inversely related to the standard of living (PCI). An increase in infrastructure by one unit will lead to a decrease in PCI by 0.537317 units. This result is contrary to the apriori expectation. The probability value is 0.6423, which indicates that investment in infrastructure and using external debt have an insignificant effect on the standard of living of an average Nigerian.
Above all, the coefficient of determinations, denoted as (R2), is 0.909033 or approximately 91%. The Adjusted R-squared is 0.898550. This means that 90% of the total variation in the standard of living (PCI) can be explained by the EXD, EXDS, EXR, and INFR, while the remaining 10% is due to other stochastic variables. The Durbin-Watson statistics at (1.68708) is within the critical threshold; this means the model is free from autocorrelation.

## TEST OF HYPOTHESES
The statistical significance of the individual parameters was used to test the hypotheses. These tests were conducted at a 5% level of significance.

## TEST OF HYPOTHESIS ONE
**Stage One**
**Restatement of hypothesis is null and alternate form:**
$Ho_1$: External debt stock has no significant effect on the standard of living of Nigerian citizens
Hi: external debt stock has a substantial impact on the standard of living of Nigerian citizens

**Stage Two**
**Analysis of regression results,**
**Table 5: OLS on the effect of external debt stock on the standard of living**

| Variable | Probability | Coefficient | Conclusion |
|---|---|---|---|
| constant | 0.0003 | 15.73210 | Statistically significance |
| EXD | 0.0001 | 1.668951 | Statistically significant and positive |
| EXDS | 0.2052 | -1.342700 | Statistically insignificance and negative |
| EXR | 0.8381 | -0.145270 | Statistically insignificance and negative |

| INFR | 0.6423 | -0.537317 | Statistically insignificance and negative |

*Source: computed from e- view 8.0*

## Stage Three: Decision

From Table 5 above, since the probability value is less than 5% (0.0001<0.05) with a coefficient value of 1.668951, the studies, therefore, reject the null hypothesis and accept the alternative hypothesis: these imply that external debt stock has a positive and significant effect on the standard of living of Nigerian citizens.

## TEST OF HYPOTHESIS TWO

**Stage one**
**Restatement of hypothesis in null and alternate form:**
$Ho_2$: external debt service has no significant effect on the standard of living in Nigeria.
Hi: external debt service significantly affects the standard of living in Nigeria.

**Stage Two**
**Analysis of the Regression Results,**
**Table 6: OLS on the Effect of External Debt Servicing on Standard of Living**

| Variable | Probability | Coefficient | Conclusion |
|---|---|---|---|
| constant | 0.0003 | 15.73210 | Statistically significance |
| EXD | 0.0001 | 1.668951 | Statistically significant and positive |
| EXDS | 0.2052 | -1.342700 | Statistically insignificance and negative |
| EXR | 0.8381 | -0.145270 | Statistically insignificance and negative |
| INFR | 0.6423 | -0.537317 | Statistically insignificance and negative |

Source: computed from e- view 8.0

## Stage Three: Decision

Table 6 above shows that the p-value is more than the 5% critical value (0.2052>0.05) with a coefficient of -1.342700; therefore, the study accepts the null hypothesis and rejects the alternative hypothesis. Hence, external debt servicing has a negative and insignificant effect on the standard of living in Nigeria.

## TEST OF HYPOTHESIS THREE

**Stage One**
**Restatement of Hypothesis in Null and Alternate Form**
Ho3: the interaction between exchange rate and external debt has no significant effect on the standard of living in Nigeria.
The interaction between exchange rate and external debt significantly affects Nigeria's standard of living.

**Stage Two**
**Analysis of the regression results**
**Table 7: OLS on the Interaction between Exchange Rate and External Debt on Standard of Living**

| Variable | Probability | Coefficient | Conclusion |
|---|---|---|---|
| constant | 0.0003 | 15.73210 | Statistically significance |
| EXD | 0.0001 | 1.668951 | Statistically significant and positive |
| EXDS | 0.2052 | -1.342700 | Statistically insignificance and negative |
| EXR | 0.8381 | -0.145270 | Statistically insignificance and negative |
| INFR | 0.6423 | -0.537317 | Statistically insignificance and negative |

*Source: computed from e- view 8.0*

## Three: Decision

Table 7 above reveals that the p-value is more than the 5% critical value (0.8381>0.05) and coefficient of -0.145270, we therefore accept the null hypothesis and reject the alternative hypothesis and conclude that the interaction between exchange rate and external debt has no significant effect on the standard of living in Nigeria.

## TEST OF HYPOTHESIS FOUR

**Stage One**
**Restatement of Hypothesis in Null and Alternate Form:**
Ho4: external debt commitment to infrastructural development has no significant effect on the standard of living in Nigeria.
Hi: external debt commitment to infrastructural development significantly affects Nigeria's standard of living.

**Stage two**
**Analysis of the regression results,**
**Table 8: OLS on the external debt commitment to infrastructural and standard of living**

| Variable | Probability | Coefficient | Conclusion |
|---|---|---|---|
| constant | 0.0003 | 15.73210 | Statistically significance |
| EXD | 0.0001 | 1.668951 | Statistically significant and positive |
| EXDS | 0.2052 | -1.342700 | Statistically insignificance and negative |
| EXR | 0.8381 | -0.145270 | Statistically insignificance and negative |
| INFR | 0.6423 | -0.537317 | Statistically insignificance and negative |

*Source: computed from e –view 8.0*

**Stage Three: Decision**
Table 8 above reveals that the p-value is more than the critical value (0.6423>0.05) and coefficient of 0.6423; the study accepts the null hypothesis. It rejects the alternative hypothesis and summit that external debt commitment to infrastructural development has no significant effect on the standard of living in Nigeria.

## ANALYSES AND INTERPRETATION OF RESULTS (DISCUSSION OF FINDING)

The result of the ordinary least square (OLS) indicates that external debt stock has a significant positive effect on the standard of living (PCI); the results of our findings are consistent with the work of Egbetunde (2012) in terms of external debt stock, it was discovered that external debt stock has a positive effect on the Nigerian economy.

**External Debt Servicing:** the result indicates that external debt servicing has a negative and insignificant effect on the standard of living of an average citizen in Nigeria.
Our findings are consistent with the work of Ezeabasili, Isu & Mojekwu (2011), who posit that external debt servicing has a negative relationship with economic growth in Nigeria. For instance, the Gross Domestic Product decreased by 0.034 percent for every 1% rise in total debt payments. At 10%, it was discovered that both of these associations were significant.

Level of significance.
Ajayi, Lawrence, Oke, & Michael (2012) assert that paying down foreign debt has a detrimental effect on the nation's revenue and per capita income. A high level of external debt servicing can also result in a depreciation of the country's currency, a decline in the labor force, ongoing strikes, and subpar educational standards.

**Exchange Rate**: the result indicates that the exchange rate has a negative and insignificant effect on the standard of living (PCI)
Our findings are consistent with the work c of Ijeoma (2013) regarding exchange; it was discovered that exchange has a negative and insignificant relationship with economic growth in Nigeria.

**Infrastructural Development**: the result indicates that infrastructural development is inversely related to the standard of living (PCI). The results of our findings are contrary to the work c of Saibu and Abogan (2014). In terms of infrastructure, it was discovered that the country's infrastructure level has a positive relationship with economic growth and development in Nigeria within the period under study. Finally, the Adjusted R-squared is 0.898550. This indicates that variations in the values of the independent variables account for 90% of the overall variance in the standard of living (PCI). In comparison, the remaining 10% is due to other stochastic variables outside the model.

## SUMMARY OF FINDING

In line with the research objective and hypothesis, the result of the study indicates that external debt stock has a significant positive effect on the standard of living (PCI). In contrast, external debt servicing, exchange rate, and infrastructure have a negative and insignificant impact on the standard of living (PCI).
The Adjusted R-squared is 0.898550. This means that 90% of the total variation in the standard of living
(PCI) Changes in the independent variables' values can be explained, while the remaining 10% is due to other stochastic variables outside the model.

## CONCLUSION

The study thus concludes that external debt has an adverse effect on Nigeria's economic development and has not helped improve Nigeria's standard of living (per capita income). The study has shown that external debt servicing has an adverse effect on Nigeria's economic development. This has reduced funds available for economic growth in Nigeria and lowered the average Nigerian's standard of living. The implication is that the standard of living could have been sacrificed on the altar of unsustainable development. Despite the vast number of resources attracted to Nigeria through external borrowing, employment, literacy ratio, good healthcare facilities, and infrastructural development have continued to elude Nigeria. This is mainly because the funds have not been employed

in productive economic activities. This is why PCI should granger-cause external debt, meaning external borrowing is anchored on the expectation that Nigeria's PCI should increase.

## Recommendations

The following recommendations are suggested:
- Reiterating the study's findings, we recommend that borrowing should be contemplated only if it is designed to deepen the economy, and the amount of debt to borrow should be sustainable to reduce the pressure exerted by its servicing requirements to improve the standard of living of an average Nigerian.
- One should only take on external debt for economic purposes, never for social or political ones. This is to keep the stock of foreign debt from growing over time and to keep the purpose of external debt from becoming obscure. In order to prevent debt overhang, the bodies in charge of overseeing Nigeria's foreign debt should properly monitor the debt payment obligations and ensure that the debt does not exceed a certain threshold.
- In order to boost foreign exchange profits and make our commodities more appealing in international markets, the Nigerian government need to encourage the export of its own goods.

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