

EFFECT OF EXTERNAL DEBT ON ECONOMIC DEVELOPMENT IN NIGERIA

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Abstract

The study investigated the effect of external debt on economic development of Nigeria between 1981 to 2014. The study regressed the variables of external debt (external debt stock to (PCI), external debt servicing to per capita income (PCI) and inflation (INFLR) on per capita income (PCI) over the years, 1981 to 2014. Econometric techniques, including ADF and PP for unit root tests, Johansson cointegration for long run relationship and VECM for short run dynamism of the models as well as granger causality were performed. The results showed that there is a cointegration in the model. The cointegration equation indicated that negative relationship exists between debt and economic development. The study revealed that although external debt stock has positive effect on economic development, its servicing conditions are adverse to the standard of living of an average Nigerian. This position is even aggravated by the unfavorable inflationary pressure experienced by Nigerian citizens. The result of the granger causality test showed that there is no causal relation between economic development and any of the explanatory variables. The study thus concludes that external debt has adverse effect on economic development of Nigeria and has not helped to improve Nigeria's standard of living (per capita income). Among the recommendations is that the nation should commit her external borrowing on priority projects that are capable of generating income that will not only produce servicing platform but will also free resources for improvement of standard of living of an average Nigeria citizen

Keywords: External Debt stock, Per Capita Income, Economic Development, External Debt Servicing.

1.1 Background to the Study

When there is a fiscal gap in proposed expenditure and expected revenue within a fiscal period, government can borrow to fill such gaps especially where the government does not want to compromise macroeconomic stability by printing more money and taxation capability is limited and driven by the desire to provide social overhead capital for the citizenry. It is only in principle, to say that governments borrow to finance public goods which increase welfare and promote economic growth. In real sense, government spending generally has to be financed either through taxation, seignior age (money printing), or with debt.

The act of borrowing creates debt. External debt is a major source of public receipts and financing capital accumulation in any economy (Adepoju, Salau & Obayelu, 2007). It is a medium used

by countries to bridge their deficits and carry out economic projects that are designed to increase the standard of living of the citizenry and promote sustainable growth and development. Hameed, Ashraf and Chaudary, (2008) stated that external borrowing ought to accelerate economic growth especially when domestic financing is inadequate. External debt is also expected improve total factor productivity through an increase in output which in turn enhances increase in per capita income (PCI) of a nation. The importance of external debt cannot be overemphasized as it is an ardent booster of growth and thus improves living standards thereby alleviating poverty (Ogunlana, 2005).

It is widely recognized in the international community that excessive foreign indebtedness in most developing countries is a major impediment to their economic growth and stability (Audu, 2004; Mutasa, 2003). Developing countries like Nigeria have often contracted large amount of external debts that have led to the mounting of trade debt arrears at highly concessional interest rates. (Gohar and Butt, 2012) opine that accumulated debt service payments create a lot of problems for countries especially the developing nations as such debt is actually serviced for more than the amount it was acquired and this slows down the growth process in such nations. The inability of the Nigerian economy to meet its debt service payments obligations has resulted in debt overhang or debt service burden that has militated against her growth and development (Audu, 2004). The genesis of Nigeria's debt service burden dates back to 1978 after a fall in world oil prices. Prior to this, Nigeria had incurred some minor debts from World Bank in 1958 with a loan of US\$28million dollars for railway construction and the Paris Club debtor nations in 1964 from the Italian government with a loan of US\$13.1 million for the construction of the Niger dam. The first major borrowing of US\$1 billion known as the "Jumbo loan" was in 1978 from the International Capital Market (ICM) (Adesola, 2009). However, in the eighties Nigeria's external debt rapidly escalated as a result of declining oil export earnings (Osuji & Ozurumba, 2013).

The increasing fiscal deficits driven by the high level of external debt servicing is a major threat to growth of the nation. The resultant effect of large accumulation of debt exposes the nation to high debt burden. Nigeria is about the richest on the continent of Africa, yet due to the numerous macro-economic problems, such as inflation, unemployment, sole dependency on crude oil as a major source of revenue, corruption and mounting external debt and debt service payment, majority of her citizen fall below the poverty line (Egbetunde, 2012).

Actual per capita GDP growth from a country may experience adverse effect if it is expected to high international borrowing stock or debt-service on public spending (Abud Abdullah & Jaffar, 2014).

Hence, the study aims to investigate the **effect** of external debt on economic development in Nigeria

1.2 Statement of the Problem

Huge external debt does not necessarily imply a slow economic development; but a nation's inability to meet its debt service obligation largely and by inadequate knowledge on the nature, structure and magnitude of the debt in question (Were, 2001). It becomes pertinent to investigate the effect of the present debt burden on Nigeria's economic development and the attendant implications.

There are various empirical studies that have been conducted to investigate the effect of external debt on economic development in Nigeria and have produced conflicting results. Ezeabasili, Isu and Mojekwu (2011), investigated the relationship between Nigeria's external debt and economic growth, between 1975 and 2006 using Johansen cointegration approach, and the result revealed that external debt has negative relationship with economic growth in Nigeria.

Olanrewaju , Abubakar & John (2015) examined the effect of government debt on economic growth in Nigeria between 1986 and 2014 – using the ordinary least square method. The study reveals that the impact of government debt on economic growth over the period under review is insignificant – with external debt which has been enormous over the years contributing minimally to real gross domestic product.\

Fosu (1996), Karagol (2002), Malik, Hayat and Hayat (2010), Audu (2004), Ayadi and Ayadi (2008), Ajayi and Oke (2012), Ejigayehu and Persson (2013), Ibi and Aganyi (2015) have found that external debt and its burdens has adverse effect on economic growth of developing countries including Nigeria.

Ijeoma (2013) assessed the impact of debt on selected macroeconomic indicators in Nigerian economy. And the study found that Nigeria's external debt stock has a significant effect on her economic growth and that there is a significant relationship between Nigeria's Debt service payment and her Gross Fixed Capital Formation.

Saibu and Abogan (2014) examined the macroeconomic determinants of external debt burden in Nigeria, with a view to investigating whether macroeconomic variables such as export, exchange rate, inflation and foreign exchange rate were major determinants of external debt burden in Nigeria. The study used annual time series data from 1970 to 2004 and Error Correction Model (ECM) to analyse the main determinants of external debt burden. The empirical results showed that external debt service payment was positively determined by existing external debt stock, negatively by export and exchange rate while total external debt stock was affected positively by fiscal deficit, level of economic growth and inflation.

The findings of the above studies are not only conflicting but exhibit common characteristic which is the use of GDP, a sub-set of the economic development as economic growth determinant. This study is designed to use another economic development variable, per capita income (PCI) as proxy for economic development.

Thus, it seeks to examine the extent to which the incurrence of external debt and its servicing requirements could affect the standard of living of an average Nigerian. This is done by isolating the two major indicators of debt burden and regressing them on economic development starting from the market based economic era of 1983 when external debt crisis crept into the Nigeria economy.

1.3 Objectives of the Study

The main objective of the study is to investigate the effect of external debt on economic development in Nigeria. The specific objectives include:

1. To examine the effect of external debt stock on per capita income.
2. To assess the effect of external debt servicing on the standard of living of an average Nigerian.
3. To investigate the effect of inflation rate on the standard of living.

1.5 Hypotheses

The following hypotheses, tested at 0.05 level of significance guided the study:

Ho₁: External debt stock has no significant effect on the standard of living.

Ho₂: External debt servicing has no significant effect on the standard of living in Nigeria.

Ho₃: Inflation rate has no significant effect on the standard of living in Nigeria.

1.6 Scope of the Study

The scope of the study covers 1981 to 2014 which coincides with the period that debt crises crept in as a major macroeconomic problem for many developing countries (Ejigayehu & Persson, 2013). The major explanatory variables considered in the study are debt stock and debt servicing and the control variables is inflation rate and the dependent variable is standard of living, proxied by per capita income (PCI)

1.7 Significance of the Study

This study is significant as its findings will be relevant to the following interest group;

Policy Makers

The study will aid policy makers in proffering policies aimed at managing the debt crisis in Nigeria.

Nigeria Government: This study will enable the government to ensure that external finance would be used only for projects of high priority and productivity. This is so because per capita income generally would have bearing on the lives of an average citizen in Nigeria

Social and Financial Analysts: This research will be useful to analysts on economic and social profitability of all external debt financial projects, which must be carried out to ensure that the returns would be in excess of the servicing requirement. The aim will be to prevent the deadweight effect of external debt on the economy and make it sustainable.

Foreign Investors: Foreign investors would try to make Nigeria an export platform, where export commodities could be manufactured for established international market; this will help to strengthen

Nigeria's terms of trade and improvement in terms of trade will reduce debt problems thereby improving the standard of living in Nigeria.

Academics: academics, including students of finance, banking and other related field will find the study useful for further academic exercise.

2.0 REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

2.1.1 Concept of External debt

Debt is derived from Latin word "debere" meaning to owe. Debt has been conceptualized as resources of money used in an organization which is not contributed by its owners and does not in any other way belong to the shareholders. Okoh (2008) noted that there are two types of debts: domestic debt and external debt. Anyanwu (1999) asserts that when government borrows, the debt is public debt. Public debts may be domestic (internal) or external. Domestic debt is debt incurred by government through borrowing from within the country, while external debt refers to the portion of a country's debt that was borrowed from foreign lenders including commercial banks, governments or international financial institutions.

The focus of this study is on external debt which refers to that part of a nation's debt that is owed to creditors outside the nation. Arnone, Bandiera and Presbiterio (2005) define external debt as that portion of a country's debt that is acquired from foreign sources such as foreign corporations, government or financial institutions. According to Ogbeifin (2007), external debt arises as a result of the gap between domestic savings and investment. As the gap widens, debt accumulates and this makes the country to continually borrow in increasing amounts in order to stay afloat. He further defined Nigeria's external debt as the debt owed by the public and private sectors of the Nigerian economy to non-residents and citizens that is payable in foreign currency, goods and services.

2.1.2 Concept of External debt Burden

External debt burden is the reflection of the difficulties and strains arising from the servicing of external debt. This may result from inability to generate enough resources to meet commitments in debt servicing. The burden is measured in terms of the proportion of current resources (income) devoted to financing past consumption (Ogunlana, 2005). Therefore, when a disproportionately large share of current resources is deployed to serve external debt the burden increases. The reverse is the case when external debts can be serviced without compromising the requirements of domestic economic development.

Cholifihani (2008) revealed that increase in external debt create problems since whenever a country has debt accumulation, a high proportion of public expenditure and foreign exchange earnings are absorbed by the debt burden with heavy opportunity costs. Furthermore, external debt may have negative effects on 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. Ubok-Udom (1978) however enumerates the costs of external borrowing to include debt service burden which incorporates costs implied by the term structure of external loans, costs of resultant liquidity crisis, costs of the viciously cumulative debt, the manage ability of the debt, costs of debt rescheduling, and costs of import substitution among others.

2.1.3 Concept of Economic Development

Michael Porter (1998:19-20), in his very influential work, *The Competitive Advantage of Nations*, considers that, "Economic development seeks to achieve long-term sustainable development in a nation's standard of living, an increase in the per capital income of every citizen, adjusted for purchasing power parity." The term sustainable, as defined by Tatyana Soubbotina at the World Bank (2004:9 – 10), could "be otherwise called equitable and balanced, meaning that, in order for

development to continue indefinitely, it should balance the interests of different groups of people...in three major interrelated areas—economic, social, and environmental.

Two influential American planners, Fitzgerald and Leigh (2002:33) propose that, "...economic development preserves and raises the community's standard of living and an improved per capita income through a process of human and physical infrastructure development based on principles of equity and sustainability.

Leszek Balcerowicz thinks that the economic development has four dimensions

- ❖ The initial level of development (reflected, for instance, by the income per capita) or the level existing when the rhythm of development starts being determined;
- ❖ The human capital or the people's level of education and professional training;
- ❖ The internal economic condition or the economy's structures;
- ❖ The external economic circumstances

Economic development leads to improvements in many sectors of a nation. There different indicators that economist uses to measure the level of economic development in a country: Declining poverty rates, increasing literacy rate, declining infant morbidity and increasing life expectancy.

Economic development has to be supported by the whole nation from economist, politicians and civilians. Thus, it can be concluded that economic development leads to the creation of more opportunities in the sector of education, health sector, research, human development and environmental conservation. It equally implies an increase in the per capita income of the citizenry

Amartya Sen's (1999) international work considers economic development to be the strengthening of autonomy and substantive freedoms, which allow individuals to fully participate in economic life. Hence, economic development occurs when individual agents have the opportunity to develop the capacities that allow them to actively engage and contribute to the economy. 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 the process of economic development: they have the freedom to realize their potential. The greater the number of individuals able to participate in the economy and the society, the greater the opportunity for new ideas to circulate and be put into action. Economic development is measured by rising real per capita income, Gini 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.

Inflation

This is a sustained fall in the purchasing power of money, it can be seen as a sustained rising trend in the general price level. According to Afolabi (1998) inflation is a sustained rising trend in the general price level. It is characterized by the prevalence of increase in price generally, not just increase in the prices of one or few commodities and this increase must be sustained over a period of time. It is possible to have fluctuations in prices of certain commodities like agricultural commodities as a result of shortfall in supply due to seasonal factors. This cannot be counted as inflation, therefore, one general way by which people can notice inflation is that once it triggered off, the price increase tends to be general, affecting practically all price and it is continuous.

When there is inflation in an economy, the resources to be use for the economic development of the economy, such as infrastructural development, employment opportunities as well as the provision of social amenities will be used for the servicing of external debt. As explained above it is clear that inflation is an economic phenomenon characterized by sustained rise in the level of prices generally or by a general fall in the purchasing power (value of money). It includes excessive money supply, insufficient supply of goods and services, excessive demand, drought, crop failures, budget deficits, population explosion (Anyanwu, 1993). And (Afolabi, 1998).

The social and economic effect of inflation is such that after certain level, the negative effect of will outwit the benefit and unless controlled at that point. The effect may be disastrous. Apart from its distributive injustice through which it penalizes fixed income earners, it causes reduction in the level of

savings and has the tendency to rid money of virtually all its functions. Inflation can turn the country into dumping ground as export goods and services becomes expensive relative to the price of commodities in other countries making the country a bad place to buy from but a good place to sell to. Also planning is distorted and labour unrest, based in sweeping loss in the real value of money and purchasing power may be experienced. These are some of the reasons why a country must do something about inflation.

It must be observed that a reasonable price increase for an economy as it will stimulate investment and bring about increase in employment and aggregate demand. It is however most important that the level is not allowed exceed what may be considered to be reasonable. Conclusively, the degree of imbalance between the supply and demand for goods and services will determine the extent of rise in the price of goods and services (i.e. the rate of inflation). Inflation therefore arises when there is excess supply of money over the supply of goods and services which money can buy. This why today it is a common household expression that inflations arises when too much money chases few goods, but there are other causes of inflation as already mention above.

2.2 Theoretical Framework

The theoretical framework of this study hinges on the view that external debt result in burden to the economies of the low income developing countries making them the so called highly indebted countries. This exertion is explained using the “debt” overhang theory and the crowding out effect theory.

The debt overhang theory is based on the premise that if debt will exceed the country's repayment ability with some probability in the future, expected debt service is likely to 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. In this case, the debt Laffer curve refers to the relationship between the amount of debt repayment and the size of debt. However, the idea of debt Laffer curve also implies that there is a limit at which debt accumulation stimulates growth (Elbadawi, Ndudu & Ndung'u, 1996). In reference to debt Laffer curve, Lensink and White (1999) argue that there is a threshold at which more debt is detrimental to growth.

The liquidity constraint is captured as a ‘crowding out’ effect, by which the requirement to service debt reduces funds available for investment and growth. A reduction in the current debt service should, therefore, lead to an increase in current investment for any given level of future indebtedness (Cohen, 1993). Other channels through which the need to service a large amount 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 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. 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 seignior age. However, debt has to be repaid. Funds borrowed are simply 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 are capable of leading to faster growth and socio-economic development (Were, 2001; Soludo, 2003).

The scope of debt overhang is much wider in that the effects of debt do not only affect investment in physical capital but any activity that involves incurring costs up-front for the sake of

increased output in the future. Such activities include investment in human capital (in terms of education and health) and in technology acquisition whose effects on growth may be even stronger over time.

The measure for debt overhang is the ratio of external debt stock to gross domestic product 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 of external debt management. Moreover, Debt Service/Export is used to explain debt crowding out effect and indicate the proportion of exports that are committed to service of debt incurred in the past. In particular, debt service/export is a liquidity measure. The debtor's ability to meet debt servicing obligation 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 greater adjustment to compensate for adverse balance of payments developments.

2.3 Empirical Studies

Ample of empirical studies exist on the effect of external debt on growth with mixed and conflicting results among the authors. Fosu (1996) tested the relationship between economic growth and external debt in sub Saharan African countries over the period 1970-1986 using O.L.S method. The study examined the direct and indirect effect of debt hypothesis. Using a debt-burden measure, the study reveals that direct effect of debt hypothesis shows that GDP is negatively influenced via a diminishing marginal productivity of capital. The study also finds that on the average, a high debt country faces about one percent reductions in GDP growth annually.

Karagol (2002) investigated both the short-run and long-run relationships between economic growth and external debt service for Turkey during 1956-1996. The study employed a standard production function model and analyzed using multivariate co-integration techniques. The Vector Auto regression estimates showed that there exists one Co-integration equation. It also revealed that debt service is negatively related to economic growth in the long-run. The causality test showed uni-directional causality between debt service and economic growth.

Malik, Hayat and Hayat (2010) explored the relationship between external debt and economic growth in Pakistan for the period of 1972-2005, using time series econometric technique. Their result shows that external debt is negatively and significantly related to economic growth. The evidence suggests that increase in external debt will lead to decline in economic growth. Empirical studies related to Nigeria on Debt-economic growth nexus also found significance among several scholars.

Audu (2004) examined the impact of external debt on economic growth and public investment in Nigeria from 1970-2002. The empirical investigation was done using the Co-integration test and Error Correction Method. The study shows that debt servicing pressure in the country has had a significant adverse effect on the growth process, and past debt accumulation negatively affect public investment.

Ayadi and Ayadi (2008) examined the impact of the huge external debt, with its servicing requirements on economic growth of the Nigerian and South African economies. The Neoclassical growth model which incorporates external debt, debt indicators, and some macroeconomic variables was employed and analyzed using both Ordinary Least Square (OLS) and Generalized Least Square (GLS) methods. Their finding revealed negative impact of debt and its servicing requirement on the economic growth of Nigeria and South Africa.

Ezeabasili, Isu and Mojekwu (2011), in their study investigated the relationship between Nigeria's external debt and economic growth, between 1975 and 2006 using Johansen cointegration approach, error correction method and granger causality test. The result of error correction estimates revealed that external debt has negative relationship with economic growth in Nigeria. For example, a one per cent increase in external debt resulted in a decrease of 0.027 per cent in Gross Domestic Product, while a 1 per cent increase in total debt service resulted to 0.034 per cent (decrease) in Gross Domestic Product. These relationships were both found to be significant at the 10 per cent level. In addition, the pairwise Granger Causality test revealed that uni-directional causality exists between external debt service payment and economic growth at the 10 percent level of significance. Also,

external debt was found to granger cause external debt service payment at the 1 percent level of significance. Statistical interdependence was however found between external debt and economic growth. Based on the findings, the researchers recommended that debt accumulation for projects must be matched with the timing of repayment while the portfolio of debt must be diversified in terms of sources and types to avoid harmful concentration and a reoccurrence to the past among others.

Sulaiman and Azeez (2012) examined the effect of external debt on economic growth of Nigeria. Ordinary Least Squares (OLS), Augmented Dickey-Fuller (ADF) Unit Root test, Johansen Co-integration test and Error Correction Method (ECM) were employed in the empirical analysis. The findings from the error correction method show that external debt has contributed positively to the Nigerian economy. The study recommends that government should ensure economic and political stability and external debt should be acquired largely for economic reasons 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 Ordinary Least Square (OLS) 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 OLS framework, the evidence of 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, while debt services were negatively impacted on economic growth at $p < 0.05$.

Ajayi and Oke (2012) investigated the effect of the external debt burden on economic growth and development of Nigeria. They adopted the Ordinary Least Square (OLS) regression technique on secondary data and on variable like National Income, Debt Service Payment, External Reserves, Interest rate among others. The finding indicated that external debt burden had an adverse effect on the nation's income, per capital income of the nation and high level of external debt led to devaluation of the nation's currency, increase in retrenchment of workers, continuous industrial strike and poor educational system and this led to the economy of Nigeria getting depressed. They suggested that debt service obligation should not be allowed to rise than foreign exchange earnings and that the loan contracted should be invested in profitable ventures, which will generate a reasonable amount of money for debt repayment.

Ejigayehu and Persson (2013) analysed the effect of external debt on the economic growth of eight selected heavily indebted African countries (Benin, Ethiopia, Mali, Madagascar, Mozambique, Senegal, Tanzania and Uganda) through the debt overhang and debt crowding out effect with ratio of external debt to gross national income as a proxy for debt overhang and debt service export 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 estimation showed that external debt affects economic growth through debt crowding out rather than debt overhang.

Kasidi and Said (2013) investigated the impact of external debt on economic growth of Tanzania for the period of 1990-2010. The study used time series data on external debt and economic performance. It was assumed that external debt helps developing countries to meet developing needs, while debt servicing seeks development by restoring credibility to existing and new creditors. The study revealed that there is significant impact of the external debt and debt service on GDP growth. The total external debt stock has a positive effect of about 0.36939 and debt service payment has a negative effect of about 28.517. Long run relationship the co-integration test shows that there is no long run relationship of the external debt and GDP.

Imimole, Imoughele, Okhue (2014) examined the extent to which Nigeria's external debt relates to indices of ability to pay in order to ascertain the sustainability of it and to identify the main determinants of her external indebtedness for the period 1986 to 2010. Based on available data and the use of statistical methods, the study observed that Nigeria's external debt is not sustainable in terms of

willingness and ability to pay, and that the country's external debt is characterised by capital flight as a result of external debt accumulation which is evident in the ratio of the country's reserves to external debt. Using theoretical framework that justifies the demand for external borrowing by developing countries and relying on error correction mechanism and the Johansen cointegration test, we estimated our model after conducting stationarity test, using the Augmented Dickey-Fuller test. The result from cointegration test showed presence of long run relationship between external debt and the explanatory variables. The study also found that the main determinants of Nigeria's external debt are gross domestic product, debt service and exchange rate. To reduce the adverse effects of external debt on the Nigerian economy and make it sustainable the study recommends that an analysis of the economic and social profitability of all external debt financial projects be carried out to ensure that the returns would be in excess of the interest and principal repayment.

Ibi and Aganyi (2015) analysed the impact of external debt on economic growth in Nigeria. It uses the variance decomposition and impulse response from Vector Auto-Regression (VAR), a time-series econometric model to test whether or not External Debt, Ratio of External debt to Exports and other economic control variables such as: Inflation, Real Exchange Rate and Public investment stimulate economic growth proxy by gross domestic product (GDP) growth rate. Based on the two-stage data processing, the result reveals that causation between external debt and economic growth is weak in the Nigerian context and external debt could thus not be used to forecast improvement or slowdown in economic growth in Nigeria. Hence, changes in GDP cannot be predicted with changes in external debt. The policy implication of the study is that most Nigerians contract debt for selfish reasons rather than for the promotion of economic growth. For debt to promote growth in Nigeria, fiscal discipline and high sense of responsibility in handling public funds should be the watchword of Nigerian leaders.

Olanrewaju, Abubakar and Abu (2015) examined the effect of government debt on economic growth in Nigeria between 1986 and 2013 – using the ordinary least square method. The study reveals that the impact of government debt on economic growth over the period under review is insignificant – with external debt which has been enormous over the years contributing minimally to real gross domestic product. The findings of the study reveal that, if the course of consistent borrowing is not curbed, the economy will slump further: resorting to surplus budgeting, and igniting; increases in unemployment, decreases in total investment, falling reserves, increased exchange rate, higher inflation and consequently increased poverty. It is therefore recommended among others that borrowing should be a last recourse by the government to revitalize the economy, and if necessary, the loans should be sourced within the economy so that when the principal and interest on the loans are paid back, it will serve as a crowd-in-effect which in turn further accelerates economic activities in the country.

3.0 METHODOLOGY

3.1 Research Design

The study adopted an ex-post facto research design because the data for the study are secondary data that already exist in the archive of well acclaimed financial publication such as the Central Bank of Nigeria. However, the data covered a period of 1981 to 2014.

3.2 Nature and Sources of Data

The study used secondary data that were collected from financial publications such as the Central Bank of Nigeria (CBN) Statistical Bulletin, Federal Office of Statistics (FOS)

3.3 Variables of the Study

The model aimed to regress a number of selected external debt variables on economic development of Nigeria. Economic development is proxied by per capita income (PCI) which is the dependent variable while external debt stock (Debt Stock/PCI) and external debt service (Debt Servicing) are the external debt and independent variables of the study. However, inflation rate is included as control variable to capture its implications on standard of living in Nigeria.

3.4 Model Specification

The model is stated thus:

$$PCI = f(EXDPC, EXDSPC, INFLR)$$

Where:

PCI = Per Capita Income, derived as the ratio of Nigeria (GDP) to her population.

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

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

INFLR= Inflation rate in Nigeria

β_0 and μ are the constant and error term respectively while β_1 and β_2 are the coefficient of external debt burdens on economic development of the economy.

The equation form of the model is:

$$PCI = \beta_0 + \beta_1 EXDPC + \beta_2 EXDSPC + \beta_3 INFLR + \mu$$

Where:

β_0 and μ are the constant and error term respectively while β_1 and β_2 & β_3 are the coefficients of external debt stock, external debt servicing, inflation and infrastructure respectively.

3.3 Method of Analyses

The data were analyzed with econometric techniques involving Philip Perron and Augmented Dicker Fuller tests of unit roots, Johansson cointegration test for long run relationship, and Vector Error Correction test for shortrun dynamism.

4.0 RESULTS AND DISCUSSION

Table 1: Descriptive Statistics

	PCI	EXDPC	EXDSPC	INFLR
Mean	5.138190	75.68479	6.587155	13.18276
Median	4.887400	78.48770	4.076800	13.70000
Maximum	33.73580	228.6423	20.85860	14.20000
Minimum	-10.75170	2.062700	0.076600	8.600000
Std. Dev.	7.704120	64.03453	6.478485	1.345381
Skewness	1.442398	0.505305	0.679157	-2.375729
Kurtosis	8.342689	2.614791	2.137857	7.447787
Jarque-Bera	44.54687	1.413411	3.127540	51.18399
Probability	0.000000	0.493267	0.209345	0.000000
Sum	149.0075	2194.859	191.0275	382.3000
Sum Sq. Dev.	1661.897	114811.8	1175.182	50.68137
Observations	29	29	29	29

The variables of the study shown on Table 1 above indicate that the per capita income (PCI) has mean of 6.58% with minimum and maximum values of 0.07% and 20.85% respectively. However, the standard deviation is 6.47% indicating high variation in the per capita income (PCI) in Nigerian

economy. 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 domestic output can be deployed to improve the standard of living in Nigeria. A high or increasing ratio will indicate problems of external debt management. From the result, it can be seen that EXDPC is 75.68%. This suggests that 76% of the changes in standard of living is accounted for by variations in external debt stock, The extent to which 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 obligation declines as the ratio increases. This directly shows that the debt is likely to be unsustainable and will therefore undermine improved welfare of the citizens. From the results on Table 1 above, ratio of external debt servicing outstanding to per capita income (EXDSPC) which measures external debt servicing effect 5.14%, with minimum and maximum values of -10.75 and 33.74 respectively.

Table 2: Unit Root Test

At Level					
Variab les	Augmented Dicke r Fuller Test		Philip and Peron Test		Decision
	t- Statistic	Prob.	Adj. t- Stat	Prob.	
PCI	- 2.13342 4	0.233 9	- 1.99665 0	0.2865	Not Stationary at level
EXDPC	- 1.15683 5	0.678 3	- 1.02385 8	0.7305	Not Stationary at level
EXDSP C	- 4.10977 8	0.003 6*	- 4.04694 8	0.0042*	Stationary at level
INFLR	- 8.66257 1	0.000 0*	- 9.11454 7	0.0000*	Stationary at level
At First Difference					
PCI	- 6.41519 3	0.000 0*	- 6.42340 3	0.0000*	Stationary at first difference
EXDPC	- 3.12828 1	0.037 8*	- 5.65404 7	0.0001*	Stationary at first difference

The result of the unit root test shows that PCI, EXDPC are non stationary at levels while EXDSPC and INFLR are stationary at level. However, all the variables (PCI, EXDPC, EXDSPC, INFLR) attained stationarity at 1st difference. This is indicated with the probabilities of the test values

which are below 0.05 level. Since the variables are stationary at least at first differences, it is suitable to go on with cointegration test for long run relationship among the variables of the study.

Table 3: Cointegration Test for Long run Relationship Between External Debt and Economic Development

Series: PCIEXDPC EXDSPC INFLR

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	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

Trace test indicates 6 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	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

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

The result of the cointegration indicate that, for trace statistic, six cointegrating equations exist at 0.05 level while for the Max-Eigen statistic, two cointegrating equation obtains at 0.05 level. Thus, the null hypothesis of no cointegrating equation is rejected using the Trace Statistics and the Max-Eigen value tests. This suggests the existence of a long run relationship among the variables at 5% significance

level. Thus, the study posits that there is presence of long run relationship between external debt and economic development in Nigeria.

From the result, External debt stock (EXDPC) has a significant positive effect with economic development (PCI) while External debt servicing (EXDSPC) and inflation rate, all have negative effect on economic development of Nigeria. The results suggest that though external debt stock made positive contribution to economic development, its servicing requirement have downgraded the standard of living of an average Nigerian. This is made worse by the nation's inflationary pressure on the citizens.

Table 4: Vector Error Correction Term

Vector Error Correction Estimates

Date: 01/30/16 Time: 20:21

Sample (adjusted): 1988 2014

Included observations: 27 after adjustments

Standard errors in () & t-statistics in []

Cointegrating	
Eq:	CointEq1
PCI(-1)	1.000000
EXDPC(-1)	0.183260 (0.01808) [10.1348]
EXDSPC(-1)	-2.252028 (0.25163) [-8.94969]
INFLR(-1)	-0.127024 (0.89833) [-0.14140]
C	70.50473
Error Correction:	D(EXDPC D(EXDSPC D(INFLR)
CointEq1	-0.653360 -3.339899 0.134419 -0.014222 (0.27263) (0.80367) (0.15024) (0.00846) [-2.39652] [-4.15582] [0.89471] [-1.68109]

To determine the shortrun dynamism of the variables the ECM results above has been employed. From the result, the coefficient of error correction term (-0.653360) is negative and rightly signed. It indicate that Nigerian economy adjusts to normalcy from the long run adverse effects of external debts. To further investigate the causal relations between the dependent variable (economic growth) and independent variables (external debt) the pairwise granger causality results are used.

Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.	Remark
EXD does not Granger Cause PCI	27	1.28346	0.2970	No causal relationship
PCI does not Granger Cause EXD		1.18583	0.3243	
EXDS does not Granger Cause PCI	27	0.71888	0.4984	No causal relationship
PCI does not Granger Cause EXDS		1.54511	0.2356	
INFLR does not Granger Cause PCI	27	2.01232	0.1575	No causal relationship
PCI does not Granger Cause INFLR		0.79163	0.4656	

The result of the granger causality has shown that none of the explanatory variables (EXDPC, EXDSPC, and INFLR) has causal relationship with PCI in Nigeria. This indicates that external debt in Nigeria is not related to the output process in Nigeria. Rather, other factors not related to the purpose of borrowing might have influenced Nigeria external debt.

5.0 Conclusion and Implications of the study

The study has shown that external debt servicing has adverse effect on economic development of Nigeria. This has reduced funds available for economic development in Nigeria and has reduced the standard of living of an average Nigerian. The implication is that standard of living could have been sacrificed on the altar of unsustainable development stock. Despite the huge amount of resources attracted to Nigeria through external debt stock, employment, literacy ratio, good health care facility and infrastructural development have continued to elude Nigeria. This is mostly because the funds have not been employed in productive economic activities. This is why PCI should granger-cause external debt, meaning that external borrowing should be anchored on the expectation that Nigeria PCI is on the increase.

5.1 Recommendations

Reiterating Olanrewaju, Abubakar and Abu (2015) opinion, the study recommends 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 so as to improve the standard of living of an average Nigerian.

REFERENCES

- Abud, E. E., Abdullah, H. & Jaffar, A. S. (2014). Analysis on the Long Run Relationship between the Economic Growth and Its Determinants of Selected North African Countries. *International Review of Management and Business Research*, 3(2), 1026 – 1037. Retrieved from <http://www.irnbrjournal.com/papers>
- Adepoju, A.A, Salau, A.S & Obayelu, A.E (2007). The effects of external debt management on sustainable economic growth and development: Lessons from Nigeria. *Munich Personal RePEc Archive (MPRA)*. Paper No. 2147.
- Adesola, W. A. (2009). Debt servicing and economic growth in Nigeria: An empirical investigation, *Global Journal of Social Sciences*, 8(2), 1-11.

Ajayi, L. B. & Oke, M. O. (2012). Effect of External Debt on Economic Growth and Development of Nigeria. *International Journal of Business and Social Science*, 3(12), 297 – 304. Retrieved from http://www.ijbssnet.com/journals/Vol_3_No_12_Special_Issue_June_2012/29.pdf.

Arnone, M., Bandiera, L. & Presbitero, A. F. (2005). External Debt Sustainability: Theory and Empirical Evidence
<http://www3.unicatt.it/unicattolica/Dipartimenti/DISES/allegati/ArnoneBandieraPresbitero033.pdf>.

Audu, I. (2004). The impact of external debt on economic growth and public investment: The case of Nigeria, African Institute for Economic Development and Planning (IDEP), Dakar.

Ayadi, F. S. & Ayadi, F. O. (2008). The impact of external debt on economic growth: A Comparative study of Nigeria and South Africa. *Journal of Sustainable Development in Africa*, 10(3), 234-264.

Bahir Dar, Ethiopia Vol. 2 (3), S/No 7, July, 2013: 165-191

Cholifihani, M. (2008). A Cointegration Analysis of Public Debt Service and GDP in Indonesia. *Journal of Management and Social Sciences*, 4 (2), 68-81.

Claessens, S. (1996). The debt Laffer Curve: Some empirical estimates. *World Development* 18(12), 38-45.

Cohen, D. (1993). Low investment and large LDC Debt in the 1980s. *American Economic Review* 5(3), 34-56.

Eduardo, B. (1989). The Effect of External Debt on Investment. *Finance and Development*. 26(3), 17-19.

Egbetunde, T. (2012). External borrowing and economic growth in Nigeria. *Fountain Journal of Management and Social Sciences*, 1(1), 1 – 9.

Ejigayehu, D. A. & Persson, J. (2013). The Effect of External Debt on Economic growth – A panel data analysis on the relationship between external debt and economic growth.

Elbadawi, A. I, Ndudu, B. J., Ndungu, N. (1996). Debt overhang and economic growth in Sub-Saharan Africa. In: Iqbal, Z. & K. Ravi (Eds.), External finance for low income countries. IMF Institute, Washington DC.

Ezeabasili, V. N., Isu, H. O. & Mojekwu, J. N. (2011). Nigeria's External Debt and Economic Growth: An Error Correction Approach. *International Journal of Business and Management*, 6(5), 156 – 170. Retrieved from <http://www.ccsenet.org/journal/index.php/ijbm/article/viewFile/10439/7456>.

Fosu, A. K. (1996). The impact of external debt on economic growth in Sub Saharan African. *Journal of Economic Development*, 21(1), 93-118.

Gohar, M., Bhutto N. A. & Butt, F. (2012). The Impact of External Debt Servicing on the Growth of Low-Income Countries. *Sukkur Institute of Business Administration*.

Hameed, H., Ashraf, J. & Chaudary, M. A. (2008). External debt and its impact on economic and business growth in Pakistan. *International Research Journal of Finance and Economics*. 20, 132-140.

Ibi, E. E. & Aganyi, A. (2015). Impacts of external debt on economic growth in Nigeria: a VAR approach. *Journal of Business Management and Administration*, 3(1), 1-5. Retrieved from

<http://www.peakjournals.org/journals/jbma/archive/2015/pdf/JBMA-14-018%20Egbe%20and%20Alfred%20.pdf>.

Ijeoma, Ngozi Blessing (2013) An Empirical Analysis of the Impact of Debt on the Nigerian Economy: An International Journal of Arts and Humanities. Ile-Ife, Southwest .

Imimole, B., Imoughele, L. E. & Okhuese (2014). Determinants and Sustainability of External Debt in a Deregulated Economy: A Cointegration Analysis from Nigeria (1986-2010). *American International Journal of Contemporary Research*, 4(6), 201 – 214. Retrieved from http://www.ajcjrnet.com/journals/Vol_4_No_6_June_2014/21.pdf.

Karagol, E. (2002). The causality analysis of external debt service and GNP: The case of Turkey. *Central Bank Review*, 2(1),39-64.

Kasidi, F. & Said, A. M. (2013). Impact of External Debt on Economic Growth: A Case Study of Tanzania. *Advances in Management & Applied Economics*,3(4), 59-82. Retrieved from http://www.scienpress.com/Upload/AMAE/Vol%203_4_6.pdf.

Lensink, R. & White, H. (1999). Is there an aid Laffer curve? Credit Research Paper No. 99/6. Nottingham: Centre for research in economic development and international trade, University of Nottingham.

Malik, S., Hayat, M. K. & Hayat, M. U. (2010). External debt and economic growth: Empirical evidence from Pakistan. *International Research Journal of Financial Economics*, 44, 88-97.

Mutasa, C. (2003). Regional Integration and Debt in Africa: A Comparative Report of Africa's Regional Groupings. AFRODAD Research Series. March.

Ogbeifun, M. I. (2007). The Politics of External Debt Relief: Nigeria's Unique Experience. *African Journal of Stability and Development*, 1(1), 37 – 43.

Ogunlana, A. (2005). Nigeria and the burden of external debt: The need for debt relief. Central Bank of Nigeria. Retrieved from <http://www.g24.org/TGM/ongu0905.pdf>.

Okoh, S. E. N. (2008). *Public Sector Economics: Principles and Policies*. Mindex Publishing, Benin City.

Olanrewaju, M. H., Abubakar,S. & Abu, J. (2015). Implications of External Debt on the Nigerian Economy: Analysis of the Dual Gap Theory. *Journal of Economics and Sustainable Development*, 6(13), 238 – 248. Retrieved from <http://www.iiste.org/Journals/index.php/JEDS/article/viewFile/24295/24867>.

Osuji, C. C. & Ozurumba, B. A. (2013) .Impact of External Debt Financing on Economic Development in Nigeria. *Research Journal of Finance and Accounting*, 4(4), 92 – 98. Retrieved from [http://pakacademicsearch.com/pdf-files/ech/519/92-98%20Vol%204,%20No%204%20\(2013\).pdf](http://pakacademicsearch.com/pdf-files/ech/519/92-98%20Vol%204,%20No%204%20(2013).pdf).

Saibu, M. O. & Abogan, O. P. (2014) .Macroeconomic Determinants of External Debts Burden in Nigeria: Department of Economics, Obafemi Awolowo University,

Soludo, C. C. (2003). Debt poverty and inequality in Okonjo Iweala, Soludo, and Muntar (Eds), The debt trap in Nigeria. Africa World Press NJ, pp. 23-74

Sulaiman, L. A. & Azeez, B. A. (2012). Effect of external debt on economic growth of Nigeria. *Journal of Economic Sustainable Development*, 3, 8 - 17.

Todaro, M. P. (2003). *Economic Development*, Eight Low Prize Edition, New Delhi: Pearson Education.

Ubok-Udom, E.U. (1978). *Development through Debt: Rationalizing the Costs of External Borrowing*. *The Nigerian Journal of Economic and Social Studies*, 20, 48-56.

Were, M. (2001). The impact of external debt on economic growth in Kenya: An empirical assessment, *UNU-WIDER Research Paper*, DP2001/116. Retrieved from <http://www.wider.unu.edu/stc/repec/pdfs/dp2001/dp2001-116.pdf>.