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## Impact of External Debt and its Services Burden to Economic Growth in Africa: Econometric Evidence from Nigeria 1990-2016

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### **Abstract**

*Nigeria as a nation falls under the classification of the highly indebted poor countries (HIPCS). Countries that fall under this have continued to experience problems in managing and servicing their huge stocks of external debt. The relatively high level of Nigeria's external indebtedness and rising debt burden despite effort by different government to pay off or receive debt forgiveness has a serious implication on the country's development and suitability initiatives. This work empirically analyzed the impact of external debts on the economic growth in Nigeria, 1990-2016. The objective of this study is to assess the impact external debts on the economic growth in Nigeria and to determine the impact external debts service to gross domestic products (GDP). The study made use of ordinary least square regression model for short run and Johansson cointegration for long run relationship, Result reveals that external debt positively and significantly impacted on economic growth of Nigeria but external debts services negatively and significantly impacted on economic growth in Nigeria. The findings of the study show that Nigeria external debt is playing significant roles in improving economic growth of Nigerians but accumulation of external debt services has been rising over the years with debt burden indicators increase steadily in the 1990s and early 2016, even after the Paris debt relief granted to Nigeria.*

*This confirms that the existence of an external debt service over time has been a problem that refused to be arrested in Nigeria and must be carefully handled to enjoy the dividend of external debt as a package.*

**Keywords:** *External Debt, External Debt Service, HIPC, Regression, Cointegration*

## **Introduction**

The ultimate aim of the government of any country is to achieve a well developed economy which can be depicted by the realization of macroeconomic objectives of equitable income distribution and economic growth. Consequently, various policies and strategies can be adopted in the realization of these objectives. The neo-classical economist postulated a positive relationship between external debt, economic growth and development. Milton, (1999) stated that based on the fact that Nigeria quest and in her bit to grow and develop, and her ability to generate loan internally, so as to fill both the domestic savings gap and foreign exchange gap, this must be done through foreign loans.

However, from early 1980, growth in external debt and huge debt services obligations, coupled with dwindling export earning gave both to what we now regard in the finance literature as the Nigeria's external debt crises. Attempts to cope with the debt crisis through the adoption of IMF supported programmes further compounded the excruciating debt problems (Isa, 2004). The Structural Adjustment Programmes (SAP) has invariable resulted in worsening economic condition. The highly indebted poor countries (HIPC) initiative formulated by the IMF and World Banks has failed This is because it is required to reestablished the condition that will sustained growth and external debt free economy. The fiscal burden of debt servicing is extremely minimal to economic growth in HIPC and is in fact an important reason to restore economic growth in some many of them, Nigeria inclusive.

Ayadi (2010) expressed that in Nigeria, using the social and economic indicators, debt overhand is the major factors that have contributed largely to poor state of the Nigerian economy. The debt services burdens has militated against the country's rapid economic growth and worsen the social problems. Many developing countries particularly Nigeria, is found to be wall owing in debt. The external debt problems facing Nigeria has been paid but not adequate. A clear and persistent lesson of the debt crisis has been that, adequate management is essential if external resources are to be used efficiently (.Ajisafe, 2006)

Nigeria resort to external borrowing to bridge the domestic resources gap in order to accelerate economic development. It then means that Nigeria can resort to external borrowing provided that the proceeds are utilized in productive way that will facilitate the eventual servicing and liquidation of the debt (Ajisafe, 2006).

In the 1950's, countries were encouraged to borrow abroad and create an environment conducive boost her economic growth, in the process, little attention was paid to the liabilities side of the current account deficits, which increased the external indebtedness of those countries (Maureen, 2001). As a matter of fact foreign borrowing can be explained in terms of the technical, managerial and financial requirements necessary to support development programmes and economic growth. Between the 1960's and 1970, deficits in the current account are financed by borrowing abroad which were highly favored as a way of boosting economic growth (Nassar and Ajisafe, 2006).

Agu (2009) advocated that in the 2006 report on Nigeria economic growth, the level of external debt indices were taken into consideration by the affected countries to the world bank, Nigeria was poorly ranked 146<sup>th</sup> out of 157 countries listed in the economic ladder. During these periods, the research documents also question Nigeria orchestrated studies turned from gains of the economic reforms and exaggerated improvements in the telecommunications and downstream sectors of the economy. The remark of the presidents of the heritage foundations, Dr. Edwin Feuler, in the preface to the publications becomes pertinent in seeking practical answers to our economy questions in relation to external debt (Okigbo,1989)

Again, the report noted that former president Obasanjo has assembled a reform minded team to implement government's involvement in the economy through privations and deregulations, but the pace of reforms has been slow because of vested interest, which continues to block significant changes. Udeh (2009) stated that the view corresponds with many observations of watchers and commentators on our political economy as well as the implementations and manifestation of the economic journalist statement. External debts overhand can be attributed to have caused part of the problems of our developmental crisis as illustrated in that report.(Ajayi,2000)

This is possible because, external debt has an inverse relationship with economic growth. Adedeji(1984) advocated that there is a widespread recognition in the international community that excessive foreign indebted of many developing countries remains a major impediments to their growth and stability. Developing countries have contracted large amount of debts, often with highly concessional interest rates particularly in the 1970's. The hope was the, these loans would put them at faster growth. But as debt services rations reached very high levels in the 1980's, it becomes clear that for many of these countries, debt repayment would not only constrain economic performance in their countries, but more importantly, it would be virtually impossible to repay these loans and leave a favorable balance to support their domestic economy.

In August 1982, Micro trader by excruciating debt overhand problems, declared itself unable to service its external debt. Other debtor's countries like Argentina, Brazil and Chile joined this line a few months later (Carmicheal, 1994,Acosta,Emmanuel,& Fredricco,2007). As a result of this development, commercial lending by international financial market evaporated and this negation led to the debt crisis of the developing countries. External debt crisis in third world countries had since then be provoked by pervasive proposition and critical analysis by various scholars. Adedeji (1984), Nunnemkannp (1986) an Okigbo (1989) all agreed that crisis would lead to major economic and financial disruption in the international financial markets unless measures are taken to resolve the problems.

The origin of Nigeria's external debts dates back to 1958 when a sum of US\$28 million was contracted for railway constrictions (Ajayi, 2000). Between 1958 and 1977, the resort to foreign debt was minimal as debt contracted during the period were the congressional debts from bilateral and multi-lateral sources with long payment periods and lower interest rates consisting about 78.5 percent of the total debts stock. The decree of 1970 – 1979, external debts outstanding was more than N500m at service ratio of 1.4% a year (Ekpo, 1980).

The reason behind this was after the civil war of 1967 – 1970, Nigeria experienced oil boom. However, with the increase in external debt and difficult in payment in 1982, pressure soon mounted on the various sectors of the economy resulting in huge balance in governments

finance, low international reserves, deficits in the balance of payments and the accumulation of trade arrears in respect of insured and uninsured trade credits.

Hence, the government approached the creditors for debt relief leading to the restructuring agreements with the Paris Clubs in 1986, 1989, 1991 and 2005, it was the same loan that was being rescheduled three times, but with different maturities. During this period, interest and late interest were capitalized thereby making the debt to grow even worse when no new loan were contracted.(Okigbo,1989)

Actually, greater parts of the borrowing was done with the hope that there would be a turnaround in the international oil market perhaps in no distance time ,Ekwe(2010) stated it was equally hoped that the borrowed funds would be used in purchasing domestic goods. However, the expected turn around did not materializes, rather it come to a point that the amount borrowed externally was greater than the national income (NI) and indeed our gross domestic products (GDP).

Nigeria, in 2006 eventually scaled the Paris Club deal by paying a total of US\$12.124 billion to get a write of US\$18 billion loans from Paris club, through, the civil society and some critical Nigerians seriously opposed the decision of Obasanjo to pay the amount of \$12.124 billions at a go to Paris club, at a time when servicing external debt, having a heavy toll on the national economy.

Indeed, civil society groups like the African Network for environment and economic Justice (ANEJ) and other human rights organization criticized the Paris Club debt deal and rather asked for unconditional colligation of Nigeria's external debt on ground that the debt is outrageous and that the Paris of debt servicing fall on the poor people, who are over 70% of the population.(Obikwe,2014)

Yet, Obikwe(2014) still maintained that the Obasanjo government were ahead to release a total of US\$126 billion to the creditors, and at the same time negotiated with the London Club for a similar debt deal. Nigeria debt to the London Club by then was US\$2 billion. According to guardian newspaper report, president Olusegun Obasanjo had on May 24, 2006 informed the senate of his government's outstanding debts owed the London Club amounting to N279 billion.

The Nigerian external debt overhang and reduction found that Nigeria's debt stock arises annually, which implies that Nigeria stock of external debt increase by different factors. This shows that excessive high stock of external debt depresses Nigeria investment and lowers rate of economic growth. The Gross Domestic Product (GDP) is growing at a low pace and one is in doubt as to when the present economic situation will be eased given the trench. The growth has been attributed to high debt stock from several empirical studies. The effects of this swaggering growth to income per capital given taste of population growth seen nauseating. According to UNCTAD ((2000) report, real GDP capita of LDCS is very low and a whole grew at an average of only 0.9% during 1990 – 1998 and 3.6% during 2000 – 2008. This implies that Nigeria's GDP per capital is by far below the average of the LDG. The problems of this study now is the implication of the Nigeria external debt and its debt services burden, which is the threat,(Omokoro,2016) stated that this debt has posed towards the realization of the economic growth objective of the country given that Nigeria whose problems of economic growth and social backwardness are supposed to reserve is currently one of the most dilapidated by sovereign debt crisis. With debt persistence and increment courtesy of huge debt services, lots of trade - off have been occurring which would have been an alternative to boasting economic growth.

Chaimi, Connel & Smar (2005) stated the trade off shows that in 2001 for example, Nigeria spend US\$1.3 billion on external debt services payments and this translated to six times the budgetary allocation to education and ten times the budgetary allocation to health for the year (Aribawe, 2003). Can we say that debt services payment has an effect on economic growth? This then perfectly fits in with the report from the jubilee research which highlighted that the poorest countries are still paying debt services of US\$8 billion per year where as if the rich donor and creditors countries were to make available only 0.1% of their GDP, vast improvement would be achieved in the lives of millions of people in such countries. The broad objectives of this study are to access the impact external debt service burden on the economic growth in Nigeria. The remainder of this paper is arranged as follows: next section reviews relevant related literature. Next section presents data and specifies model used in the study, then, next section presents and discusses results while the last section concludes the paper.

## **Review of Related Literature**

### **Conceptual Review**

#### **Meaning of External Debt**

Many developing countries particularly Nigeria is found to be wallowing in debt. The external debt impact facing Nigeria has been receiving increasing attention in which adequate solution area yet to be found (Ajisafe, Nassar and Gidado, 2006). A clear and persistent lesson of the debt management is vital if external resources are to be used efficiently. Nigeria resort to external borrowing to bridge the domestic resources gap in order to ensure economic growth. It then means that any developing country can resort to external borrowing provided that the proceeds and facilities of the eventual servicing and liquidation of the debt are readily made available upfront.

#### **Justification for External Loans**

There has been sustainable debate on the justification for external borrowing or developing countries, especially in view of the negative effects of debts on their economic and experiences of virtually, of the claims that all debtor countries are of the third world. Eaton and Gerrsovits (1981) sought to justify debt in their study. They articulated primary motives for external borrowing as:

To smoothen consumption, to invest (if domestic marginal products of capital exceed the world's cost of funds).to ease the transition to a new economic environment

Aikhomu (1988) amplified further reasons for recession to external borrowing.

Glytos (2002,2005) external loans are required:

To supplement domestic savings, which make possible a higher rate of capital formation, to build up a country's external reserve position and hence strengthen the liquidity position of the country, to absorb major external shocks in external resources flows in order to avoid wasteful and stagnation of the external loan, to serve as a financial intermediation in countries with weak financial markets.

Karagez (2009) expressed that the point of view above that on its own, debt is very beneficial and advantageous for the process of economic development in less developed countries (LDCs) who mostly have weak financial markets and low level of capital formation. The non application of these loans to regenerative ventures and the interplay of other negative macro-economic

aggregates have tended to make issues of debt unit variable and unattractive. Nigeria, for instance, experience shocks from 1983-1996, as a result of its debt crisis. This however, does not reduce the need for external financing for the growth process. The basic problem is how to ensure the debt burden correlates with the resources base of a country to enhance development.

### **Causes of External Debt Crisis in Nigeria**

The causes of Nigerian external debt crisis had been discussed in the introductory part of this work. The remote causes of the debt overhang are essentially structural in nature, arising from the peripheral nature of the Nigerians economy in the world's economic relations. Essentially, the disarticulation of production and consumption profiles in Nigeria was singular factors, which has a propounding effect on the debt crisis. This is a product of the contradictions in the development planning process (Olukoshi, 1998). The contradiction crisis arises from the fact that the country's stand as a peripheral appendage in the international capitalist economy, to supply natural economic resources to western countries and to serve as a market for the advanced countries surplus manufacturers. The above scenario could be said to be a situation where Nigeria produces what it does not consume and consumes what it does not produce.

The pattern of population over the years centered on import substitution and assembly of process imported from abroad. Adedeji (1989) contends that the continued fragmentations of African product and factors markets have exacerbated the lopsided nature of development, openness and external dependence of African has deepened its economic crisis. This affects foreign resources inflows necessary for the development process. The issue of over dependence on western economies is another factor that affected the debt crisis. The Nigerian economy has been highly dependent on the economies of developed countries for productive capital, financial resources, technical and expatriate skills, food and even the export market for its products. The cyclical crisis of the advanced countries are consistently and systematically transmitted to the country as the derivative crisis of global capitalistic production ,while the country is persistently denied autonomous development dynamism, as it becomes a bugger for resolving the crisis of the advanced economies of western Europe (Nkwoke, 1988). A classical example of the nature of dependence of Nigeria on external economies was the devaluation of the naira in 1973 as a result of the devaluation of the US Dollar about the same period. This was because the naira exchange was pegged to the dollar and the depreciations suffered by the dollar were translated to the Nigerian economy. This scenario consistently promoted balance of payments disequilibria and eventually the debt overhang problem. Also the escalation of interest rates in western countries affected the debt stock since this creates debt-serving problems. As interest rate rise in these countries the debt stock also increases proportionately. Essentially, we can say that the pattern of capital accumulation in Nigeria has not sustained the demands of economic development.

Nwoke (1990) says the international credits system is controlled exclusively by the western countries, while Nigeria hangs on the periphery of the world's monetary relations. This affects the debt crisis negatively. Mbutor (2010) stated that long term funds needed for economic development are politicized while the conditions for obtaining some are very stringent for the third world countries, the factors above coupled with the need for capital intensive technology, led to the ever increasing demand for foreign capital resources which has been receding especially since the beginning of the debt crisis in 1982. (Taylor,1992,1999)

Specifically, the following factors constitute the causes of external debt crisis in Nigeria:

- i. Low propensity to save
- ii. Poor debt management
- iii. Financing of long term project with short term loans.
- iv. Diversion of loan proceeds
- v. Declining foreign exchange earnings.

### **Empirical Review**

There have been several studies on the relationship between external debt and economic growth. Most of the empirical studies include a fairly standard set of domestic debt policy and other exogenous explanatory variables. Majority of the study find one or more debt variables to be significantly and negatively correlated or regressed with economic growth which is the focus of the study.

Iyoha (1999) investigates the impact of external debt on economic growth in sub Saharan African countries. An econometric study, for the period of 1970 – 1994. The Study made use of both external debt model and investment equation to find the impact of external debt and economic growth using panel regression. An important finding was the significance of debt overhang variables in the investment equation, suggesting that mounting external debt depresses through both a “disincentive” effect and a crowding out effect. The results demonstrate that debt forgiveness could provide a much needed stimulus to investment recovery and economic growth in Sub-Saharan African. Hence, external debt has a negative and significant impact on economic growth of the sub sahara African countries used for the study.

Onah (1994) writes on “can debt burden depress investment and economic growth, through liquidity and disincentive effects”. by making use of oral interview. He suggested that the liquidity effects results from the fact that there are only limited resources to be divided among consumption investment external transfer to service existing debt. The study made use of investment equation models and then concluded that the disincentive arises because expectations of future burden tend to discourage current investment.

Ajisafe (2006), investigates the cause and effect relationship of the external debt and foreign private investment in Nigeria using granger causality test. The findings of the study shows that there existed a bi-directional relationship between external debt and foreign investment in Nigeria. The result of the analysis suggests that external debt contributes significantly to foreign private investment in Nigeria.

Hassan and Mamman (2013) examined the impact of external debt on the economic growth of Nigeria using ordinary least square regression. Result reveals that external debt negatively impacted on GDP but positively on private investment in Nigeria Hence, the study recommends that external borrowing should be channeled to the real sectors of the economy for the impact to be felt in the country,

Alfredo and Franscico (2004) examined the relationship between external debt and the growth of economy for some Latin American and Caribbean countries using panel regression. Result reveals that the lower the levels of total external debt were associated with higher growth rates in the countries under study

Kasidi and Said (2013) examined the impact of external debt on economic growth of Tanzania for the period 1990 – 2010 using ordinary least square method. The study revealed that the

impact of external debt and debt service on GDP growth is positively and significant. The effect of total external debt stock is positive and the effect of debt service payment is negative. Long run relationship and the co-integration test illustrations that the external debt and GDP does not have long run relationship.

Ejigayehu, (2013).examined the impact of external debt on economic growth in some selected (Eight) heavily indebted poor African countries. The investigations from prior works strongly vary from researcher to researcher in terms of statistical method used, Geographical area and the period of the time using ordinary least square method .The study has been used annual data for the period of 1991 and 2010. As each the result, the impact of external debt on economic growth is found to be statistically positive and significant in terms of debt crowding out effect. This is the case when indebted poor countries transfer resources to service their accumulated debt.

Benedict et al. (2005) examined the impact of foreign borrowing on investment and growth of a country up to a threshold level using ordinary least square method. Result reveals that foreign borrowing and investment positively and significantly impacted on economic growth of malysia but external debt service may potentially affect the growth as most of the funds will go in the debt repayment negatively rather at the investments,

Safdari and Mehrizi (2011) investigate the effect of external debt on the economic growth in Iran for the period of period of (1974-2007). Using ordinary least square method. The results showed that the effect of external debt and public investments had a positive effect on the growth of economy.

Safdari and Mehrizi (2001) examined impact of external debt accumulation on economic growth and private investment in kenya for the period 1970 – 1995, the empirical results indicated that the impact of external debt accumulation is negative on economic growth and private investment. This confirms the existence of a debt overhang problem in Kenya. Nevertheless, the results also showed that current debt inflows stimulate private investment. Debt servicing does not appear to affect growth adversely but has some crowding – out effects on private investment. Similarly, to examine the impact of Sudan’s external indebtedness to economic growth, Mohammed (2005) used a time series data from 1978 – 2002. By adopting ordinary least square method. The findings of the study exposed the existence of debt overhang problem in Sudan, ie. external debt exceed the country’s ability to repay. The study concluded that external debt and inflation prevent the growth of economy, while the impacts of export earnings are positive. Hence, the results of this study support the need of Sudan to be considered for comprehensive debt relief measures.

Ezeabasili et al. (2011) examines the relationship between Nigeria’s external debt and economic growth, between 1975 and 2006.. The findings the error correction estimates are quite insightful. Empirical results level of external debt service payment and economic growth is negative. The empirical result of external debt and debt service payment and the growth of economy are in agreement with the results of Iyoha (1999), which confirms that high stock of debt can reduce investment and lower economic growth rate. Rapid economic growth supposes that public ingest might often be necessary at a rate well in excess of public savings. Hence it might become necessary for government to borrowing to supplement public savings and thus fill the resource gap. Debt is a good finance option to simplify economic development process.

Ajayi (1991) examined the impact of the size of external debt relative to the size of economy and its relationship with to capital flight. It was recorded that there are also service burden which

does not encourage private investments. In the other hand, the effect of external debt on economic growth is statistically nonsignificant in terms of debt overhang effect. This consequence is against the presumption that was made on slow theory of economic growth and debt overhand hypothesis, which illustrates that our accumulated debt act as a tax on the output in future, discouraging productive investment plan of the private sector and adjustment efforts on the part of government (Debt, overhand hypothesis) and this is turn will shift inward both investment and production curves in Solow's production function. Beside this, the work also shows that, the total amount of debt – relief the countries towards a better economic growth to sum up, the major objective of these studies reviewed here is to investigate the empirical evidence regarding the dynamic growth. overall, majority of the studies came up with a conclusion that a higher level of external debt is related with a lower level of economic growth, which only few studies that did not find conclusive evidence supporting their hypothesis.

### **Summary of Literature**

External debt is a fraction of the country's national debt sourced from foreign individual's agencies or government. It has been observed and confirmed by this study that external debt contribute in both positive and negative way to economic growth in Nigeria. It is a clear fact from observable reality that ineffective utilization of debt will make repayment a difficult task, the interest will keep accruing (a time almost to the time of the capital), then repayment becomes a problem and such debt will become a bad debt. From the above summary, one could understand the previous studies uses Ordinary least square constantly in their study ,this work will depart from the previous work above by using auto regressive base line test to evaluate both the short and long run impact of external debt and its debt service ratio to economic growth in Nigeria. This is the gap that the study will fill.

### **METHODOLOGY**

#### **Research Design**

The study of the impact of external debt management on econometric analysis in Nigeria is an empirical work, therefore the design of this study could be said to be an ex-post factors. Thus, this dissertation involved comparative analysis of data and other information which built up the literature review. A set of growth equation regression was adopted as the model, while the conventional Dickey Fuller (ADF) and Augmented Dickey Fuller (ADF) were used to test for stationary of the series.

#### **Sources of Data**

The sources of data for the work under review are based on secondary sources. The secondary sources of data were gotten from records and publications of debt management office (DMO) federal office of statistics, central banks of Nigeria, economic and financial review, general policies, articles as well as business and economic journals and internets browsing. Due to the need to ensure an acceptance work the researchers visited central bank of Nigeria library Enugu.

### Model for the Study and its Specification

It is argued that growth in investment facilities economic growth the accelerators principles; Foser (20066) argued that debt can additionally influence economic growth. Even if debt services payments do not recue savings and investment significantly, they could still decrease output growth directly by diminishing productivity as a result of the adverse change in investment mix of the country. The effects of external indebtedness, therefore affects economic growth. The way through which the indebtedness effects growth have been identified as stock of external debt as a ration of GDP which should stimulate growth, past debt accumulation (Lopped Debt GDP ratio) which impact negatively on growth, the debt services ratio the final indirect channel incorporated in this work is net foreign financing as a proportion of the deficit as the stock of debt and cost of external; debt serving rise, there is little left to finance public development projects and social services. This led to severely compressed budget/or fiscal deficits. These fiscal policy aggregate further external borrowing as a source of financing the deficits.

The Model adopted is based on Elbadwi et al (1996) model specification.

The regression equation is specified as

$$GDP_t = B_0 + B_1 EXD_t + B_2 EDSt + B_3 INFR + \dots + e_t$$

Where

- GDP = Economic Growth  
EXD = Stock of external debt  
EDS = Debt service burden as a ratio of export earning  
INFR = Inflation rate  
et = Error term
- t = Time series  
bo,b1,b2,b3 coefficient of the parameter estimates

**DATA PRESENTATION**

**TABLE 4.1 PRESENTATION OF DATA OF LOG TRANSFORMED FROM 1981-2016**

|      | LNGDP   | LNEXD  | LNEXDS  | LNINFR |
|------|---------|--------|---------|--------|
| 1990 | 6.1583  | 5.6822 | 3.1045  | 2.0541 |
| 1991 | 6.3020  | 5.7943 | 3.0633  | 2.5014 |
| 1992 | 6.7746  | 6.2994 | 3.3463  | 3.7977 |
| 1993 | 6.9936  | 6.4506 | 2.5494  | 3.6136 |
| 1994 | 7.2440  | 6.4751 | 2.9069  | 3.3778 |
| 1995 | 7.9750  | 6.5748 | 2.6390  | 2.3702 |
| 1996 | 8.3020  | 6.4253 | 2.6532  | 2.0668 |
| 1997 | 8.3400  | 6.3901 | 2.1282  | 1.8870 |
| 1998 | 8.2914  | 6.4505 | 2.5257  | 1.9459 |
| 1999 | 8.4508  | 7.8545 | 1.9315  | 2.9391 |
| 2000 | 8.8118  | 8.0383 | 2.1041  | 2.5572 |
| 2001 | 8.8388  | 8.0634 | 2.5257  | 2.6390 |
| 2002 | 8.9866  | 8.2771 | 2.0541  | 2.7080 |
| 2003 | 9.2016  | 8.4070 | 1.7749  | 2.8848 |
| 2004 | 7.0397  | 8.4950 | 1.5047  | 1.6863 |
| 2005 | 9.9358  | 7.8991 | 2.8154  | 1.6863 |
| 2006 | 9.8301  | 6.1124 | 0.3364  | 2.4510 |
| 2007 | 9.9358  | 6.0842 | 0.3364  | 2.5257 |
| 2008 | 10.0980 | 6.2600 | 0.4700  | 2.6173 |
| 2009 | 10.1183 | 6.3808 | 0.5877  | 2.3795 |
| 2010 | 10.9080 | 6.5368 | 0.2623  | 2.5014 |
| 2011 | 11.1804 | 6.7988 | 0.1823  | 2.3674 |
| 2012 | 11.1804 | 6.9342 | 0.0953  | 2.3674 |
| 2013 | 11.2909 | 7.2251 | 0.0123  | 2.0794 |
| 2014 | 11.3968 | 7.3972 | 0.1043  | 2.1972 |
| 2015 | 11.4525 | 7.4871 | -0.1863 | 2.5095 |
| 2016 | 11.5116 | 7.5289 | -1.2288 | 2.9621 |

**SOURCE: SEE APPENDIX 1**

From table 4.1, it shows data representation of various variables of external debt statistics in Nigeria, Measured in Billion Naira such as Nigeria external debt, external debt services, Gross Domestic Product and micro economic variables that influence external debts such as Inflation rate. A look at the above variable indicated that external debt variables must exert an influence on the Gross Domestic Product performance in Nigeria. The look at the above table shows that GDP in Nigeria geometrically increased by 3.5% though the percentage increase varies across the years. The debt service the level of debt burden of a country in debt services in relation to exports.

**TABLE 4.1.2 PRESENTATION OF DATA FROM 1981-2016 SHOWING GROWTH RATE OF THE VARIABLES**

**LOG FORM OF THE DATA SET**

LNGDP=LOG(LNGDP)

LNEXD=LOG(EXD)

LNEXDS=LOG(EXDS)

LNINFR=LOG(INFR)

SOURCES: OWN COMPUTATION (2018)

From the table 4.2, it shoes data that has been loganarized. The purpose of loganarizing data is to reduce the data size through scaling. Scaling of data help to treat auto correction which is a violation of the classical linear regression model. Therefore lognionzing a data is a diagnostic treatment of a data set.

**Table 4.3 Table showing stationary properties of the data set using augmented dickey fuller test of unit root.**

| Variables | ADFSTAT | CR@5%   | P.V    | Speci | Remark     |
|-----------|---------|---------|--------|-------|------------|
| LNGDP     | -3.5989 | -3.0440 | 0.0168 | 1(1)  | Stationary |
| LNEXD     | -6.3260 | -3.5628 | 0.0136 | 1(1)  | Stationary |
| LNEXDS    | -4.1008 | -3.5806 | 0.0165 | 1(1)  | Stationary |
| LMINFR    | -4.1526 | -3.5628 | 0.0001 | 1(1)  | Stationary |

Source: Own computation (2018) From table 4.3, the data tested the stationary properties of the variables and confirmed that it is stationary at order one. The augmented dickey fuller test is used to test whether the variable has a unit root. Therefore, analyses from the review confirm that there is unit root on the variable at (1). Hence, when there is unit root at order, one, and it means that the variable are all stationary and ADF statistics is more negative and significant than critical value (a) 5%.

**TABLE 4.4: DESCRIPTIVE STATISTICS PROPERTIES OF THE DATA**

|              | LNGDP     | LNEXD    | LNEXDS    | LNINFR   |
|--------------|-----------|----------|-----------|----------|
| Mean         | 9.131479  | 6.974936 | 1.501582  | 2.506448 |
| Median       | 8.986667  | 6.574895 | 1.931521  | 2.501436 |
| Maximum      | 11.51160  | 8.495003 | 3.346389  | 3.797734 |
| Minimum      | 6.158355  | 5.682252 | -1.272966 | 1.686399 |
| Std. Dev.    | 1.698792  | 0.844934 | 1.298991  | 0.521046 |
| Skewness     | -0.140000 | 0.392796 | -0.321924 | 0.720822 |
| Kurtosis     | 1.853580  | 1.851506 | 1.814649  | 3.377581 |
| Jarque-Bera  | 1.566763  | 2.178218 | 2.047048  | 2.498516 |
| Probability  | 0.456859  | 0.336516 | 0.359326  | 0.286717 |
| Sum          | 246.5499  | 188.3233 | 40.54271  | 67.67410 |
| Sum Sq. Dev. | 75.03325  | 18.56174 | 43.87182  | 7.058712 |
| Observations | 27        | 27       | 27        | 27       |

SOURCES: OWN COMPUTATION (2018) E-VIEW 9.0

From the above table, it shows the descriptive statistics of the data; the mean and median of the above data show the aggregative tendency of the data as well as the spread. The maximum and minimum shows the dispersion surrounding the mean in the data set. The standard deviation and variance of the data shows how the data departs from the normal series. Normality test is captured by the skewness and Kurtosis. The entire variable skewed to the left while all the variables are leptokurtic meaning that there are not complexity peaked. LNGDP and LNEXD are not normally distributed because it is not normally up to 2.0. Hence, the observation is 27.

**TABLE 4.5 EXAMINATION OF THE IMPACT OF EXTERNAL DEBT ON GDP USING OLS REGRESSION.**

Dependent Variable: LNGDP  
 Method: Least Squares  
 Date: 09/08/18 Time: 20:29  
 Sample: 1990 2016  
 Included observations: 27

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.  |
|--------------------|-------------|-----------------------|-------------|--------|
| C                  | 9.528499    | 1.612240              | 5.910099    | 0.0000 |
| LNEXD              | 0.285896    | 0.191272              | 1.494706    | 0.1486 |
| LNEXDS             | -1.109934   | 0.124956              | -8.882633   | 0.0000 |
| LNINFR             | -0.289042   | 0.310552              | -0.930735   | 0.3617 |
| R-squared          | 0.795261    | Mean dependent var    | 9.131479    |        |
| Adjusted R-squared | 0.768556    | S.D. dependent var    | 1.698792    |        |
| S.E. of regression | 0.817266    | Akaike info criterion | 2.570249    |        |
| Sum squared resid  | 15.36224    | Schwarz criterion     | 2.762225    |        |
| Log likelihood     | -30.69837   | Hannan-Quinn criter.  | 2.627334    |        |
| F-statistic        | 29.77936    | Durbin-Watson stat    | 2.474645    |        |
| Prob(F-statistic)  | 0.000000    |                       |             |        |

**SOURCES: OWN COMPUTATION (2018) E-VIEW 9.0**

From the table 4.5, EXD has a 29% increase in GDP and the rate of the increases is statistically Non-significant. Also, EDSR has 111% decreases in GDP and statistically significant. INFR has 29% decreases in GDP and equally statistically Non-significant under the scope of this study, inflation rate has a negative and non significant impact on GDP in Nigeria. The  $R_2$  is 80% while the  $R_2$  adjusted is 77% the probability of statistics is significant and the Dublin Watson is good because it not violates auto correlation assumptions where Durbin Watson must be equal to 2. Beside, the overall regression is significant and any result used in this analysis is good in predicting econometric result.

**EXAMINATION OF THE LONG RUN RELATIONSHIP EXISTING BETWEEN EXTERNAL DEBTS ON GDP USING JOHANSON COINTEGRATION.**

Date: 09/02/18 Time: 20:52  
 Sample (adjusted): 1992 2016  
 Included observations: 25 after adjustments  
 Trend assumption: Linear deterministic trend  
 Series: LNGDP LNEXT LNEXTS LNINFR  
 Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

| Hypothesized No. of CE(s) | Eigenvalue | Trace Statistic | 0.05 Critical Value | Prob.** |
|---------------------------|------------|-----------------|---------------------|---------|
| None *                    | 0.685472   | 56.20334        | 47.85613            | 0.0068  |
| At most 1                 | 0.474466   | 27.28628        | 29.79707            | 0.0948  |
| At most 2                 | 0.360321   | 11.20278        | 15.49471            | 0.1993  |
| At most 3                 | 0.001322   | 0.033063        | 3.841466            | 0.8557  |

Trace test indicates 1 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 No. of CE(s) | Eigenvalue | Max-Eigen Statistic | 0.05 Critical Value | Prob.** |
|---------------------------|------------|---------------------|---------------------|---------|
| None *                    | 0.685472   | 28.91706            | 27.58434            | 0.0336  |
| At most 1                 | 0.474466   | 16.08351            | 21.13162            | 0.2200  |
| At most 2                 | 0.360321   | 11.16971            | 14.26460            | 0.1459  |
| At most 3                 | 0.001322   | 0.033063            | 3.841466            | 0.8557  |

Max-eigenvalue test indicates 1 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 Cointegrating Coefficients (normalized by b'S11\*b=I):

| LNGDP     | LNEXD     | LNEXDS    | LNINFR    |
|-----------|-----------|-----------|-----------|
| -2.355911 | 1.225164  | -2.903514 | -1.503042 |
| -1.155336 | -0.815489 | -1.200412 | -0.835201 |
| 1.132581  | -0.563000 | 1.565055  | -2.037362 |
| 0.572716  | 0.080784  | 1.660750  | -0.298711 |

Unrestricted Adjustment Coefficients (alpha):

|           |           |          |           |           |
|-----------|-----------|----------|-----------|-----------|
| D(LNGDP)  | 0.199829  | 0.230243 | -0.046797 | 0.015538  |
| D(LNEXD)  | -0.271314 | 0.087113 | 0.105595  | -0.003492 |
| D(LNEXDS) | 0.031150  | 0.151980 | -0.059239 | -0.007212 |
| D(LNINFR) | 0.138724  | 0.143419 | 0.232827  | 0.002073  |

1 Cointegrating Equation(s): Log likelihood -38.54636

Normalized cointegrating coefficients (standard error in parentheses)

| LNGDP    | LNEXD     | LNEXDS    | LNINFR    |
|----------|-----------|-----------|-----------|
| 1.000000 | -0.520038 | 1.232438  | 0.637988  |
|          | (0.08683) | (0.06474) | (0.17091) |

Adjustment coefficients (standard error in parentheses)

|           |           |
|-----------|-----------|
| D(LNGDP)  | -0.470780 |
|           | (0.30517) |
| D(LNEXD)  | 0.639193  |
|           | (0.16209) |
| D(LNEXDS) | -0.073386 |
|           | (0.16939) |
| D(LNINFR) | -0.326821 |
|           | (0.24524) |

2 Cointegrating Equation(s): Log likelihood -30.50460

Normalized cointegrating coefficients (standard error in parentheses)

| LNGDP    | LNEXD    | LNEXDS    | LNINFR    |
|----------|----------|-----------|-----------|
| 1.000000 | 0.000000 | 1.150385  | 0.674012  |
|          |          | (0.09457) | (0.24640) |
| 0.000000 | 1.000000 | -0.157782 | 0.069272  |
|          |          | (0.17528) | (0.45671) |

Adjustment coefficients (standard error in parentheses)

|           |           |           |
|-----------|-----------|-----------|
| D(LNGDP)  | -0.736789 | 0.057062  |
|           | (0.31034) | (0.17407) |
| D(LNEXD)  | 0.538548  | -0.403445 |
|           | (0.17275) | (0.09690) |
| D(LNEXDS) | -0.248974 | -0.085775 |
|           | (0.16500) | (0.09254) |
| D(LNINFR) | -0.492518 | 0.053003  |

(0.25914) (0.14535)

3 Cointegrating Equation(s): Log likelihood -24.91975

Normalized cointegrating coefficients (standard error in parentheses)

| LNGDP    | LNEXD    | LNEXDS   | LNINFR                 |
|----------|----------|----------|------------------------|
| 1.000000 | 0.000000 | 0.000000 | 19.00471<br>(4.99381)  |
| 0.000000 | 1.000000 | 0.000000 | -2.444890<br>(0.82306) |
| 0.000000 | 0.000000 | 1.000000 | -15.93440<br>(4.31556) |

Adjustment coefficients (standard error in parentheses)

|           |                        |                        |                        |
|-----------|------------------------|------------------------|------------------------|
| D(LNGDP)  | -0.789791<br>(0.33662) | 0.083409<br>(0.18560)  | -0.929835<br>(0.41344) |
| D(LNEXD)  | 0.658143<br>(0.17496)  | -0.462895<br>(0.09646) | 0.848456<br>(0.21488)  |
| D(LNEXDS) | -0.316067<br>(0.17546) | -0.052424<br>(0.09674) | -0.365594<br>(0.21550) |
| D(LNINFR) | -0.228822<br>(0.23740) | -0.078079<br>(0.13089) | -0.210560<br>(0.29157) |

### Conclusions

This work studied the impact of External debt variable to Economic Growth in Nigeria. External debt as one of the key economic growth variable is getting practically popular with economic development experts. The theoretical and empirical issues concerning external debts and business macro-economic factor helps to increase financial industry and also the financial system. Undoubtedly, external debt services in Nigeria strongly affect the countries financial development and play a significant role in the development of the financial system and economic growth. External debt services help to provide growth in the financial outlet, development in money and capital market and increase in the level of economic activities in Nigeria. The knowledge of the review summary in the study attempt to fill the gap of the study by studying the influence of the external debt on the financial performance of Nigeria economic development. Hence, these variables are the external debt factors which financial managers should strategically be conscious of whenever they are planning and forecasting future economic business in Nigeria. To cap it all, external debt have serious positive and significant implication on the Financial Performance of Nigeria economy but its debt services have serious negative and significant implication on the Financial Performance of Nigeria economy and its growth and development. Finally, there are evidence to support that external debt and economic growth nexus have along run relationship.

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#### APPENDIX 1

| YEAR | GDP     | EXD     | EXDS | INFR  |
|------|---------|---------|------|-------|
| 1990 | 472.65  | 293.61  | 22.3 | 7.8   |
| 1991 | 545.67  | 328.45  | 21.4 | 12.2  |
| 1992 | 875.34  | 544.26  | 28.4 | 44.6  |
| 1993 | 1089.68 | 633.14  | 12.8 | 37.1  |
| 1994 | 1399.7  | 648.81  | 18.3 | 29.3  |
| 1995 | 2907.36 | 716.87  | 14   | 10.7  |
| 1996 | 4032.3  | 617.32  | 14.2 | 7.9   |
| 1997 | 4189.25 | 595.93  | 8.4  | 6.6   |
| 1998 | 3989.45 | 633.02  | 12.5 | 7     |
| 1999 | 4679.28 | 2577.37 | 6.9  | 18.9  |
| 2000 | 6713.57 | 3097.38 | 8.2  | 12.9  |
| 2001 | 6895.2  | 3176.29 | 12.5 | 14    |
| 2002 | 7995.76 | 3932.88 | 7.8  | 15    |
| 2003 | 9913.52 | 4478.33 | 5.9  | 17.9  |
| 2004 | 1141.07 | 4890.27 | 4.5  | 5.4   |
| 2005 | 20657.3 | 2695.07 | 16.7 | 5.4   |
| 2006 | 18585   | 451.46  | 1.4  | 11.6  |
| 2007 | 20657.3 | 438.89  | 1.4  | 12.5  |
| 2008 | 24296.3 | 523.25  | 1.6  | 13.7  |
| 2009 | 24794.2 | 590.44  | 1.8  | 10.8  |
| 2010 | 54612.3 | 689.84  | 1.3  | 12.2  |
| 2011 | 71713.9 | 896.85  | 1.2  | 10.67 |
| 2012 | 71713.9 | 1026.9  | 1.1  | 10.67 |
| 2013 | 80092.6 | 1373.58 | 1    | 8     |
| 2014 | 89043.6 | 1631.52 | 1.11 | 9     |
| 2015 | 94145   | 1784.9  | 0.83 | 12.3  |
| 2016 | 99867.7 | 1861.2  | 0.28 | 19.34 |

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