

## THE EFFECT OF EXTERNAL DEBT ON THE ECONOMIC GROWTH OF NIGERIA 2000-2018

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### **Abstract:-**

*This study examined the effect of external debt on the economic growth of Nigeria. Secondary data was used for the study and it was obtained from the financial statement of the Central Bank of Nigeria for the period 2000-2018. The unit root property of the data was analyzed using the Augmented Dickey Fuller Test (ADF) and the variables were all stationary at level. In absence of cointegration Ordinary Least Square regression analysis was used to examine the effect of the independent variables on the dependent variables of the model. The statistical significance of the estimated parameters is checked by an F-test of the overall fit. The result of the regression analysis revealed that External Debt Stock (EDS) has a positive and statistically significant ( $p < 0.05$ ) effect on Economic Growth in Nigeria. This is against a priori expectation. Debt Service Payment (DSP) was found to have a negative effect on Economic Growth and the relationship is statistically significant ( $p < 0.05$ ) but not in line with a priori expectation. Government Expenditure (GEX) was found to have a positive effect on Economic Growth and the relationship is statistically significant ( $p < 0.05$ ) and in line with a priori expectation. The value of the R-squared (0.854830) indicates that about 85.48% of the total variation in the dependent variable is explained by the independent variables. Also given that the probability value of the F-statistic (0.000002) indicates that the independent variables of the study statistically predicts the dependent variable of the study. It was concluded that external debt has not been well utilized in Nigeria. It was recommended among others that external debts should be contracted solely for economic reasons and not for social or political reasons. This is to avoid accumulation of external debt stock overtime and prevent an obscuring of the motive behind external debt.*

**Keywords:** - External, Debt, Economic, Growth, Nigeria.

## 1.0 INTRODUCTION

Government as an institution is saddled with responsibilities. One can make a safe assumption that the ultimate goal of every sovereign government is to promote the economic growth and development of its nation, while carrying out the process of good governance. A nation's financial resource however, has a decisive effect on the achievement of the above mentioned goal. Since good governance also calls for adequate provision of public infrastructures that are capable of catalyzing both the economic growth and private sector development, the challenge of resource deficit has to be addressed (Obademi, 2013). Thus to bridge a financial resource gap, governments usually resort to employing external debt facilities. The rationale for raising loan (both external and domestic) by developing countries has always been to bridge the domestic resource gap in order to accelerate economic growth (Sanusi, 1987). To that extent, no one will fall out with any developing country like Nigeria for resorting to external borrowing provided that the proceeds are utilized in a productive way that will facilitate the eventual servicing, liquidation of the debt and economic growth of the debtor-country. The rate, at which the countries borrow abroad, depends on the links among foreign and domestic savings, investment, and economic growth. Therefore, a country should borrow abroad as long as the capital acquired produces a rate of return that is higher than the cost of the foreign borrowing. If this happens, the borrowing country is increasing capacity and expanding output with the aid of foreign savings (Ayodele, 2012)

In the process of obtaining finance from abroad, a country may consider several options such as grants, foreign investment and loans (concessional and non-concessional) in that order. However, a mix of this capital in-flow in varying proportion could be obtained depending on the socio-economic and political situation in a country (Adepoju, Salau and Obayelu, 2007).

Basically, debts can be classified into two, namely, productive debt and dead weight debt. A debt is said to be productive if the loans are obtained to purchase or invest in some sorts of assets that are capable of yielding returns. On the other hand, a debt is termed dead weight when it is obtained to finance good and services, wars and expenses on current expenditures or any of such avenues that are usually not capable of generating returns. The two types of debt require the borrower's future savings to serve as a cover for the interest and principal payment (debt servicing). A good debt management must earn a rate of return higher than the cost of debt servicing.

Interested researchers have opined that the rationale for raising external loans has always been to bridge the domestic resource gap in order to accelerate economic growth and development. Over the last few years, there has been a significant rise in the external debt profile of Nigeria. Thus it becomes necessary to take a critical look at the activities of such external debt and the impact it has on the economic growth of Nigeria.

### Statement of the problem

There exist a claim that no government is an island of its own; it would require aid at a point or another, especially in the period of cash or economic crises, to perform effectively and efficiently its role of governance. One major source of aid open to a cash trapped government has being foreign borrowing or external debt which is extensively held to enhance economic growth (Osinubi & Olaleru, 2006). Thus we can say the motive behind external debt lies in the realization that countries especially the developing ones lack sufficient internal financial resources which calls for the employment of foreign aid. Soludo (2003) opines that countries borrow for two broad reasons; macroeconomic reasons to either finance higher investment or higher consumption and to circumvent hard budget constraint. This implies that an economy borrow to boost economic growth and alleviate poverty.

The government of Nigeria has resorted to the utilization of external debt over a period of time to bridge the gap in domestic resources aimed at boosting economic growth, alleviating poverty and improving the living standard of the citizenry in general. However there has been mixed claims on the real impact of such facility on the economic growth of the nation. From some quarters, there are claims that the gains of good governance are been delivered with the employment of external debt facilities which has transformed into the actualization of the above goals. However, this measure has come under heavy criticism from other quarters.

Furthermore, having established that external debt is necessitated to bridge the domestic resource gap in order to accelerate economic growth, it is therefore expected that the facility will lead to an increase in the financial base of government which will enable it to prosecute the function of governance. This is usually reflected in the expenditure of government. To this end, the relationship and the rising trend between government spending and economic growth has led to various opinions among scholars and policy makers. Series of arguments and studies have emerged on the platform that increase in government spending do not actually promote growth and development, rather reduce overall performance of the economy. On the flip side, arguments also holds that such expenditure have led to economic growth. A trend analysis of the expenditure profile of the federal government has revealed that bulk of the expenditure falls within recurrent expenditure against capital expenditure which is considered more instrumental in fostering the much desired economic growth (Momoh, 2003). This has sparked further debate among researchers due to the general assumption that the effectiveness of government expenditure in expanding the economy and fostering rapid economic growth depends on whether it is productive or unproductive.

All things being equal, productive government expenditure would have positive effect on the economy, while unproductive expenditure would have the reverse effect. It is against this backdrop that this work is necessitated and it is aimed at probing the utilization of external debt by government and the impact of such on the economic growth of the nation. The primary aim of the study is to examine the impact of external debt on the economic growth of Nigeria. However, the specific objectives of this study include; to examine the effect of external debt stock on the economic growth of Nigeria, to ascertain the effect of debt service payment on the economic growth of Nigeria and to examine the impact of government expenditure on the economic growth of Nigeria.

## **2.0 LITERATURE REVIEW**

### **Theoretical framework**

#### **Harrod Domar Growth Model**

The Harrod Domar Growth Model was propounded independently by Roy F. Harrod in 1939 and Evsey Domar in 1946. Harrod Domar Growth Model states that economic growth rate depend on the level of saving (higher savings which enables higher investment) and capital output ratio (efficiency of investment). The model seeks to establish that a high level of domestic saving in a country creates the required fund for investment. Such investment will in turn increase the capital stock of an economy which will generate economic growth through the increase in the production of goods and the rendering of services.

The model hold that if developing countries desire to ensure economic growth, the government need to formulate as well as implement strategic policies to encourage domestic saving and also support technological advancement. These measures will help to reduce the economic output ratio. The capital output ratio measures the productivity of the investment that takes place in an economy. Basically, a reduction in the capital output ratio implies that the economy is more productive since it produces a higher amount of output from fewer inputs. This outcome will lead to economic growth.

Although the Harrod–Domar model was initially created to help analyze the business cycle, it was later adapted to explain economic growth. Its implications were that growth depends on the quantity of labour and capital; more investment leads to capital accumulation, which generates economic growth. The model carries implications for less economically developed countries, where labour is in plentiful supply in these countries but physical capital is not, slowing down economic progress. The model implies that economic growth depends on policies to increase investment, by increasing saving, and using that investment more efficiently through technological advances. The model concludes that an economy does not "naturally" find full employment and stable growth rates.

Less economically developed countries do not have sufficiently high incomes to enable sufficient rates of saving; therefore, accumulation of physical-capital stock through investment is low. The inability to accumulate physical stock through investment and manage the economy productively is what leads to huge external debt in some cases while the real time need to borrow and finance economic activities is also some of the major reasons for accumulation of external debt. The model is appropriate for this study as it offers the leeway on how to effectively mobilize saving and accumulate physical stocks through investment so as to grow the economy.

Omoruyi (2005) stated that most economies have experienced a shortfall in trying to bridge the gap between the level of savings and investment and have resorted to external borrowing in order to fill this gap. This gap provides the motive behind external debt as pointed out by Chenery (1966), which is to fulfill the lack of savings and investment in a nation as increases in savings and investment would vis-à-vis lead to a rise in economic growth (Hunt, 2007). The dual-gap analysis is provides a framework that shows that the development of any nation is a function of investment and that such investment requires domestic savings which is not sufficient to ensure that development take place (Oloyede, 2002). The dual-gap theory is coined from a national income accounting identity which connotes that excess investment expenditure (investment-savings gap) is equivalent to the surplus of imports over exports (foreign exchange gap)

### **Conceptual framework**

#### **Concept of External Debt**

In the words of Akpa (2008), an external debt is a debt contracted offshore and repayable under the agreed term. The debt includes money owed to private commercial banks, other governments, or international financial institutions such as the International Monetary Fund (IMF) and World Bank. The field of external debt and the economic growth of the nation has been an area of vast studies by interested analyst. A pool of opinion that either lays credence to external debt impacting positively or negatively on the economic growth of Nigeria has been collected and will thus be reviewed. The following works are of the opinion that external debt impacts positively on the economic growth of Nigeria.

Ogwuma (1996) is of the view that debts arise from loans and credit procured by the residents of a country from the rest of the world that is meant for bridging the gap between saving and investment. He stipulates that when these resources are productively deployed and utilized, they do not constitute any drain on the future resources. He further buttresses that, to ensure sustainability of debt servicing, borrowing countries like Nigeria need to adopt efficient external debt management strategies, which entail carefully planned schedules of external debt acquisition, deployment and retirement. According to Ezeabasili (2006), external borrowings by Less Developed Countries (LDCs) are necessary to supplement

the inadequacy of their domestic financial resources and to allow for effective functioning of a productive economy. Gana (2002) establishes that external loan is desirable and necessary to accelerate economic growth provided it is channeled towards increasing the productive capacity of the economy and promote economic growth and sustainability.

Adepoju, Salau & Obayelu (2007) opines that though debt is an important resource needed to support sustainable economic growth; a huge external debt without servicing as is the case for Nigeria before the year 2000 constituted a major impediment to the revitalization of her shattered economy as well as the alleviation of debilitating poverty. Summers (1986) believes that excessive external debt burdens will threaten financial stability with adverse consequence on the real sector of the economy and that an increase in debt stock will create political pressures that will make acceleration of inflation inevitable. The external debt problem, which poses quite a number of adverse effects on the economies of these developing countries, did generate macroeconomic distortion issues such as capital flight, discouragement of private investment and debt servicing payments. Meeting debt service obligations drastically affects other facilities which can be provided to improve the welfare of the citizenry and also crowd out public investment while insufficient public infrastructures discourage private investment.

### **External Debt Management**

The act of borrowing creates debts. Debt therefore refers to the resources of money in use in an organization, which is not contributed by its owners and does not in any way belong to them (Adejuwon, Kehinde and Soneye, 2010). Debt according to Ogbeifun (2007) is generated by the gap between domestic saving and investment, which can increase in absolute terms over time. As the gap widens and the debt accumulates, interest rates also accumulate and the country must borrow increasing amounts just to maintain a constant flow of net imports. It must also borrow to re-finance maturing debt obligations. However, it must be appreciated that debt is an obligation which must be managed as at when due.

In the words of Ahmed (1991), former governor of the Central Bank of Nigeria, “External Debt Management is a conscious and careful, deployment and retirement of loans acquired either for development purpose or supports the balance of payments. It incorporates estimates of foreign exchange earnings, source of finance, the project returns from the investment and the repayment schedule, it also includes an assessment of the country’s capacity to service existing debts and adjustment of the desirability of contracting further loans”.

The Central Bank of Nigeria (CBN), in conjunction with the Federal Ministry of Finance manages the nation’s external or public debts. It is necessary to note that in an attempt to get out of debts, the Debt Conversion Committee (DCC) was set up under the External Debt Management Department which was established in July, 1988 to implement Nigeria’s debt conversion programme.

### **Structure, Source, Type and Composition of External Debt**

There are various alternative attempts at classifying external debt. First, external debt can be classified on the basis of the status of the donor, generally divided into official and private debts. While official debts encompasses all debts obtained from national governments, their agencies or from international agencies like the World Bank and the IMF, private debts cover those obtained from private creditors which include the Euro-dollar loans, supplier’s credit, exports and loans from private commercial banks. It is also needful to say that the Paris Club and the London club are the basic sources of debt facilities utilized by Nigeria over the years. The Paris Club is a voluntary, informal group of creditor nations and also the major forum where creditor countries renegotiate official sector debts. Official sector debts are those that have been issued, insured, or guaranteed by creditor governments. Members of the Paris Club agree to renegotiate and/or reduce official debt owed to them on a case-by-case basis.

### **Economic growth**

A safe assumption can be made that economic growth remains the backbone of an economy’s development and as such its enhancement remains one of the foremost strategic and policy issues for government and policymakers. Over time interested researchers have conducted studies on economic growth and also placed special emphasis upon the factors that influences same.

Jaja and Momodu (2003) assert that for economic growth to be recorded there has to be an increase in economic activities. They opine that Indicators of economic growth include job creation, increase in GDP, poverty reduction, macroeconomic expansion, favourable balance of trade and payment, expansion in infrastructural development amongst others. Momodu (2003) citing the Harod Domar Growth Model states that economic growth rates depend on the level of saving (higher savings which enables higher investment) and capital output ratio (efficiency of investment). Barro (1996) identified various factors which enhance the real per capita GDP growth rate.

### **Nexus between Economic growth and External Debt Crises**

The correlation linking government expenditure and economic growth has been on the forefront of studies among researchers and has also led to a string of debate. Basically it can be said that government performs two principal functions which are protection (security) and provisions of public goods. Akpokerere and Ighoroje (2013) posit that the protection function of government covers the establishment of rule of law and enforcement of property rights. They believe this measure helps to curtail risks of criminality, protect life and property, and the nation from external aggression. Secondly

under the provisions of public goods, the government makes provision for items such as defence, roads, education, health, and power, to mention a few.

It has become a popular opinion that increases in government expenditure on socio-economic and physical infrastructures encourage economic growth. For example, it is believed by some researchers that government expenditure on health and education raises the productivity of labour and increase the growth of national output. Similarly, it is believed expenditure on infrastructure such as roads, communications, power, etc, reduces production costs, increase private sector investment and profitability of firms, thus fostering economic growth.

In similar vein, Oyinlola (1993), Akpan (2005), Olukoye (2009) are all of the view that the components of government expenditure leads to economic growth. Furthermore Fajingbesi and Odusola (1999) hold that capital expenditure rather than recurrent expenditure will bring about economic growth. However, some scholars did not support the claim that increasing government expenditure promotes economic growth, instead they assert that higher government expenditure may slowdown overall performance of the economy. For instance, in an attempt to finance rising expenditure, government may increase taxes and/or borrowing. Higher income tax discourages individuals from working for long hours or even searching for jobs. This in turn reduces income and aggregate demand. In the same vein, higher profit tax tends to increase production costs and reduce investment expenditure as well as profitability of firms.

### **Empirical Review**

Smyth and Hsing (1995) have tried to test the Federal Government's debts impact on economic growth and examine if an optimal debt ratio exists that will maximize the economic growth. The analysts calculated the optimal debt ratio (DEBT/GDPT), which represents the maximum real GDP growth rate (38.4%). The DEBT/GDP ratio corresponding to the maximum GDP growth rate is 38.4 percent. Chowdrg (1994) argues that external debt burden leads to bad management in highly indebted countries such as exchange rate mismanagement. The expectation of currency devaluation leads to speculative capital flight. Devaluation also causes the currency cost of debt service obligations, deteriorates budget deficit and affects money supply and inflation.

Abubakar (2010) empirically investigated the impact of external debt on economic development in Nigeria based on the proxies of the economic development. Adopting a causality research approach and using the regression technique, the findings reveal that external debt cannot be said to have a total negative or positive impact on Nigerian economic development during the ten-year period covered. Some of the proxies of economic development like life expectancy rate at birth in the country and the population living below the poverty line were observed to improve with external debt borrowing. Also, the study found that unemployment rate in the country will be reduced with external debt borrowing, although not significantly. The GDP per capita and literacy rate in Nigeria will simultaneously reduce when more external debt are borrowed as established by the study. The study therefore inferred that external debt in Nigeria has made both positive and negative impacts.

Furthermore, Adjani and Oke (2012) investigated the effect of the external debt burden on economic growth and development of Nigeria. They adopted regression analysis of OLS on secondary data sourced from CBN, Economical and Financial review, Business times, Financial Standard and relevant publications from Nigeria on variables like National Income, Debt Service Payment, External Reserves, Interest rate among others. Their findings indicate that external debt burden has an adverse effect on the nation income and per capital income of the nation. High level of external debt led to devaluation of the nation currency, increase in retrenchment of workers, continuous industrial strike and poor educational system. This led to the depression of the Nigerian economy.

Ezeabasili (2011) investigated the relationship between Nigeria's external debt and economic growth between 1990 and 2006 applying econometric analysis. The result of the error correction estimates revealed that external debt has a negative relationship with economic growth in Nigeria. The investigation stated that Nigeria must be concerned about the absorptive capacity noting that consideration about low debt to GDP, low debt service/GDP capacity ratios should guide future debt negotiations.

Ogege and Ekpudu (2010) also examine the impact of debt burden on the Nigerian economy. They specifically sought to ascertain the effect of debt burden on the growth of the Nigerian economy. Nigeria's data set from the CBN Statistical Bulletin volume 18, (2007) during the period 1970-2007 was used. They employed the Ordinary Least Squares (OLS) to test the relationship between debt burden and the growth in the Nigerian economy. The finding shows that there is a negative relationship between debt stock (internal and external debt) and gross domestic product, meaning that an increase in debt stock will lead to reduction on the growth rate of Nigerian economy.

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 findings reveal a negative impact of debt and its servicing requirement on the economic growth of Nigeria and South Africa.

Adesola (2009) empirically investigated the effect of external debt service payment practices on the economic growth of Nigeria. Ordinary Least Square method of multiple regression was used to examine how debt payment to multilateral financial creditors, Paris Club creditors, London Club creditors, Promissory Notes holders and other creditors relates to Gross Domestic Product (GDP) and Gross Fixed Capital Formation (GFCF) using data from 1981-2004. The study provides evidence that debt payment to Paris Club creditors and Promissory Notes holders are positively related to GDP and GFCF while debt payment to London Club creditors and other creditors show a negative significant relation to GDP and GFCF.

Olulu, Erhieyovwe and Ukavwe (2014) studied the empirical relationship between government expenditure and economic growth. The study particularly looked into government expenditure components such as total expenditure, public debt expenditure, expenditure on health and government expenditure on Education. The ordinary least square (OLS) was applied to ascertain the short-run relationship between variables while the Augmented Dickey Fuller (ADF) test, was used to examine long-run relationship between variables. Their findings indicated that there is an inverse relationship between government expenditures on health and economic growth while government expenditure on education sector, is seen to be insufficient to cater for the expending sector in Nigeria.

Okoro (2013) investigated the impact of government spending on the Nigerian economic growth. He used the ordinary least square multiple regression analysis with the application of Granger Causality test, Johansen Co integration Test and Error Correction Mechanism, to estimate the model specified. He adopted Real Gross Domestic Product (RGDP) as the dependent variable while government capital expenditure (GCEXP) and government recurrent expenditure (GREXP) represented the independent variables. The result concluded that there exists a long-run equilibrium relationship between government spending and economic growth in Nigeria. Fajingbesi and Odusola (1999) empirically investigated the relationship between government expenditure and economic growth in Nigeria.

The econometric results stated that real government capital expenditure has a significant positive influence on real output. On the other hand, the results showed that real government recurrent expenditure has an insignificant effect on growth. A similar work as conducted by Ogiogio (1995) revealed a long-term relationship between government expenditure and economic growth. In addition, his findings also showed that recurrent expenditure exerts more influence than capital expenditure on growth. Ighodaro and Okiakhi (2010) used time series data for the period 1961 to 2007 and applied Co integration Test and Granger Causality test to examine government expenditure disaggregated into general administration and community and social services in Nigeria. The results revealed negative impact of government on economic growth.

### 3.0 METHODOLOGY

Ex-post factor research designs was adopted for this study. It examines how an independent variable, prior to the study affects a dependent variable. The study is designed to cover thirty two years, from 2000 to 2018. The study relied on data from Central Bank of Nigeria statistical bulletin, covering nineteen years from 2000 to 2018.

#### Method of Data Analysis

Several data analytical techniques were deployed. Augmented Dickey Fuller Test (ADF) was used to establish the stationarity of the data. The general form of the Augmented Dickey Fuller test statistics is given as shown below:

$$\Delta Y_t = \mu + \gamma T_{t-1} + \sum_{j=1}^p \alpha_j \Delta Y_{t-j} + \beta \hat{\alpha} + \omega_t$$

Where  $\mu$  is the drift term,  $t$  denotes the time trend, and  $p$  is the largest lag length used.

If all the variables are stationary at level, then Ordinary Least Squares (OLS) can be used to evaluate the relationship between the variables of the study. The researcher prefers to use the scientific method of Ordinary Least Square (OLS) regression technique. The reason for employing the classical Ordinary Least Squares (OLS) follows from the GaussMarkov theorem which states that of all classes of estimators, the Ordinary Least Squares (OLS) is the Best Linear Unbiased Estimator (BLUE) and it has Minimum Error. The OLS possesses some salient features such as Unbiasedness, Efficiency, Best Linear Unbiasedness, Least or Minimum Variance, Least Mean Square Error and sufficiency when compared with other econometric estimators. However, if the variables of the study are stationary at first difference, further statistical test like Johansen cointegration test will be carried out to test the long run relationship among the variables of the study. If there is a long run relationship among the variables of the study, error correction estimation is done to integrate the short run dynamics with its long run equilibrium.

#### Model Specification

Guided by the functional relationship among the variables of the equation, the implicit and the explicit form of the model is stated as shown below:

$$GDP = (EDS, DSP, GEX) \dots (1)$$

In explicit form, the model can be restated as shown below:

$$GDP = b_0 + b_1EDS + b_2DSP + b_3GEX + U_t -$$

(2) Where:

GDP = Gross Domestic Product (A proxy for Economic Growth)

EDS = External debt stock

DSP = Debt service payment

GEX= Government expenditure

### A priori expectations

**Table 1: Descriptive Statistics**

(X<sub>1</sub>) = External debt stock; *a priori* expectation is negative

(X<sub>2</sub>) = Debt service payment; *a priori* expectation is negative

(X<sub>3</sub>) = Government expenditure; *a priori* expectation is positive

	GDP	EDS	DSP	GEX
Mean	55002.11	63482.96	589519.1	1.30E+08
Median	25994.20	15034.10	632435.0	1110644.
Maximum	178097.8	309015.6	855343.0	8.45E+08
Minimum	4750.800	4100.100	244352.0	124491.3
Std. Dev.	60135.60	95240.25	147509.5	2.73E+08
Skewness	0.868530	1.665967	-0.285354	1.862623
Kurtosis	2.187172	4.315242	3.433786	4.926162
Jarque-Bera	2.911805	10.15839	0.406820	13.92348
Probability	0.233190	0.076225	0.815944	0.523947
Sum	1045040.	1206176.	11200862	2.46E+09
Sum Sq. Dev.	6.51E+10	1.63E+11	3.92E+11	1.34E+18
Observations	19	19	19	19

Source: Author's Computation using E-views 10.0

## 4.0 RESULTS AND DISCUSSION

The various descriptive statistics that are discussed are minimum, maximum. Mean and standard deviation for all variables of the study. These are contained in Table 1.

The analysis of the study starts with the examination of the summary statistics. The descriptive results on Table 1 shows that GDP averaged 55002.11 units over the period of study with a standard deviation of 60135.60 Similarly, External Debt Stock (EDS) has a mean value of 63482.96 and a standard deviation of 95240.25 for the period of study. Also, Debt Service Payment (DSP) and Government Expenditure variables have respective mean values of 589519.1 and 1.30 with a standard deviations of 147509.5 and 2.73 respectively. Also, the result of the Jarque-Bera test of normality showed that all the variables are normally distributed given that their respective probability values are greater than 0.05 level of significance which implies that the variables are normally distributed, as opposed to a situation of not being normally distributed if their probability values were less than 0.05 level of significant.

### Testing for Unit Root (ADF-Test)

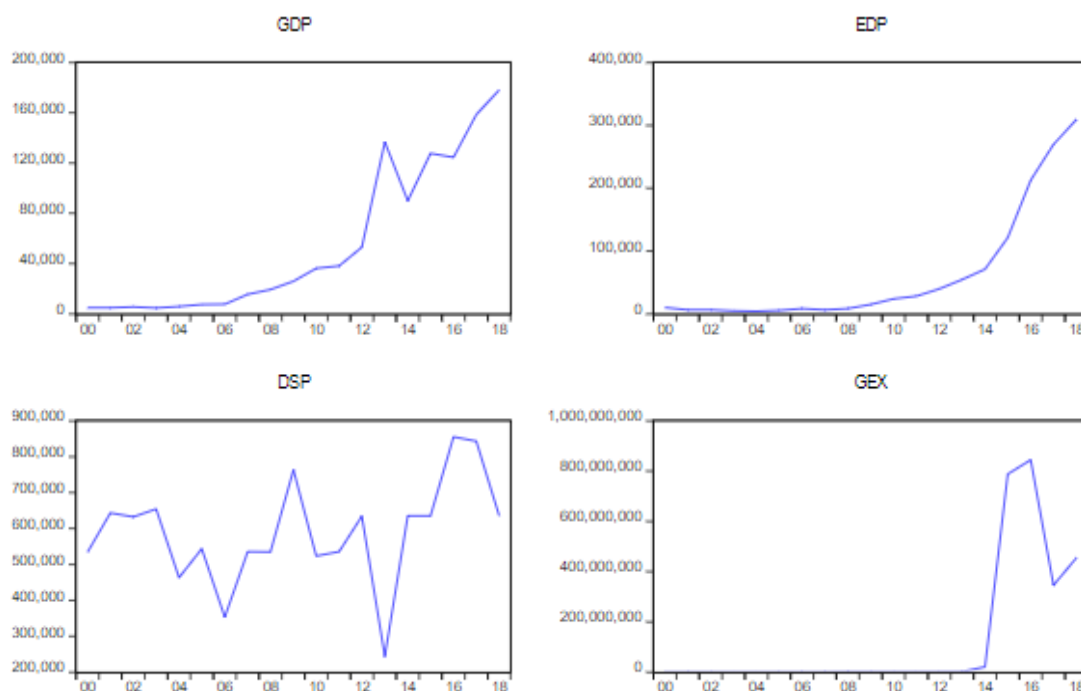
The unit root test is carried out to investigate the stationarity properties of the data and to satisfy the basic assumption for the test statistics adopted for this study. Testing for the order of integration is standard in applied econometric work at different levels of integration.

**Table 3: Augmented Dickey-Fuller Test (ADF) at Level**

Variables	ADF	5% Critical Value	Integration Order
GDP	-1.435554	-3.052169	I (0)
EDS	-3.065585	-4.826972	I (0)
DSP	-3.393931	-3.081002	I (0)
GEX	-1.882098	-3.081002	I (0)

Source: E-views 9.0 result computation, 2019

The unit root test using Augmented Dickey Fuller test (ADF) shows that Gross Domestic Product (GDP), External Debt Stock (EDS), Debt Service Payment (DSP) and Government Expenditure were all stationary at levels and are integrated of order [I (0)]. This implies that the null hypothesis of non-stationary for GDP



**Figure 1: Trend analysis**

The above graph shows trend analysis of the variables as they move from one year to the other during the study period. The graph of all the variables at levels is rejected for all the variables of the study. At this point, the relationship between the variables of the study can be modelled using Ordinary Least Square (OLS).

The above graph shows trend analysis of the variables as they move from one year to the other during the study period. The graph of the Gross Domestic Product (GDP) against year shows that from 2000 to a considerable height before it cascaded and rose further to its highest point in 2018. External Debt Stock (EDP) showed a continuous rise from the start point (2000) to the final point in the year 2018. Debt Service Payment showed a highly unpredictable movement that could be as a result of government policy and policy reversal together with political instability. Government expenditure showed a very minimal expenditure from the start point of the study to the year 2014 when the expenditure peaked and reached its highest point in the year 2016 and fell mid 2016 before it cascaded downward in mid-2017. These fluctuations could also have been occasioned by government policies due to several exogenous factors operating in the economy.

### Regression Analysis

The effect of the independent on the independent variables of the study is examined in this section using the techniques of the Ordinary Least Square (OLS) regression analysis as presented in Table 2 below:

**Table 2: Regression Coefficient**

Dependent Variable: GDP  
 Method: Least Squares  
 Sample: 2000 2018  
 Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EDS	0.581168	0.097232	5.977100	0.0000
DSP	-0.111047	0.047666	-2.329657	0.0342
GEX	0.240005	0.410005	0.951286	0.0365
C	7.936599	2.673161	2.968994	0.0096
R-squared	0.854830	Mean dependent var		55002.11
Adjusted R-squared	0.825796	S.D. dependent var		60135.60
S.E. of regression	25099.21	Akaike info criterion		23.28372
Sum squared resid	9.45E+09	Schwarz criterion		23.48255
Log likelihood	-217.1954	Hannan-Quinn criter.		23.31737
F-statistic	29.44247	Durbin-Watson stat		0.790324
Prob(F-statistic)	0.000002			

Source: E-views Result 10.0 Result Output, 2019



As shown by the result of the Ordinary Least Square regression (OLS) analysis External Debt Stock (EDS) has a positive and statistically significant ( $p < 0.05$ ) effect on Economic Growth in Nigeria. This is against *a priori* expectation. This implies that a unit increase in External Debt Stock will lead to an increase in Gross Domestic Product (GDP) by a margin of 58.12%. The findings is contrary to that of Ogege and Ekpudu (2010) who examined the impact of debt burden on the Nigerian economy. The finding shows that there is a negative relationship between debt stock (internal and external debt) and gross domestic product, meaning that an increase in debt stock will lead to reduction on the growth rate of Nigerian economy. The positive effect of the Debt Stock in our study could be due to the proactive manner in which debt forgiveness has been obtained or managed by the government.

Debt Service Payment (DSP) was found to have a negative effect on Economic Growth and the relationship is statistically significant ( $p < 0.05$ ) but not in line with *a priori* expectation. This implies that a unit increase in Debt Service Payment (DSP) will lead to a corresponding decrease in Gross Domestic Product by a margin of 11.10%. The study is in line with that of Serkan (2008) who investigated the role of macroeconomic factors in explaining Turkish stock returns using macroeconomic factor model from the period of July 1997 to June 2005. He found that interest rate and world market return seem to affect all of the portfolio returns, while inflation rate is insignificant for only three of the twelve portfolios.

Government Expenditure (GEX) was found to have a positive effect on Economic Growth and the relationship is statistically significant ( $p < 0.05$ ) and in line with *a priori* expectation. This implies that a unit increase in Debt Service Payment (DSP) will lead to a corresponding decrease in Gross Domestic Product by a margin of 11.10%. The study is in line with that of Okoro (2013) who investigated the impact of government spending on the Nigerian economic growth using ordinary least square multiple regression and found that they exists a long run equilibrium positive relationship between government spending and economic growth in Nigeria. Also, Fajingbesi and Odusola (1999) empirically investigated the relationship between government expenditure and economic growth in Nigeria and found that real government capital expenditure has a significant positive influence on real output. A similar work as conducted by Ogiogio (1995) revealed a long-term relationship between government expenditure and economic growth. The value of the R-squared (0.854830) indicates that about 85.48% of the total variation in the dependent variable is explained by the independent variables. Also given that the probability value of the Fstatistic (0.000002) indicates that the independent variables of the study statistically predicts the dependent variable of the study.

## 5.0 CONCLUSION AND RECOMMENDATIONS

### Conclusion

This study examined the effect of external debt on economic growth in Nigeria.

External debt stock and external debt service payments were used to capture the external debt burden in Nigeria while government expenditure is used as a control variable. The policy implication of this study is that external debt has not been well utilized in Nigeria. As a developing nation, Nigeria no doubt is obliged to seek for external finance to bridge the saving-investment gap, but such external resources should be channeled to productive uses which should stimulate growth and subsequent development of the nation rather than having a negative impact as established by one of the variables of the study.

It is recommended that external debts should be contracted solely for economic reasons and not for social or political reasons. This is to avoid accumulation of external debt stock overtime and prevent an obscuring of the motive behind external debt.

Secondly, the authorities responsible for managing Nigeria's external debt should adequately keep track of the debt payment obligations and the debt should not be allowed to pass a maximum limit so as to avoid debt overhang.

Lastly the Nigerian government should promote the prudent government expenditure as extravagant expenditures from politicians have been linked to high borrowing from the executive arms of government to finance project which sometimes do not have bearing on the emancipation of the common people.

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