

Evaluation of the Effect of Federal Government External Debts and Reserves on Economic Growth in Nigeria

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Abstract

This study is to evaluate the effect of federal government external debts and external reserve on economic growth in Nigeria. The study spanned 2007–2016. Gross Domestic Product formed the basis for economic growth. The study adopted the ex post facto as research design. The analytical tools used were unit root test and ordinary least square. The study found out that external debt stock had a negative and significant effect on real gross domestic product with the studied period and external debt service payment had a negative and non-significant influence on real gross domestic product with the sampled period. The study therefore 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. 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.

Keywords: Federal government, External Debts, External Reserve, Economic Growth, Nigeria

1.1 INTRODUCTION

Suffice to say that sustainable economic growth is a major concern for any sovereign nation most especially the Less Developed Countries (LDCs), which are characterized by low capital formation due to low levels of domestic savings and investment (Adepoju, Salau and Obayelu, 2007). It is expected that these Less Developed Countries when facing a scarcity of capital would resort to borrowing from external sources so as to supplement domestic saving (Aluko and Arowolo, 2010). Soludo (2013) asserts that countries borrow for two broad reasons; macroeconomic reason that is to finance higher level of consumption and investment or to finance transitory balance of payment deficit and avoid budget constraint so as to boost economic growth and reduce poverty. The constant need for governments to borrow in order to finance budget deficit has led to the creation of external debt Osinubi and Olaleru (2011).

External debt is a major source of public receipts and financing capital accumulation in any economy (Adepoju, et al, 2007). It is a medium used by countries to bridge their deficits and carry out economic projects that are able to increase the standard of living of the citizenry and promote sustainable growth and development. Hameed, Ashraf and Chaudary (2008) observe that external borrowing ought to accelerate economic growth especially when domestic financing is inadequate. External debt also improves total factor productivity through an increase in output which in turn enhances Gross Domestic product (GDP) growth 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.

The history of Nigeria's debt service burden dates back to 1978 after a fall in world oil prices. Prior to this occurrence 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).

External borrowing has a significant impact on the growth and investment of a nation up to a point where high levels of external debt servicing sets in and affects the growth as the focus moves from financing private investment to repayments of debts. Pattilo, Poirson and Ricci (2012) asserted that low levels debt has positive effects on growth but above particular points or thresholds accumulated debt begins to have a negative impact on growth. Furthermore Fosu (2009) observed that high debt service payments shifts spending away from health, educational and social sectors. This obscures the motive behind external borrowing which is to boost growth and development rather than get drowned in a pool of debt service payments which eats up most of the nation's resources and hinders growth due to high interest payments on external debt.

Nigeria as a developing nation has adopted a number of policies such as the Structural Adjustment Programme (SAP) of 1986 to liberalize her economy and boost Gross Domestic product (GDP) growth rate. In a

bid to ensure the implementation of these policies the government embarked upon massive borrowings from multilateral sources which resulted in a high external debt service burden and by 1992 Nigeria was classified among the heavily indebted poor countries (HIPC) by the World Bank. According to Omotoye, Sharma, Ngassam and Eseonu, (2013) Nigeria is the largest debtor nation in sub Saharan Africa. When compared with other sub Saharan nations such as South Africa, Nigeria's external debt stock follows an upward pattern over the years while the former is relatively stabilized. Nigeria's external debt stock rose from US\$28454.8 million in 1997 to US\$31041.6 and US\$37883.1 million in 2001 and 2004 with 80.3, 64.67 and 52.58 percentages of GDP respectively. On the other hand South Africa's external debt stock stood at US\$25272.4 million, US\$24050 million and US\$27112.4 million in 1997, 2001 and 2004 with 16.98, 20.34 and 12.52 percentages of GDP respectively.

The unabated increase in the level of external debt service payments has led to huge imbalances in fiscal deficits and budgetary constraints that have militated against the growth of the Nigerian economy. The resultant effect of the debt quagmire in Nigeria have created some unfavourable circumstances such as crowding out of private investment, poor GDP growth etc. (Iweala, 2011). It is based on this premise that this project investigates external debt and its performance in Nigerian economy.

1.2 Statement of the Problem

It is no exaggeration that external debt servicing is the major challenge faced by the Nigerian economy. The inability of the Nigerian economy to effectively meet its debt servicing requirements has exposed the nation to a high debt service burden. The resultant effect of this debt service burden creates additional problems for the nation particularly the increasing fiscal deficit which is driven by higher levels of debt servicing. This poses a grave threat to the economy as a large chunk of the nation's hard earned revenue is being eaten up. Nigeria's external debt outstanding stood at US\$28.35 million in 2001 which was about 59.4% of GDP from US\$8.5 million in 1980 which was about 14.6% of GDP (Were, 2011). The debt crisis reached its maximum in 2003 when US\$2.3 billion was transferred to service Nigeria's external debt. In the year 2005 the Paris Club group of creditor nations forgave 60% (US\$18 billion) of US\$30.85 billion debt owed by Nigeria. Despite the debt relief of US\$18 billion received by Nigeria from the Paris club in 2005 the situation remains the same (Bakare, 2010).

The problems associated with increasing external debt stock and debt servicing prompted Soludo (2013) to warn that rising Nigeria's debt is an impediment to economic growth and development as it has negative impact on exchange rate which invariably is a factor in increased inflation in the country. Similar view was expressed by Campbell (2009) when he said that government debt can easily become a burden on the economy weakening its foundation, warning that the authorities should recognize that accumulating debt also means accumulating risks by increasing claims on unrealized future income. It is against this backdrop that this study sought to add to existing limited research in this area to either validate or invalidate them.

1.3 Objectives of the Study

The broad objective of this study is to appraise the effect of federal government external debts and external reserve on economic growth in Nigeria covering 2007 – 2016.

The specific objectives of the study are as follows;

1. To ascertain the effect of external debt on gross domestic product in Nigeria.
2. To examine the effect of external debt servicing on economic growth of Nigeria.
3. To determine the extent to which external reserve affects the gross domestic product of Nigeria.

1.4 Research Questions

The following questions are stated for this study:

1. What is the effect of external debt on gross domestic product in Nigeria?
2. What is the effect of external debt servicing on economic growth of Nigeria?
3. To what extent does external reserve affect the gross domestic product of Nigeria?

1.5 Statement of Hypotheses

The following null hypotheses guided this study;

1. External debt does not have significant effect on gross domestic product in Nigeria.
2. External debt servicing does not have significant effect on economic growth of Nigeria.
3. External reserve does not have significant effect on the gross domestic product of Nigeria.

REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

2.1.1 Debt

Anidiobu, Agu and Ezinwa (2016) submit that debt may be defined as the resource or money in use in a country,

which may or may not be generated by the residents. Debt is money owed by one party, the borrower or debtor, for a second party, the lender or creditor. The borrower may be a sovereign state or country, local government, company, or an individual. The lender may be a bank, credit card company, payday loan provider, or an individual. Debt is generally subject to contractual terms regarding the amount and timing of repayments of principal and interest. A simple way to understand interest is to see it as the "rent" a person owes on money that they have borrowed, to the bank from which they borrowed the money. Loans, bonds, notes, and mortgages are all types of debt. The term can also be used metaphorically to cover moral obligations and other interactions not based on economic value. For example, in Western cultures, a person who has been helped by a second person is sometimes said to owe a "debt of gratitude" to the second person

2.1.2 External Debt

The effect of external debt on a nation's economy has been a subject of controversy among academics. Some are of the view that external debt accelerates economic growth (Soludo, 2013). This view is in line with neoclassical model of economic growth –the Keynesian theory in which capital accumulation is viewed as a catalyst to economic growth. This has been confirmed by the significant growth by the Asian Tigers- Malaysia, Singapore, Indonesia and Taiwan and South American country, Brazil. These nations were able to transform their economy using external debt.

Were, (2001) describes external debt as that part of a country's debt that is borrowed from foreign lenders including commercial banks, governments or international financial institutions. External debt becomes necessary when domestic financial resources become inadequate to finance public goods that increase welfare and engender economic growth. External debts are funds sourced from outside the nation's boarder usually in foreign currency and are interest-bearing to finance specific project(s).

Arize, Sang & Slottie (2010) reveal that the major cause of the debt crisis situation in Nigeria is the fact that these foreign loans are not being used for developmental purposes. Instead of being ventured into capital projects that will better the economy, they are shrouded in secrecy. According to Bamidele & Joseph, (2013), the factors that led to Nigeria's external debt burden can be grouped into six areas; inefficient trade and exchange rate policies, adverse exchange rate movements, adverse interest rate movements, poor lending and inefficient loan utilization, poor debt management practices and accumulation of arrears and penalties.

Nigeria has two major categories of external creditors; official and private creditors. Her official creditors include the International Fund for Agricultural Development (IFAD), African Development Fund (ADF), the International Bank for reconstruction and development (IBRD), the African Development Bank (AFDB), Economic Community of West African States (ECOWAS) fund and the European Investment Bank (Eme & Johnson, 2012). The above listed are Nigeria's multilateral creditors which also include the World bank and International Monetary Fund (IMF) which were very active lenders in the 1970s/1980s. The bilateral creditors include the Paris Club and Non-Paris Club creditors. The Paris Club is an informal group of official creditors which was created to aid debtor countries going through payment difficulties by finding sustainable and lasting solutions. Also part of Nigeria's debt profile are private creditors which are made up of promissory note holders and the London Club group. The total debt outstanding as at 31st December 2007 stood at US\$35.94 billion with Paris Club (85.82%), multilateral creditors (7.86%), London Club (4.01%), Non-Paris Club (0.13%) and Promissory notes (2.18%) (Eduardo, 2009). This clearly shows that the largest proportion of Nigeria's external debt is accrued to the Paris Club group of creditors.

2.1.3 External Reserves

External reserves (also called forex reserves or FX reserves) is money or other assets held by a central bank or other monetary authority so that it can pay if need be its liabilities, such as the currency issued by the central bank, as well as the various bank reserves deposited with the central bank by the government and other financial institutions. Reserves are held in one or more reserve currencies, mostly the United States dollar and to a lesser extent the Japanese yen.

Eme & Olugboyega, (2012) defined debt relief as an agreement by a creditor or a country to accept reduced or postponed interest and redemption payments from the debtor. Nigeria's debt relief deal with the Paris Club is widely recognized in external debt literature. The Paris Club was formed in 1956 and its role is to provide help to the debt payment challenges faced by debtor nations. It comprises of 14 member nations (United Kingdom, France, Germany, Japan, Italy, United States of America, Belgium, Netherlands, Denmark, Austria, Spain, Switzerland, Russia and Finland). Nigeria's first loan from the Paris Club of Creditor Nations was a US\$13.1 million obtained from the Italian government in 1964 for the building of the Niger Dam. However the oil boom of 1971-1981 introduced the era of massive borrowings in Nigeria. Loans were acquired by various tiers of government as Nigeria embarked on major development and reconstruction projects in the wake of the civil war (Ezeabasili, 2006).

The borrowing continued well into the civilian era, as the Federal Government embarked on the guaranteeing of many unviable loans taken by private banks, state governments and government parastatals. In 1982, when oil prices crashed, Nigeria was unable to pay off the loans it borrowed. This resulted in rising

interest payments and mounting of trade arrears and their penalties. A critical point was reached in 1986 when creditors refused to open new credit lines for imports to Nigeria. The government therefore approached the creditors for debt relief leading to the restructuring arrangements with the Paris Club in 1986, 1989, 1991 and 2000. However this did not stop the “leaps” and “jumps” in the external debt stock which led to Nigeria to stop paying its debts to the Paris Club altogether, after the Paris Club refused to substantially reduce Nigeria’s debt. With the return to civilian rule in 1999 under the President Olusegun Obasanjo administration, Nigeria embarked on a relentless campaign for debt relief. The major concern was that Nigeria’s spends more on debt service payments than it does on healthcare and education and as such with the high level of debt servicing could not achieve the millennium development goals (Hameed, Ashraf, & Chandhary, 2008). The campaign efforts finally paid off in 2005 when the Paris Club group of creditors agreed to cancel 60% (US\$18 billion) of the US\$30.85 billion owed to it by Nigeria. This debt relief freed the nation from the yearly US\$2.3 billion (N345 billion) debt service burden. Anidiobu, Agu and Ezinwa (2016) stated that the debt relief milestone was expected to put Nigerian economy on better springboard of being rejuvenated. On the contrary, the economy seems to be deteriorating by the day with skyrocketing unemployment rate, lowering living standard, and decaying infrastructure, among others, though she is still borrowing.

2.1.4 Economic Growth

Economic growth is the increase in the inflation-adjusted market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP, usually in per capita terms.

Growth is usually calculated in *real* terms – i.e., inflation-adjusted terms – to eliminate the distorting effect of inflation on the price of goods produced. Measurement of economic growth uses national income accounting. Since economic growth is measured as the annual percent change of gross domestic product (GDP), it has all the advantages and drawbacks of that measure. This study measures GDP as a proxy for economic growth.

2.1.5 Gross Domestic Product

Gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period. Though GDP is usually calculated on an annual basis, it can be calculated on a quarterly basis as well.

GDP includes all private and public consumption, government outlays, investments, private inventories, paid-in construction costs and the foreign balance of trade (exports are added, imports are subtracted). GDP connotes that broad measurement of a nation’s overall economic activity.

Ezeabasili, Isu & Mojekwu, (2011) stated that GDP is commonly used as an indicator of the economic health of a country, as well as a gauge of a country's standard of living. Since the mode of measuring GDP is uniform from country to country, GDP can be used to compare the productivity of various countries with a high degree of accuracy. Adjusting for inflation from year to year allows for the seamless comparison of current GDP measurements with measurements from previous years or quarters. In this way, a nation’s GDP from any period can be measured as a percentage relative to previous periods. An important statistic that indicates whether an economy is expanding or contracting, GDP can be tracked over long spans of time and used in measuring a nation’s economic growth or decline, as well as in determining if an economy is in recession (Eme & Johnson, 2012).

2.2 Theoretical Review

The following theories were considered relevant to this study:

2.2.1 The Dual-gap theory

The Dual – Gap Theory was propounded by Harrod and Domar in 1946. Iya, Gabdo & Aminu, (2013) 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 Jhingan, (2004) 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. The dual-gap analysis provides a framework that shows that the development of any nation is a function of investment and that such investment requires domestic savings which is not sufficient to ensure that development take place. 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).

2.2.2 Debt-overhang Theory:

The Debt – Overhang theory was propounded by Howard in 1972. Debt-overhang occurs when a nation’s debt is more than its debt repayment ability. Eme & Olugboyega, (2012) explains debt overhang as one whereby the expected repayment amount of debt exceeds the actual amount at which it was contracted. -- Eduardo, (2009) also defined debt overhang as one where the debtor nation benefits very little from the returns on additional investment due to huge debt service obligations. The “debt overhang effect” comes into play when accumulated debt stock discourages investors from investing in the private sector for fear of heavy tax placed on them by

government. This is known as tax disincentive.

Bamidele & Joseph, (2013) relates the concept of debt overhang to Nigeria's debt situation. He stated that the debt service burden has prevented rapid growth and development and has worsened the social issues. Nigeria's expected debt service is seen to be increasing function of her output and as such resources that are to be used for developing the economy are indirectly taxed away by foreign creditors in form of debt service payments. This has further increased uncertainty in the Nigerian economy which discourages foreign investors and also reduces the level of private investment in the economy.

The tax disincentive here implies that because of the high debt and as such huge debt service payments, it is assumed that any future income accrued to potential investors would be taxed heavily by government so as to reduce the amount of debt service and this scares off the investors thereby leading to disinvestment in the overall economy and as such a fall in the rate of growth. In addition, Atique & Malik (2012) stated that external debt accumulation can promote investment up to a certain point where debt overhang sets in and the willingness of investors to provide capital starts to deteriorate.

This study is therefore anchored on the Debt – Overhang theory. This is based on the premise that the theory goes to a great extent to explain the consequences of external debt on a nation as it described as one of the consequences associated with external debt as discouraging private investors due to high tax rates in order to raise fund to compensate for the debt.

2.3 Empirical Review

The following empirical studies are reviewed for this study:

2.3.1 Effect of External Debt on Gross Domestic Product in Nigeria

Another study by Ogunmuyiwa (2011) examined whether external debt promotes economic growth in Nigeria using time-series data from 1970-2007. The regression equation was estimated using econometric techniques such as Augmented Dickey-Fuller test, Granger causality test, Johansen co-integration test and Vector Error Correction Method (VECM). The results revealed that causality does not exist between external debt and economic growth in Nigeria.

Onyekwelu, Okoye & Ugwuanyi (2014) examines effect of External Debts Management Strategies in developing economies and its implications on some key economic indices using Nigeria. This work has adopted both the content analysis and the empirical approach. Secondary data was used for this study. The data for analysis were gathered from the statistical bulletins/releases of relevant government agencies like the Debt Management Office, Central Bank and the Office of the Accountant General of the Federation. Data were analysed using the Linear Regression and Analysis of Variance (ANOVA). The linear regression showed that there is a positive and significant relationship between the size of External Debts and Gross Domestic Product (GDP), Capital Expenditure, External Reserves and Exports. However, the Analysis of Variance (ANOVA) reveals a negative correlation between External Debts and the variables studied. The study attributes this anomaly to mismanagement of credit facilities, unfavourable loan terms characterized by capitalization/compounding of interests, weak economic base, poorly co-ordinated statistics on loans and overdependence on foreign aids among others. This development has led to poor performance of almost all the key economic indices of the country resulting in dearth of infrastructural development, very weak real sector, and high unemployment rate and so on. The paper recommends that developing economies should manage credits better by appropriating the funds to sectors that would ensure diversification of their economic base. Nigeria should pursue deliberate policy that will encourage a virile productive sector, place less emphasis on external borrowings as most of the credits are given under very unfavourable credit conditions and their repayments erode the much-needed funds for economic development. The various governments should see external borrowings as a last resort and when contracted must be employed to finance only self-sustaining projects that will stimulate real sector and other factors of production needed to engender sustainable economic development.

Anidiobu, and Okolie (2016) carried out a study on the responsiveness of foreign exchange rate to foreign debt in Nigeria. The objectives of the study were to examine whether foreign exchange rate responded positively to foreign debt and investigate whether foreign exchange rate responded significantly to foreign debt. The researcher used ex – post facto as research design because it suited the objectives of the study. The study found out that foreign exchange rate responded positively to foreign debt in Nigeria within the study period and that foreign exchange rate responded non-significantly to foreign debt in Nigeria during the period of study. The study recommended that in order to achieve the goal of a realistic exchange rate in Nigeria, foreign borrowing should be geared towards increased production in the non-oil sectors, e.g. agriculture and solid minerals, less imports and increased exports. This is intended to strengthen the value of the naira in relation to other major international currencies like US dollar, euro, etc. Government must adopt fiscal adjustment programme that can improve its revenue base by intensifying productive export activities in the non-oil sector. They will engender favourable trade balance, strengthen and stabilize the exchange rate in favour of the naira. Policy makers should

ensure that borrowed funds are deployed to cardinal sectors of the economy such as agriculture and manufacturing. Stepping up these activities could lead to optimal harnessing of productive resources to boost economic development of the country. In order to use foreign debt to maximize the productive potential of our country, and indeed other highly indebted jurisdictions, fiscal prudence and great sense of responsibility in managing public funds should be the ethical standard of these countries leadership.

2.3.2 Effect of External Debt Servicing on Economic Growth of Nigeria.

Suliman, Prashanth and Al-zakwani(2012) examined the effect of external debt on the economic growth of Nigeria. Annual time series data covering the period from 1970-2010 was used. The empirical analysis was carried out using econometric techniques of Ordinary least squares (OLS), Augmented Dickey-Fuller unit root test, Johansen Co-integration test and error correction method. The co-integration test shows long-run relationship amongst the variables and findings from the error correction model revealed that external debt has contributed positively to the growth of the Nigerian economy. In addition the study recommends that the Nigerian should ensure political and economic stability so as to ensure effective debt management.

An empirical investigation conducted by Audu (2004) assessed the impact of external debt on the economic growth and public investment of Nigeria. The study carried out its analysis using time series data covering the period from 1970-2002. The Johansen Co-integration test and Vector Error correction method econometric techniques of estimation were employed in the study. The study concluded that Nigeria's debt service burden has had a significant adverse effect on the growth process and also negatively affected public investment.

Ejigayehu (2013) also analyzed 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.

2.3.3 Effects of external reserve on the gross domestic product of Nigeria

Ayadi and Ayadi (2008) investigated 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) techniques of estimation. Their findings revealed that debt and its servicing requirement has a negative impact on the economic growth of Nigeria and South Africa.

Faraji and Makame (2013) explored the impact of external debt on the economic growth of Tanzania using time series data on external debt and economic performance covering the period 1990-2010. It was observed through the Johansen co-integration test that no long-run relationship between external debt and GDP. However the findings show that external debt and debt service both have significant impact on GDP growth with the total external debt stock having a positive effect of about 0.36939 and debt service payment having a negative effect of about 28.517. The study also identified the need for further research on the impact of external debt on foreign direct investments (FDIs) and domestic revenues.

Safdari and Mehrizi, (2011) analyzed external debt and economic growth in Iran by observing the balance and long term relationship of five variables (GDP, private investment, public investment, external debt and imports). Time series data covering the period 1974-2007 was used and the vector autoregressive model (VAR) technique of estimation was employed. Their findings revealed that external debt that has a negative effect on GDP and private investment and public investment has a positive relationship with private investment.

In a study on external debt relief and economic growth in Nigeria, Ekperiware and Oladeji, (2012) examined the structural break relationship between external debt and economic growth in Nigeria. The study employed the quarterly time series data of external debt, external debt service and real GDP from 1980-2009. An empirical investigation was conducted using the chow test technique of estimation to determine the structural break effect of external debt on economic growth in Nigeria as a result of the 2005 Paris Club debt relief. The result of their findings revealed that the 2005 external debt relief caused a structural break effect in the relationship between external debt and economic growth. Based on these findings they concluded that the external debt relief made available resources for growth-enhancing projects.

2.4 Research Gap

Other studies on the effect of external debt on economic growth have encompassed diverse durations but this study covers from 2007 to 2016.

METHODOLOGY

3.1 Research Design

The researcher adopted *ex-post facto*. The choice of the *ex-post facto* design is because the research relied on already recorded events, and researchers do not have control over the relevant dependent and independent variables they are studying with a view to manipulating them (Onwumere, 2009).

3.2 Nature and Sources of Data

This study made use of secondary data covering a period of 10 years i.e. 2007 – 2016 obtained from Central Bank of Nigeria Statistical Bulletin.

3.3 Model Specification

The model of the study is based on the classical linear regression model of Brooks (2014). An econometric analysis of which real gross domestic product is the dependent variable while the independent variable/explanatory variables are external debt stock, external debt service payment and external reserve. The model is shown as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + \mu_t \dots \dots \dots (1)$$

Where;

Y = dependent variable

X₁, X₂, ---X_n = Explanatory or independent variable

β₁, β₂, ---- β_n = the slope of coefficient of the parameter estimate

μ = Error or disturbance term

t = time

In relating this to the study

$$RGDP = F(EDS, EDSP \text{ and } ER) \dots \dots \dots (2)$$

Relating it in econometric form and the variable

$$\log GDP = \beta_0 + \beta_1 \log EDS + \beta_2 \log EDSP + \beta_3 \log ER + \mu_t \dots \dots \dots 3.3$$

Where

RGDP = Real Gross Domestic Product

EDS = External Debt Stock

EDSP = External Debt Service Payment

ER = External Reserve

β₀ = Constant/intercept term

β₁ & β₂ = Coefficient of the parameter estimated or the slope

μ = Error or disturbance term

t = time period

Apriori Expectation: It is expected that β₁, β₂ > 0

3.4 Description of Variables in the Model

Real Gross Domestic Product: This is a measure that reflects the value of goods and services produced in a given year. It is used to capture economic growth in this study because it is adjusted for inflation and as such provides a more accurate figure.

External Debt Stock: This is the amount at which the debt was contracted and it is used as a proxy for capturing external debt burden.

External Debt Service Payments: This is the amount used in repaying the external debt. It is also used as a proxy for capturing external debt burden.

Real Gross Domestic Product (RGDP), External Debt Stock (EDS) and External Debt Service Payment (DSP) were logged due to the large nature of their values. Exchange Rate (EXR) was not logged because it is a rate.

External Reserve:

External reserves (also called **forex reserves** or **FX reserves**) is money or other assets held by a central bank or other monetary authority so that it can pay if need be its liabilities, such as the currency issued by the central bank, as well as the various bank reserves deposited with the central bank by the government and other financial institutions.

DATA PRESENTATION, ANALYSIS AND RESULT

4.1 Data Analysis

Data for the study is as presented in Appendix

4.2 Data Analysis

Data were analysed using the Ordinary Least Square

Test of Hypothesis One

Restatement of Hypothesis One

H₀: External debt stock does not have a positive and significant effect on the Real Gross Domestic Product.

H₁: External debt stock have a positive and significant effect on the Real Gross Domestic Product.

Table 4.1: Ordinary Least Square Regression Result

Dependent Variable: RGDP

Method: Least Squares

Date: 12/1/17 Time: 23:45

Sample: 2007 2016

Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23384.69	4948.534	4.725579	0.0000
EDS	-4.20E-07	1.87E-07	-2.250363	0.0317
EDSP	-2.05E-06	1.31E-06	-1.557425	0.1295
ER	-3.05E-05	1.42E-08	-1.354183	0.1295
R-squared	0.204238	Mean dependent var		11000.99
Adjusted R-squared	0.152898	S.D. dependent var		14438.25
S.E. of regression	13288.70	Akaike info criterion		21.91131
Sum squared resid	5.47E+09	Schwarz criterion		22.04599
Log likelihood	-369.4923	Hannan-Quinn criter.		21.95724
F-statistic	3.978181	Durbin-Watson stat		0.277342
Prob(F-statistic)	0.028983			

Source: Computer OutputData using E-views 9, 2017

Table 4.1 shows that EDS ratio to GDP coefficient of -4.2007 suggests that a percentage increase in EDS ratio to GDP resulted in -4.2007 percent increase in gross domestic product growth rate, a proxy for economic growth within the period covered by the study. The multiple coefficient of determination (R^2) is approximately 0.20, that is, the explanatory variables explained about 20% of the total variation in the dependent variable. We can say that the model is well fitted. Also, the adjusted R^2 is about 0.152898 that is, about 15% variation in the regress and is explained by the regressors. The critical value of F-distribution at 5% level of significance and 26 degree of freedom, ie, $f(4,26)$, is 2.74. F- statistics calculated as divulged in table 4.4 for model 2 is 8.54. The value is greater than tabulated F-statistics of 3.98, and by implication, the models is statistically significant and has a goodness of fit. Furthermore, the probability of the F - statistics is 0.028983. The value is less than 0.05 (5% level of significance). The calculated Durbin Watson (d^*) statistic for model 2 is 2.079460. The tabulated Durbin Watson for lower limit (d_L) and upper limit (d_U) are 1.06 and 1.76 respectively. These values are lesser than calculated Durbin Watson (d^*). The calculated Durbin Watson of 2.079460 implies that there is no autocorrelation between gross domestic product growth rate and financial deepening proxies.

The regression output in table 4.4 as illustrated showed that external debt stock had a negative and significant effect on the real gross domestic product.

Tests of Hypothesis Two

Restatement of Hypothesis Two

H₀: External debt service payments do not have a positive and significant effect on the Exchange Rate (EXCHR).

H₁: External debt service payments have a positive and significant effect on the Exchange Rate (EXCHR).

Table 4.2: Ordinary Least Square Regression Result

Dependent Variable: EXCHR
 Method: Least Squares
 Date: 12/1/17 Time: 11:54
 Sample: 2007 2016
 Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	91.18866	23.42188	3.893311	0.0005
EDSP	-4.30E-09	6.22E-09	-0.691173	0.4946
EDS	-9.79E-10	8.83E-10	-1.108566	0.2761
ER	-7.35E-10	4.62E-11	-3.823413	0.2043
R-squared	0.055135	Mean dependent var		63.30954
Adjusted R-squared	-0.005824	S.D. dependent var		62.71430
S.E. of regression	62.89665	Akaike info criterion		11.20496
Sum squared resid	122635.7	Schwarz criterion		11.33964
Log likelihood	-187.4843	Hannan-Quinn criter.		11.25089
F-statistic	0.904464	Durbin-Watson stat		0.087083
Prob(F-statistic)	0.415173			

Table 4.2 indicates that EDS ratio to exchange rate coefficient of -9.79 suggests that a percentage increase in EDS ratio to GDP resulted in -9.79 percent increase in exchange rate, a proxy for economic growth within the period covered by the study. The multiple coefficient of determination (R²) is approximately 0.055, that is, the explanatory variables explained about 50% of the total variation in the dependent variable. We can say that the model is well fitted. Also, the adjusted R² is about -0.0058 that is, about 5% variation in the regress and is explained by the regressors. The critical value of F-distribution at 5% level of significance and 26 degree of freedom, ie, f(4,26), is 2.74. F- statistics calculated as divulged in table 4.5 for model 2 is 8.54. The value is greater than tabulated F-statistics of 0.90, and by implication, the models is statistically significant and has a goodness of fit. Furthermore, the probability of the F - statistics is 0.415173. The value is more than 0.05 (5% level of significance). The calculated Durbin Watson (d*) statistic for model 2 is 0.087083. The regression output in table 4.5 as illustrated indicated that external debt service payments had a negative and non significant effect on exchange rate.

5.1 Summary of Findings

- i. External debt stock had a negative and significant effect on real gross domestic product with the studied period.
- ii. External debt service payment had a negative and non significant influence on real gross domestic product with the sampled period.

5.2 Conclusion

The study concluded that external debt stock had a negative and significant effect on the Gross Domestic Product. This conclusion was drawn because the coefficient and t-statistics of external debt stock had negative value. It was also concluded that external debt service payments has a negative and non significant effect on real gross domestic product. This was also due to the fact that the coefficient and t-statistics of the variable had negative values.

The study also concluded that none of the variables used met the a priori expectation at levels. Therefore LRGDP, LEDS, LER and LEDSP are integrated of order one. This conclusion was due to the fact that the a priori expectation when using the ADF test is that a variable is stationary when the value of the ADF test statistic is greater than the critical value at 5%.

5.3 Recommendations

In view of the above findings, the following recommendations are given:

- i. 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.
- ii. 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.

5.4 Contribution to Knowledge

This study has also provided the requisite knowledge on the impact of external borrowing where it was stated that external borrowing has a significant impact on the growth and investment of a nation up to a point where high levels of external debt servicing sets in and affects the growth as the focus moves from financing private investment to repayments of debts. It has also expanded literature for related topics. It therefore ensues that this study on the effect of federal government external debts and external reserve on economic growth of Nigeria has provided adequate knowledge for the academic body.

REFERENCES

- Adepoju, A.A, Salau, A.S and Obayelu, A.E (2007). The effects of external debt management on sustainable economic growth and development, *Journal of Social Sciences*, 21 (11), 34 – 38.
- Adesola, W.A. (2009). Debt servicing and economic growth and public investment: The case of Nigeria. *Journal of Social Sciences*. 8(2), 44 – 49.
- Aluko, F. and Arowolo, D. (2010). Foreign aid, the Third World debt crisis and the implication for economic development: The Nigerian experience. *African Journal of Political Science and International Relations*. 4(4), 120-127.
- Audu, I. (2012). The impact of external debt on economic growth and public investment: The case of Nigeria. *African Institute for Economic Development and Planning (IDEP) Dakar Senegal*. <http://www.unidep.org>.
- Anidiobu, G.A., Agu, B.O. & Ezinwa, C.E. (2016). Responsiveness of economic growth to external debt in Nigeria. *Journal of Policy and Development Studies*, 10(3), 1-19.
- Anidiobu, G. A. and Okolie, P. I. P. (2016) Responsiveness of foreign exchange to foreign debt: Evidence from Nigeria *International Journal of Arts, Humanities and Social Sciences*, 1(3), 11-20.
- Arize, A.C, Sang T. & Slottie D.J. (2010). Exchange rate volatility and foreign trade: Evidence from thirteen LDCS, *Journal of Business and Economic Statistics*. 18(1): 10-17.
- Atique, R. & Malik, K. (2012). Impact of domestic and external debts on economic growth of Pakistan, *World Applied Science Journal*. 20(1):120-129.
- Bamidele, T. B. & Joseph, A. I (2013). Financial crisis and external debt management in Nigeria, *International Journal of Business and Behavioural Sciences*, 3(4): 16-24.
- Bakare, (2010). *Economic development*, eight low prize edition, New Delhi: Pearson Education.
- Eduardo, B. (2009). The effect of external debt on Investment. *European Journal of Accounting Auditing and Finance* 4,(2), pp.33-48.
- Eme, O.A & Johnson A.A. (2012). Effect of exchange rate movement on economic growth in Nigerian, *CBN Journal of Applied Statistics*, 2(2): 1-28.
- Eme, O.A & Olugboyega, O.A (2012). Exchange rate and macroeconomic aggregate in Nigeria, *Journal of Economics and Sustainable Development*, 3(2): 93-102.
- Ezeabasili, V. N. (2006). Nigeria external debt: past, present and future. *The certified National Accountant*, 14(1) 25 – 43.
- 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) May, 1833 -8119.
- Fosu, A.K (2009). The external debt servicing constraint and public expenditure composition: Evidence from African economies. *Journal of Sustainable Development in Africa*, 10(3). 60 – 71.
- Gohar, M., Bhutto N.A and Butt F. (2012). The impact of external debt servicing on the growth of low-income Countries. *European Business Review*. 19(4), 279-291.
- Hameed, A., Ashraf, H. & Chandhary, M. A. (2008). External debt and its impact on economic business growth in Pakistan, *International Research Journal of Finance and Economics*, 12(20), 132 – 140.
- Iya, I. ., Gabdo & Aminu, U. (2013). An empirical investigation into the impact of external debt on economic growth in Nigeria. *International Journal of Current research*.
- Iweala, K. O (2011). External debt and economic growth: Empirical evidence from Pakistan. *International Research Journal of Finance and Economics*. 14(4), 88-97
- Jhingan, M. L. (2004). *Public finance and international trade*. 2nd Edition, Delhi: Vrinda Publications Ltd.
- Matiti, C. (2013). The relationship between public debt and economic growth in Kenya, *International Journal of Social Sciences and Project Planning Management*, 1(1), 65- 86.
- Obansa, S. A., Okoroafor, O.K.D., Aluko, O. O & Millicent, E. (2013). Perceived relationship between exchange rate and economic growth in Nigeria, 1970-2010. *American Journal of Humanities and Social Sciences*, 11(3), 116-124
- Omotoye, O. Richard, Sharma, H.P, Ngassam, C. and Eseonu, M. (2013). Sub-Saharan Africa's debt crisis: Analysis and forecast based on Nigeria's managerial finance. 32(7), 606-620.
- Onyekwelu, L.U., Okoye, E.I. & Ugwuanyi, B.U. (2014). External debts management strategies in developing economies: An impact assessment on selected economic indices of Nigeria(2002-2011). *International*

- Journal of Economics and Finance*; 6(8)137- 152. URL:<http://dx.doi.org/10.5539/ijef.v6n8p137>; doi: 10.5539/ijef.v6n8p137
- Onyekwelu, L.U(2015). Firm foundation on accounting and financial research, Enugu: His Glory Publications
- Osinubi, T.S. and Olaleru, O.E. (2011). Budget deficits, external debt and economic growth in Nigeria. *Applied econometrics and international development*. 6(3), 12 – 19.
- Patillo, L. Ricci and H. Poirson (2012). *Principles of international finance*. Forthright Educational Publishers, Lagos.
- Soludo, C. C. (2013). “The impact of external debt on economic growth: A comparative study of Nigeria and South Africa”. *Journal of Sustainable Development in Africa*. 10(3), 55 – 59.
- Were, M (2011). “The impact of external debt on economic growth in Kenya: An empirical assessment”. *World Institute for Economic Research*. Paper No. 116. World Bank Statistics (WDI 2013 & 2014)

APPENDIX

Data Presentation

Year	EXTR	EDS (₦'M)	EDSP (₦'M)	GDP (₦'M)
2007	51, 333.2	20475927000	8807116000	18564.59473
2008	53, 000.4	3964275000	6710138000	20657.31767
2009	42, 382.5	3747929000	1010498000	24296.32929
2010	32, 339.3	4042772000	412879000	24794.23866
2011	32, 639.8	6765042000	408162000	33984.75413
2012	43, 830.4	7206781000	292018000	37409.86061
2013	42, 847.3	8962799000	351185000	40544.09994
2014	47, 283.3	10058908000	302664000	42396.76571
2015	51, 038.8	13791937000	486424000	48391.27431
2016	53, 193.2	16147201000	491372000	51418.14972

Source: CBN statistical bulletin, 2016