



Effect of External Debt Overhang on the Nigerian Economy

Chinonso Tamunowariye

Department of Economics, Faculty of Social Sciences
Ignatius Ajuru University of Education, Port Harcourt, Nigeria.

Abstract

This study examined empirically the effect of external debt overhang on economic growth in Nigeria from 1981 to 2018. Annual time series data were sourced from secondary sources such as the Central Bank of Nigeria (CBN) statistical bulletin and world development indicators. The study used Gross Domestic Product Growth Rate (GDPG) to proxy economic growth while External Debt Stock (EXDS), External Debt Service Payment (EDSP) and Exchange Rate (EXR) were used as the explanatory variables. The study employed descriptive statistics and Auto Regressive Distributed Lag (ARDL) approach to analyze the data. The results revealed that external debt stock (EXDS) has negative insignificant effect on economic growth (GDPG) in Nigeria within the period under review. External debt service payment (EDSP) exhibits negative and insignificant relationship with economic growth (GDPG) in Nigeria while Exchange rate (EXCR) has positive and insignificant relationship with economic growth (GDPG) in Nigeria within the period of study. The study recommends that External debt stock should be reduced so that its overhang effect (negative impact) on the economy growth will be minimized if not eliminated.

Keywords: External, Debt, Stock, Overhang, Gross Domestic Product, Growth Rate, Economy, Nigeria

Reference to this paper should be made as follows:

Tamunowariye, C. (2020). Effect of external debt overhang on the Nigerian economy. *International Journal of Scientific Research in Education*, 13(3), 412-424.

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INTRODUCTION

Nigeria, like most highly indebted poor countries has low economic growth and low per capita income, with domestic savings insufficient to meet developmental and other national goals (Udeh, Ugwu, & Onwuka, 2016). Nigerian exports were basically primary commodities with export earnings too small to finance imports which are mostly capital intensive (Manufactured) goods which are comparably more expensive (Siddique, Selvanathan & Selvanathan, 2015).

Compounding the problem is Nigeria's drift to mono cultural economy with the discovery of oil. The oil sector generates about 95 percent of foreign exchange earnings and about 80 percent of budgetary revenue. The inability to diversify her revenue sources coupled with corruption and mismanagement compels Nigeria to have inadequate fund for growth and developmental projects such as roads, electricity pipe borne water and so on.

The quest for economic growth and development compelled Nigeria to acquire external debt. The first major external loan of US\$28 million by Nigeria was acquired from World Bank in 1958 to finance railway construction. Ever since, there has been accumulation of loans in Nigeria. The aim of these loans was for various developmental projects but these loans have not yielded results as expected. As the amount of loans increased, Debt Management Office (DMO) was established in October, 2000. Prior to the establishment of DMO, Central Bank of Nigeria (CBN) was saddled with the responsibility of management of national debts. At moment, DMO in collaboration with CBN and Federal Ministry of Finance manage Nigeria's debts.

The problems associated with debt and debt servicing as cited by Sanusi (2003) warns that the rising debt in Nigeria is an impediment to economic growth and development. 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.

Theoretically, external debt is expected to bring about economic growth. Over emphasis on negative impact of debt will cause morbid fear of debt, resulting in debt avoidance when it would have stimulated the economy by bringing in the much needed capital for infrastructural development and investment.

From the foregoing, it is clear that there were divergent views on the impact of external debt on the economy. For instance, Ademola, Olaleye, Olusuyi and Babatunde, (2013), Monogbe (2016), and Udeh, Ugwu, and Onwuka, (2016) have found that external debt positively affected economic growth while Ajayi and Oke (2012), have found external debt to be negatively affecting economic growth. However, there exists a controversy as regards the actual effect of external debt on economic growth in Nigeria. It is against this backdrop that this study sets to empirically provide answers to some pertinent questions like: What is the trend of external debt in Nigeria? Does external debt impacts on Nigeria's economic growth? These questions and more are answered in this study. The paper is organized into five sections. First, is the introduction, following is the literature review and theoretical framework. Third, the method of study and model estimation is discussed. Fourth is the discussion of results, and finally, conclusion and recommendations.

THEORETICAL FRAMEWORK

The Dual Gap Theory

According to Aremu, Abubakar, and Bashorun (2014), the Dual Gap Theory was propounded by Chenery in 1988. The theory assumed that external borrowing becomes a necessity. To Ajayi and Oke (2012), underdeveloped economies face low and weak growth rates because of the inherent nature of under savings which is unable to provide financial support for investment in both private and public sectors of their economies. In other words savings and investment supports and sustains economic growth. Sanusi (2003) opined that economic growth cannot be sustained

and maintained unless the level of capital reaches a certain threshold point. Growth in capital and investment enhanced with foreign loans will stimulate automatic output growth resulting from an increase in savings over time. The foregoing illustrates the concept of the dual gap theory.

Thus, external borrowing becomes a necessity. The most important consideration in contracting external debt is a simple and direct one; signing up for debt from abroad only when the funds can generate higher returns than the cost of funds when invested.

The Debt Overhang Theory

The debt overhang theory was developed by Myers (1977). Debt overhang is the condition of an organization (for example, a business, government, or family) that has existing debt so great that it cannot easily borrow more money, even when that new borrowing is actually a good investment that would more than pay for itself. The literature field of economic growth, external borrowing is awash with the perceived negative relationship between foreign debt and investment which consequently results into lower capital formation. Krugman (1988) defines this negative relationship as “debt overhang” where the potentials of repayment of outstanding facilities fall lower than the signed value. The study gave a straight forward definition of the problem of debt overhang as being the anticipated current value of any potential resource allocation that is not up to its outstanding loan. Several scholars have supported the theoretical case for debt overhang, some of the studies include Krugman (1988); Saunsi (2003). Others like Elbadawi, Ndulu, and Ndung’u (1997) reaffirmed this by coming up with ample proof that backs the debt overhang phenomenon.

In those economies with heavy indebtedness debt overhang is considered a leading cause of distortion and slowing down of economic growth. Economic growth slows down because these countries lose their pull on private investors. Additionally, servicing of debts exhausts up so much of the indebted country’s revenue to the extent that the potential of returning to growth paths is abridged. They suggested that even if structural adjustment programs are put in place by governments of these countries, adverse effects can still be felt on development of general economic performance. It should however be noted that debt overhang does not occur only when a country accumulates too much debt, it can also arise when country’s circumstances change, making it difficult to manage and discharge its stocks of debts. Such conditions may emerge because of adverse economic shocks or poor economic policies.

Growth-Cum-Debt model

The Debt-cum-growth model was developed by Barbara Fritz. This model considers the debt capacity in terms of the benefits and costs of borrowing in the process of economic growth. The original non-optimizing approach was advanced in the framework of Debt-cum-growth literature, in which emphasis has mainly been on foreign borrowing for investment purposes, i.e. for filling the gap between domestic investment and saving. The Debt-cum-Growth Model considers debt capacity in terms of the benefit and cost of borrowing in the process of economic growth. The basic argument is that a country will maintain its capacity to service debt provided that additions to its debt overtime contribute (sufficiently) to growth. A ‘debt’ cycle is proposed, in which the behavior of capital flows may change over a number of stages which are closely linked to the course of economic growth. The merit of the debt cum-growth mode lies in its summary of the complexities of the debt growth mechanics into a simple and readily

understandable insight, namely that any debt strategy will only work, ultimately, if there is sufficient economic growth to support it. However, in terms of analyzing debt capacity in a more specific manner, the Debt-cum-Growth Model framework suffers from a number of conceptual problems relating to its theoretical underpinning and the rigidity of its basic assumptions (Matthew and Mordecai, 2016). A particular weakness is that the model focuses solely on the saving -investment gap. Yet, given that external financing will have been made available in foreign currency and the saving surplus must therefore somehow be converted into foreign exchange. By not considering the performance of the external sector of economy the Debt-cum-Growth Model is silent on this transformation problem.

CONCEPTUAL CLARIFICATION

External Debt

External debt is the portion of a country's debt that is borrowed from foreign lenders through commercial banks, governments, or international financial institutions. If a country cannot repay its external debt, it faces a debt crisis. If a nation fails to repay its external debt, it is said to be in sovereign default. External debt is the total debt which the residents of a country owe to foreign creditors; its complement is internal debt which is owed to domestic lenders. The debtors can be the government, corporations or citizens of that country.

According to Khodaparasti and Mohammadpour (2016), external debt refers to money borrowed from a source outside the country. External debt has to be paid back in the currency in which it is borrowed. External debt can be obtained from foreign commercial banks, international financial institutions like IMF, World Bank, ADB etc. and from the government of foreign nations (Reinhart, Reinhart, & Rogoff, 2012).

External Debt Overhang

Debt overhang refers to a debt burden so large that an entity cannot take on additional debt to finance future projects. This includes entities that are profitable enough to be able to reduce indebtedness over time. A debt overhang serves to dissuade current investment, since all earnings from new projects would only go to existing debt holders, leaving little incentive and ability for the entity to attempt to dig itself out of the hole (Redo, 2018). Debt overhang refers to a debt burden so large that an entity cannot take on additional debt to finance future projects. The burden is so large that all earnings pay off existing debt rather than fund new investment projects, making the potential for defaulting higher. Debt overhangs can lead to underinvestment, which stunts growth, making recovery even more difficult.

When an entity has an excessive amount of debt and cannot borrow more capital, that entity is said to be in a debt overhang (Hwang, Chung, & Wang, 2010). The burden is so large that any and all earnings go directly to pay off existing debt rather than fund new investment projects, making the potential for default higher. In most cases, shareholders may be reluctant to approve new stock issuances because shareholders may be on the hook for losses (Hwang, Chung, & Wang, 2010).

External debt overhang represents a major barrier to the growth of many developing countries. A high debt discourages investors to provide capital and binds the developing countries in a poverty trap (Debt Overhang effect). Several studies have tried to examine the

relationship between external debt and economic growth in countries. The review of literature reveals that there is a divide in literature as regards the actual effect of external debt on economic growth. These studies could be grouped into those that settle for positive effect as well as negative effects. The positive effect advocates are Ademola, Olusuyi, Ibiyemi, and Giwa (2013); Monogbe (2016); Udeh, Ugwu, and Onwuka, (2016); and more while those of the negative effect are Ajayi and Oke (2012); Adegbite, Ayadi, and Felix (2015); and more.

Diamond and He (2011) investigated on a theory of debt maturity: the long and short of debt overhang and posit that debt overhang influences the investment and default decisions of those whose claims are like equity. The study adopted the Ordinary Least Squares (OLS) regression method to analyze the data. Long-term debt causes overhang, because it prevents equity from receiving any payoff from investment when the ex-post payoff is low enough that there is a default. Short-term debt with the possibility of default can impose even greater overhang, simply because there is less uncertainty resolved over the shorter time until it matures, and as a result most part of the initial increase in value (due to investment or bailout to avoid default) will not result in any payoff to equity. Short-term debt shares less risk (which includes both losses and gains) with equity than long-term debt does. As a result, short-term debt then imposes either no overhang (if riskless it leaves all marginal returns to equity) or large overhang (if likely to default, it leaves very little marginal returns to equity).

Ajayi and Oke (2012) examine impact of external debt on economic growth and development of Nigeria using Ordinary Least Squares (OLS) for the analysis. The results of the analysis showed that external debt burden had 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 economy of Nigeria getting depressed. Based on the finding the study suggest that debt service obligation should not be allowed to rise than foreign exchange earnings and that the loan contracted should be invested in profitable venture, which will generate a reasonable amount of money for debt repayment.

Sulaiman and Azeez (2012) investigate the impact of external debt on economic growth of Nigeria from 1970 to 2010. The study used Ordinary Least Squares (OLS), Johansen Co-integration test and Error Correction Method (ECM) to estimate the relationship. The co-integration test showed that a long-run equilibrium relationship exist among the variables. The findings from the error correction method show that external debt has contributed positively to the Nigerian economy. The study recommends that government should ensure economic and political stability and external debt should be acquired largely for economic reasons rather than social or political reasons.

Ekperiware and Oladeji (2012) examine the effect of external debt on economic growth Nigeria from 1980 to 2009. The result of the chow test showed that the 2005 external debt relief caused a structural break in economic growth relationship with external debt in Nigeria. The study further showed that beside the reduction in aids, resources were freed for economic growth projects in health and education sectors. The study therefore recommended toward discretional concessional borrowing and see external debt relief as a good option for poor unsustainable indebted countries as a way of making resources available for economic growth. The real sector should be the focal point where value is created rather than impeding it with mismanagement and servicing debt.

Kobayashi (2013) on a theory of public debt overhang on technology choice and growth, unsustainable debt undermines the credibility of government policy because the government will

do whatever possible to postpone fiscal consolidation, as the incumbent inevitably goes out of power upon implementing fiscal consolidation.

Ademola, Olaleye, Ajayi, and Giwa (2013) investigate the effect of external debt on the performance of the Nigerian economy from 1980 to 2010 using the Ordinary Least Squares (OLS) technique of analysis. The result of the analysis reveals that 12.3 percent changes in economic growth is caused by external debt and prime lending rate. The therefore recommend that government should initiate and develop policies that will address the fundamental causes external debt. Also, there should be political will on the part of government to ensure proper use of borrowing to develop other sectors that are crippling. Conclusively, proper debt payment plan should be formulated and strictly adhered to.

Azeez, Oladapo, and Aluko (2015) assess the significant economic impact of external debt and foreign direct investment on the growth of Nigeria for a period stretching from 1990 to 2013. The model specifies gross domestic product (economic growth) as dependent on outstanding value of external debt and foreign direct investment inflows. Estimating the model using the error correction modelling approach, the findings show that external debt is negatively but insignificantly related to economic growth while foreign direct investment is also negatively but significantly related. Foreign direct investment is indicated to be significant for economic growth; therefore, inflows through foreign direct investment tend to have more impact on the Nigerian economy than inflows from external debt.

Udeh, Ugwu and Onwuka, (2016) investigate the effect of external debt on economic growth in Nigeria from 1980 to 2013. The study employed the Ordinary Least Squares (OLS) method of regression, Co-integration and error correction model to estimate the relationship. The result of the analysis reveals that external debt had a positive relationship with Gross Domestic Product at short run, but a negative relationship at long run. Also, while External Debt Service Payment had negative relationship with Gross Domestic Product, Exchange Rate had a positive relationship with it. The study recommended amongst others, that Debt Management Office should set mechanism in motion to ensure that loans were utilized for purposes for which they were acquired as well as set a ceiling for borrowing for states and federal governments based on well-defined criteria.

Adeniran, Azeez, and Aremu (2016) examine the effect of external debt and economic growth in Nigeria from 1980 to 2014 using the Vector Auto Regressive (VAR) modeling to analyse the data. The empirical findings through the impulse response analysis and variance decomposition have revealed that external debt service payment negatively impacts real GDP per capital growth in Nigeria significantly, signaling the existence of the debt overhang impact on economic growth. Furthermore, the Granger Causality/Wald test revealed a unidirectional causation from real GDP to external debt stock and from external debt service payment to real GDP. It is recommended that external debt should be discouraged for it cannot be relied on by government for the promotion of economic growth because of its retarding influence on growth.

Monogbe (2016) examine the impact of intergenerational effect of foreign borrowed funds on the performance of the Nigerian economy for 33 year spanning from 1981 to 2014. The study employed the Ordinary Least Squares (OLS) method of analysis, cointegration and granger causality test to estimate the model. The study found that MLD, TMS and BLD which are proxy for external debt has positive and significant relationship to economic growth which suggests that using borrowed fund for infrastructural, production and manufacturing project will stimulate economic performance and hence promote economic growth in the economy. The study therefore recommends that when government is increasing her spending through (external debt),

they must be meticulous about the sector of the economy in which such advances is channel towards.

Oti and Odey (2016) analyzed the link between Nigeria's debt burden and development tangle from 1980 to 2014 using the granger causality test to analyze the data. The study found and in the light of the need to encourage and promote economic development, a strategy that exercises tense embargo on fresh loans and advances should be put in place and the government should try by all means to reduce the quantum of public debt as well as its total eradication via debt buy back, total cancelling of the debt or complete repudiating of the debt stock. Policies that will promote increase in the volume of commodities export should be put in place by the government, which will boast earnings from foreign exchange and hence help to eliminate the huge deficit in the revenue account of the federation.

METHODS

Analytical Framework

The theoretical basis for this study is the Growth-Cum-Debt Model. The study adopts the Debt-cum-growth or Growth-cum-debt model because the theory has lay emphasis mainly on foreign borrowing for investment purposes, i.e. for filling the gap between domestic investments and saving.

Hence, the functional relationship will be:

$$\text{GDPG} = f(\text{EXDS}, \text{EDSP}, \text{EXCR})$$

Where;

GDPG = Gross Domestic Product Growth Rate

EXDS = External Debt Stock

EDSP= External Debt Service Payment

EXCR = Exchange Rate

Accordingly, the econometric form of the model is stated as:

$$\text{GDPG}_t = \beta_0 + \beta_1 \text{EXDS}_t + \beta_2 \text{EDSP}_t + \beta_3 \text{EXCR}_t + \mu_t$$

The apriori expectations are stated as:

$$\beta_1 \text{ and } \beta_3 > 0 \text{ while } \beta_2 < 0$$

Data Sets and Estimation Techniques

Data on GDP growth rate, external debt stock, external debt service payment and exchange rate were gathered from various issues of WDI and Central Bank of Nigeria statistical bulletin between the period 1981 and 2018. Thereafter, the data were analyzed using Autoregressive Distributed Lag (ARDL) technique of analysis.

PRESENTATION OF DATA AND ANALYSIS OF RESULTS

The empirical analysis of data in this work was conducted in six phases. It begins with the descriptive statistics analysis of the data and thereafter conducted the unit root test. Furthermore, Bound test for co-integration, the short run and long run estimation of the ARDL and diagnostic tests were conducted.

Descriptive Statistics

The result of the descriptive statistics is presented in Table 1 below.

Table 1: Descriptive Statistics

	GDPG	LOG(EXDS)	LOG(EDSP)	LOG(EXCR)
Mean	3.175088	13.12905	21.37449	3.429504
Median	4.212993	13.35835	21.34557	4.577656
Maximum	15.32916	15.86439	22.89883	5.726587
Minimum	-13.12788	7.754138	20.02139	-0.494296
Std. Dev.	5.538472	1.978975	0.632056	1.981207
Skewness	-0.870060	-1.000422	0.059635	-0.754089
Kurtosis	4.539815	3.394026	3.159634	2.273799
Jarque-Bera	8.548490	6.584509	0.062872	4.436453
Probability	0.013923	0.037170	0.969053	0.108802
Sum	120.6533	498.9039	812.2306	130.3212
Sum Sq. Dev.	1134.963	144.9047	14.78130	145.2318
Observations	38	38	38	38

Source: *Author's Computation (2020)*

From table 1 above, it show that, the standard deviation for GDPG was the most volatile in the series with a value of 5.54 while EDSP was the least volatile variable with a value of 0.63. The calculated values for the skewness statistic for GDPG, EXDS, and EXCR were negatively skewed suggesting that their distributions have a long left tail while EDSP was positively skewed, suggesting that their distributions have a long right tail. Again, the kurtosis statistics of GDPG and EXDS variables were leptokurtic, suggesting that their distributions were peaked relative to normal distribution while EXCR was platy kurtic, meaning that their distributions were flat relative to normal distribution. Based on these observations, it therefore means that there is unit root (non-stationarity) in the series. Thus, estimating these variables at level might not give good results, hence, the need to conduct the unit root test. The unit root test is conducted to test whether or not the variables were stationary. The study adopts the Augmented Dickey Fuller (ADF) unit root tests procedures.

Unit Root Test

The results of the unit root test using the ADF are reported in Table 2. The result of the variables shows that GDPG and EDSP were stationary at level while EXDS and EXCR were stationary at

their 1st difference. This can be seen by comparing the observed values of the ADF test statistics with the critical values of the test statistics at the 5 percent level of significance.

Table 2: Unit Root Test Results

Augmented Dickey Fuller (ADF) Test					
Variables	Level	5% Critical Values	1 st Diff.	5% Critical Values	Status
GDPG)	-4.106177	-2.943427	-	-	I(0)
LOG(EXDS)	-1.664243	-2.945842	-4.654444	-2.945842	I(1)
LOG(EDSP)	-4.068784	-2.943427	-	-	I(0)
LOG(EXCR)	-2.007005	-2.943427	-5.235013	-2.945842	I(1)

Source: *Author's Computation (2020)*

Bound Test Result

Since the series are of different order of integration, that is, I(0) and I(1), we cannot use the Engle-Granger and Johansen cointegration but rather the appropriate test to use is the Bound Cointegration test. The result of the Bound Cointegration test is presented in Table 3 below.

Table 3: ARDL Bound Test Result

F-Statistics	4.633631	
% Critical Levels	Critical Value for Bond Test	
Significance	1(0) Bond	1(1) Bond
10%	2.72	3.77
5%	3.23	4.35
2.5%	3.69	4.89
1%	4.29	5.61

Source: *Author's Computation (2020)*

From table 3 above, the results reveal that the computed F-statistic value of 4.633631 in the ARDL estimated model is greater than the upper critical bound test at 5 percent level. This means that a long run relationship exist between the variables in the model within the period under review.

Short Run Estimation Result

Table 4 shows that the short run estimated dynamic coefficients for the estimated model over the period of study. The result shows that the lagged error correction term ECM (-1) included in this model to capture the long run dynamics between the cointegrating series is rightly signed (i.e. negative) and is significant at 5 percent level. The coefficient indicates adjustment of about 0.68 percent from actual changes in the previous year. This adjustment implies that errors are corrected within one year since that data were annual series. The ECM also reveals a long run relationship between the independent variables (EXDS, EDSP and EXCR) and the response variable (GDPG) in this model. The findings confirmed that a short run relationship exist

between the variables. Furthermore, the result showed that EXDS, EDSP and EXCR at level and lag 2 has an inverse relationship with GDPG while EXCR lag 1 and 3 showed a direct relationship with GDPG in the model.

Table 4: Estimated Short Run Coefficients Using the ARDL Approach

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(EXDS)	-1.100132	1.022945	-1.075455	0.2924
DLOG(EDSP)	-0.252290	0.960922	-0.262550	0.7950
DLOG(EXCR)	-2.393851	2.562690	-0.934117	0.3592
DLOG(EXCR(-1))	3.712008	2.929354	1.267176	0.2168
DLOG(EXCR(-2))	-7.743975	2.889103	-2.680409	0.0128
DLOG(EXCR(-3))	6.338225	2.127057	2.979809	0.0063
ECM (-1)	-0.679184	0.161527	-4.204775	0.0003

R-Square = 0.593849; Adjusted-R-Square = 0.463881;
F-statistic = 4.569185; D.W = 1.971773

Source: *Author's Computation (2020)*

Also, the calculated Adjusted - R^2 is 0.463881, means that about 46 per cent of the total variations in GDPG are caused by the explanatory variables EXDS, EDSP and EXCR. The remaining 54 per cent of variations is caused by exogenous factors to the model but covered by the error term. Also, the F-statistics calculated of 4.569185 is greater than $F_{0.05, v_1, v_2}$ of 2.92. This means that the overall model is statistically significant at 5 per cent level. The value of the D.W is 1.971773. This suggests that there is minimal of serial autocorrelation in the model.

Long Run Estimation Results

Table 5 shows that the long run estimated coefficients for the estimated model over the period of study.

Table 5: Estimated Long Run Coefficients Using the ARDL Approach

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(EXDS)	-1.619785	1.523892	-1.062927	0.2980
LOG(EDSP)	-0.371460	1.413771	-0.262744	0.7949
LOG(EXCR)	1.620393	1.476878	1.097175	0.2830
C	27.333323	30.760651	0.888581	0.3827

Source: *Author's Computation (2020)*

Table 5 shows the estimated coefficients of the long run relationship between the variables in the model. From the result, it shows that EXDS has a negative (-1.619785) relationship with GDPG. This means that a unit increase in EXDS lead to a decrease in GDPG by about 1.62 per cents. This finding does not conform to a priori and EXDS does not impact significantly on GDPG in Nigeria within the period under consideration.

Again, the results indicate that EDSP has a negative (-0.371460) relationship with GDPG. This means that a unit increase in EDSP lead to a decrease in GDPG by about 0.37 per cents. This finding does not conform to a priori and EDSP does not impact significantly on GDPG in Nigeria within the period under consideration.

Also, the results indicate that EXCR has a positive (1.620393) relationship with GDPG. This means that a unit increase in EDSP lead to an increase in GDPG by about 1.62 per cents. This finding does not conform to a priori and EXCR does not impact significantly on GDPG in Nigeria within the period under consideration.

Post Estimation Testing Results

The result of the diagnostic or post estimation test results is presented in Table 5 below. Table 5 shows the Normality test (using Jarque-Bera Statistics), Serial Correlation test (using Breusch-Godfrey Serial Correlation LM Test), and Heteroscedasticity test (using Breusch-Pagan-Godfrey Test). The study reveals that the model passes the entire post estimation test as presented in Table 5 below.

Table 5: Post Estimation Test Results

Test	Result	Prob.
Normality Test	1.030236	0.5974
Breusch-Godfrey Serial Correlation LM Test	0.037897	0.8473
Heteroskedasticity Test	1.631850	0.1659

Source: *Author's Computation (2019)*

CONCLUSION AND RECOMMENDATIONS

This study investigated empirically the effect of external debt overhang on economic growth in Nigeria from 1981 to 2018. The study employed descriptive statistics, and ARDL modeling technique for the analysis. Data for the empirical analysis were sourced from secondary sources like WDI (2019) and CBN Statistical Bulletin (2018). The result of the data analysis showed that external debt stock (EXDS) has a negative insignificant effect on economic growth (GDPG) in Nigeria within the period under review. External debt service payment (EDPS) has a negative and an insignificant relationship with economic growth (GDPG) in Nigeria while Exchange rate (EXR) has a positive insignificant relationship with economic growth (GDPG) in Nigeria within the period of study. In light of the above findings, the paper recommends as follows that:

- We thereby recommend that the foreign debt funds should be invested in productive ventures (sector of the economy) that can guarantee high marginal returns on investment. Investment that can generate high returns capable of servicing, repaying the external debt and still enhancing domestic productivity. This will help to reduce the over-hang effect.
- Government should pursue other areas of financing the economy rather than external borrowing such as Concession by foreign governments and financial institutions.
- Since external debts are meant to boost the economic growth and development of the debtor country and improve the standard of living of the citizenry, as such Nigerian

government should ensure that debts incurred are channel towards productive uses and sourcing external debts should be considered as a means of long run development not just for solving short run problems.

- The Debt Management Office should strengthen their plans and ensure that external loans be taken only if needed in critical capital areas that must be strictly monitored.

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