Acta Universitatis Danubius
ŒCONOMICA

The Impact of Debt Service in Stimulating Economic Growth in Nigeria: Mediating on its Role on Public Sector Financial Management

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Abstract: The study examined debt service and its impact on economic growth of the country. It specifically examined the impact of debt servicing on economic using its role on public sector financial management as a mediating factor. The study predicted on dependency theory, Keynesian theory and neoclassic theory. Secondary data source was explored in presenting the facts of the situation. The secondary data were obtained from the debt management office which covered the period of 30 years spanning from 1990-2020. Data collated were analyzed using both descriptive and covariance estimate method of analysis. Descriptive analysis conducted in the study include the mean, standard deviation, Kurtosis, and Jarque-Bera statistics of each variable. The findings revealed among other things that; there was presence of co-integration (long-run relationship) among the dependent and all the explanatory variables which is a clear indication that working debt servicing has positive and significant impact on economic growth of the country both in short and long run if properly managed. It was concluded that debt servicing has significant impact on the economic growth due to his positive relationship with gross domestic product, while exchange rate reflected a negative significant relation to Gross domestic product. This study recommends among others that government should ensure that any debt both internal and external debt should be deal that will open Nigeria to greater trade and investment and can stimulate the economic growth of the country.

Keywords: Debt Service; Internal Debt; External Debt; Economic Growth

JEL Classification: B26

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1. Introduction

Most of the developing countries fall back on internal and external borrowings of funds to finance their various governmental projects due to insufficient or inadequacy financial resources in their respective economies. The provision of social and infrastructural facilities for the improvement of standard of living of citizens in developing among factors which include availability of financial resources, good governance, political will, external loan accessibility, interest rate on loanable fund and others too numerous to mention (Adepoju, Salawu & Obayelu, 2007). Weak economies due to low revenue generation which led to the inability to meet their expenses and have to secure loans from International financial institutions or have to issue bonds and treasury bills to their citizens domestically. International Financial Institutions like World Bank, International Monetary Fund, Asian Development Bank and International Bank for Reconstruction and Development are the lending donor agencies. They give loan on hard and soft conditions depending upon the credit rating of the country (Benedict, Rina & Toan, 2003).

The collection of principal repayments and interest to be paid in currency, goods or services on long term debt and short-term debt makes reference to debt servicing. This is the repayment by a country that owes the principal and interest on a loan outstanding at maturity. In Nigeria, debt servicing has jeopardized the country's economic growth and development. This weighs heavily on the economy, with consequences such as high inflation, unemployment, the majority of the population living under the poverty line and corruption (Ayadi, 2008).

The above negative implications notwithstanding, nations still borrow and service their loans because they cannot furnish all that they need and the operations of government must be taken out with finances. The concern therefore is on how these debts are managed and put into proper use in order to have return on the investment which will be plunged into the economy for further growth. (Ayadi, 2008).

According to Adesola, (2009) Considering the huge amount of money earmarked for servicing Nigeria’s debt profile, there is no appreciable proof of reduction in the magnitude of debt owed different financial institutions at home and abroad. This in no small measure has been retarding economic growth and is believed to be affecting the economic growth of the nation. This assumption therefore is what this study seeks to find out and affirm the degree of debt servicing in Nigeria, the relationship between debt servicing and economic growth in Nigeria and the extent to which debt service has affected economic growth in Nigeria.

Base on Alfredo and Franciso (2005) submission, past and present administrations over the years in Nigeria have obtained various soft and hard loans from International Financial Institutions and domestic sources to finance developmental projects it is worth mentioning that successive governments in Nigeria have also spent enormous

amount of fund to service both internal debt and external debt taken. According to Central Bank of Nigeria Statistical Bulletin for 2016, total debt service payment figure was #1. 03 billion in 1981 and rose to #1. 61 billion in 1985. In 1990, debt service payment figure increased astronomically to #23. 82 billion. The figure stood at #51. 06 billion in 1995. In 2000, the figure rose to #131. 05 billion while it was #393. 96 billion in 2005. In 2010, debt service payment figure was #415. 66 billion while it stood at #1, 060. 38 billion in 2015. In 2016, debt service payment figure amounted to #1, 584. 11 billion. Nigeria's Total Debt Stock (Foreign & Domestic), as at June 2020 stood at N31. 01 trillion ($85. 9 billion)- 8. 31% increase when compared with N28. 63 trillion ($79. 3 billion) recorded in March 2020. This was disclosed in the Nigeria public debt report, recently released by the Debt Management Office (DMO).

It should be noted that despite the colossal amount of loans taken from both internal and external sources by successive governments in Nigeria over the years and enormous debt service payments made, the magnitude of their impact on economic growth provision or delivery is uninvestigated. This study is undertaken to provide answers to the following questions: What is the relationship between debt service and economic growth in Nigeria? Does debt service exert a statistically significant positive or negative correlation with economic growth in Nigeria?

The outcome of this study will be of great interest to economic planners because it will enable them to evaluate the extent to which the funds expended for debt servicing would have helped to boost the economy. The budget implementation and monitoring agencies will also find the work useful since it will reveal whether the funds earmarked for debt servicing are actually being transmitted for the intended purpose even the alternative uses of such funds.

2. Related Conceptual Review

2.1.1. Debt Servicing

Chinaemerem and Anayochukwu, (2013) defined debt servicing as the regular payment of installments of loans taken by a country from domestic and external sources. An installment includes interest on debt and a part of the principal. For servicing debt, a country or corporate organization should have those timely cash flows. If a country is unable to honor its debt service obligations in the absence of required funds, the country is said to be unable to service her debt. This variable is expected to be inversely related with economic growth provision. This is because the higher the amount of money required to service existing domestic and foreign debts, the lesser would be the amount of fund available for provision of qualitative and quantitative economic growth.

Debt servicing is defined by Adesola, (2009) as the cash that is required for a particular time period to cover the repayment of interest and principal on a debt. He further noted that debt servicing results to acute decline in the standard of living, gross social and economic overhead depreciation, high external dependence, currency depreciation, balance of payment disequilibria, exchange rate depreciation and rising inflationary rate.

2.1.2. External Debt: Audu, (2004) define external debt or foreign debt as that part of the total debt that is owed to lenders outside the country. External debt has to be paid back in the currency in which it is borrowed. It can be obtained from foreign commercial banks, international financial institutions like International Monetary Fund, World Bank, African Development Bank and International Bank for Reconstruction and Development. This variable is expected to be positively related with economic growth provision in Nigeria. The higher the amount of external debt, the higher the expenditure that would be earmarked by the government for economic growth provision while the converse is true (Butt, 2009).

2.1.3. Internal Debt- Internal debt alternatively known as domestic debt is the part of the total government debt in a country that is owed to lenders within the country. Internal debt complements external debt. Commercial banks and other financial institutions constitute the sources of funds for the internal debt. The government borrows from the citizens through the issuance of bonds and treasury bills. This variable theoretically should exert positive relationship with economic growth provision. The higher the amount of domestic debt sourced by the government, the greater the expenditure that would be committed to the provision of economic growth for the citizenry while the reverse is true (Choong, Evan, Venus & Puah, 2010).

2.1.4. Exchange Rate – Exchange rate is the price at which the domestic currency is exchanged for foreign currencies. It is the rate at which one currency will be exchanged for another, that is, the value of a country's currency in terms of another. This variable theoretically should exert a negative impact on economic growth provision in Nigeria. The continuous depreciation of the value of naira against foreign currency would have adverse effect on economic growth provision (Mohammed & Ahmed, 2005).

2.1.5. Inflation Rate – This variable theoretically should affect economic growth provision negatively. The higher the inflation rate, the greater the prices of productive resources or equipment needed by the government to provide qualitative and quantitative economic growth in the economy. There would be discouragement or disincentive to invest on the provision of economic growth on the part of the government. (Muhammad & Hira, 2012)

2.1.6. Economic Growth

Economic growth is an increase in the capacity of an economy to produce goods and service, compared from one period of time to another (Hunt, 2007). It is the key policy objective of any government. It is described as the positive and sustained increase in aggregate goods and services produced in an economy within a given time period (Malik, Hayat & Hayat, 2010). When measured with the population of a given country, then economic growth can be stated in terms of per capita income according to which the aggregate production of goods and services in a given year is divided by the population of the country in the given period. Economic growth can also be stated in nominal which include inflation or in real terms which are adjusted for inflation (Sulaiman & Azeez, 2012).

Shabbir, (2014) notes that economic growth, proxies by Gross Domestic Product (GDP) is noticed with the rise in the general standard of living of the populace as measured by per capita national income, making income distribution easier to achieve, enhance time frame of accomplishing the basic needs of man to a substantial majority of the populace. With this in place, there will be development and improvement in the operations of the state which will incidentally provide enhance the standard of living of the citizenry and create an enabling environment for the investment and further development.

However, developing countries like Nigeria are far from enjoying the benefits of economic growth because of the stings and pressures of debt and debt servicing (Karagol, 2002).

2.1.7. Impact of Debt Service on Economic Growth

Several studies have led to analyze the influence of debt service on economic growth and have suggested that debt service has a negative impact on economic growth (Iyoha. 1996; Were. 2001; Karogol, 2002; Muhammad and Hira 2004; Audu 2004; Abdelmawla and Mohammed 2005; Villanueva et al. 2006; Ogunmuyiwa, 2011; Malik et al, 2010; Muhammed et al, 2005; Edo, 2002). It has also been proven that total productive maintenance (including system, equipment, processes, and employees) has a positive relationship with business monetary performance (Banker et al. 2014). However, contrary studies are imposing relationship between debt service and economic growth (Adepoju et al, 2007; Ayadi and Ayadi, 2008; Adesola 2009; Butt and Hector, 2009; Malik et al, 2010; Shabbir, 2009; Chinaemerem et al, 2013; Benedict et al,, 2013). There are also researchers opting for a neutral stance when it comes to the relationship between economic growth and debt service (Muhammed & Hammed, 2005; Audu. 2004; Alfredo et al, 2005; Edo, 2002; Adepoju et al, Nazifi, 2014). Debt services by the government are argued to generate favorable results for the country by increasing infrastructure facilities and provision of basic social amenities and improve the standard of living which collectively improves the economic wellbeing (Sulaiman and Azeez, 2012). A recent study using

a linear model indicates that debt service and economic growth do not have a positive relationship, while the nonlinear model of debt service and economic service have a positive association in the area for future (Tajudeen, 2020).

2.2. Related Theoretical Review

2.2.1. The Dependency Theory

This theory is based on the assumption that resources flow from a "periphery" of poor and underdeveloped states to a "core" of wealthy states thereby enriching the latter at the expense of the farmer. Dependency theory states that the poverty of the countries in the periphery is not because they are not integrated or fully integrated into the world system as is often argued by free market economists, but because of how they are integrated into the system. From this standpoint, a common school of thought is the bourgeoisie scholars. (Ogunmuyiwa, 2011). To them, the state of underdevelopment and the constant dependence of less developed countries on developed countries are as a result of their domestic mishaps. They believe this issue can be explained by their lack of close integration, diffusion of capital, low level of technology, poor institutional framework, bad leadership, corruption, mismanagement, they see the under-development and dependency of the third world countries as being internally inflicted rather than externally afflicted. To this school of thought, a way out of the problem is for third world countries to seek foreign assistance in terms of aid, loan, investment etc. and allow undisrupted operations of the Multinational (Nazifi, 2014).

They are dependent on the developed nations for virtually everything ranging from technology, aid, technical assistance, to culture, etc. the dependent position of most underdeveloped countries has made them vulnerable to the products of the Western metropolitan countries and Breton Woods institutions. The dependency theory gives a detailed account of the factors responsible for the position of the developing countries and their constant and continuous reliance on external aid for their economic growth and development (Villanueva & Mariano, 2006).

2.2.2. Neoclassical Theory

According to the Neoclassical growth theory, debt has a direct effect on economic growth. This is because the amount borrowed, if used optimally, is anticipated to increase investment. As long as countries use the borrowed funds for productive investment and do not suffer from macroeconomic instability, policies that distort economic incentives or sizable adverse shocks, growth should increase and allow for timely debt repayment (Butt, 2009).

On the other hand, the indirect effect of debts is its effect on investment. The transmission mechanism through which debts affect growth is its reduction on the

resources available for investment by debt servicing. Also, public debt can act as an implicit tax on the resources generated by a country and create a burden on future generations which come in the form of a reduced flow of income from a lower stock of private capital. This in turn, may lead to an increase in long-term interest rates, a crowding out of private investments necessary for productivity growth, and a reduction in capital accumulation (Benedict et al, 2003).

2.2.3. Keynesian Theory

Keynes view fiscal policy as the best policy that brings about growth in any economy since it acts in the interest of the general public. According to Keynes, when the government embark on public borrowing to finance its expenditure, unemployed funds are withdrawn from the private pockets such that the consumption level of private individuals remains unaffected. This funds when injected back into the economy by the government leads to a multiple increase in aggregate demand causing an increase in output and employment. Hence, public borrowing can be used to influence macroeconomic performance of the economy (Choong et al, 2010) On the other hand, the indirect effect of public borrowing is its effect on investment. The transmission mechanism through which debts affect growth is its reduction on the resources available for investment by debt servicing. Also, public debt can act as an implicit tax on the resources generated by a country and create a burden on future generations which come in the form of a reduced flow of income from a lower stock of private capital. This in turn, may lead to an increase in long-term interest rates, a crowding out of private investments necessary for productivity growth, and a reduction in capital accumulation (Victo, Joseph & Godoo, 2016).

2.3. Related Empirical Review

Several empirical studies have been conducted on the connection between debt service and economic growth across the world range from developed countries, developing countries. It must be stated that the literature on debt servicing and economic growth is very scanty. Iyoha (1996) conducted a study on the impact of debt on economic growth of Sub-Saharan African countries for the period 1970 to 1994. Time series data and simulation approach were used for the study. Empirical findings revealed that debt service is negatively and significantly related to investment. Were (2001) analyzed the impact of debt service on economic growth in Kenya from 1970 to 1995. The study employed time series data and Ordinary Least Square Regression technique. Empirical findings from the study revealed that there was no adverse relationship between debt service payment and economic growth; Karogol (2002) examined empirically both the short-run and long-run relationships between economic growth and debt service for Turkey over the period 1956 to 1996. The study employed a standard production function model analysis using multivariate co-integration techniques. Empirical findings from the study revealed that debt service payment is negatively related to economic growth in the long run.

Muhammad and Hira (2004) examined the impact analysis of external debt servicing on the aggregate investment of Pakistan. A simple and sophisticated technique of classical econometrics is used for the analysis. Empirical findings revealed that debt servicing practices to multilateral financial creditors and other private creditors has a negative impact on investment while the bilateral creditors. Audu (2004) investigated the impact of external debt on economic growth and public investment in Nigeria from 1970 to 2002. The study was conducted using the cointegration test and error correction method. Empirical findings from the study revealed that debt servicing pressure in the country has had a significant adverse effect on the growth process and past debt accumulation negatively affect public investment. Abdelmawla and Mohammed (2005) examined the relationship between external debt and economic growth in Sudan over the period 1978 and 2001. The study revealed that export earnings have a significant positive impact while external debt and inflation had negative impact on Sudan's economic growth. Villanueva et al. (2006) used standard neo-classical growth model to explore the dynamics of capital accumulation, debt service and economic growth for Philippines over a period of 2000 to 2003. They used goal seek technique to estimate the steady state ratio of external debt to GDP, associated with doubling the capita income. He concluded that higher ratio of change in interest rate spread to change in debt-to-GDP lowers welfare in long run.

On a contrary, Adepoju et al. (2007) analyzed the effects of debt service management on the economic growth of Nigeria for a period of 1962 to 2006 using time-series data of the various bilateral and multi-lateral arrangements. Their study concluded that proper debt service management have positive impact on Nigeria's economic growth. Ayadi and Ayadi (2008) examined the impact of external debt on economic growth in Nigeria and South Africa using neoclassical growth model. The study found a positive impact of debt and its servicing requirement on economic growth in the two countries while external debt contributes positively to growth up to a point after which its contribution becomes negative in Nigeria. Adesola (2009) investigated the effect of external debt service payment practices on sustainable economic growth and development in Nigerian from 1981 to 2004. The study used Ordinary Least Square estimating technique for the analysis. Empirical findings from the study revealed that debt service payment to foreign creditors exerted positive impact on sustainable economic growth and development. Butts and Hector (2009) empirically investigated the effect of external debt service payment practices on the economic growth of Nigeria. Ordinary Least Square method of multiple regressions 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 to 2004. The study showed 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 shows a positive significant relation to GDP and GFCF. Malik et al. (2010) investigated the relationship between external debt and economic growth in Pakistan over the period 1972 to 2005 employing time series econometric technique. Their result reveals that external debt is positively and significantly related to economic growth. The evidence suggests that increase in external debt would lead to decline in economic growth.

However, grounded in the above literature review, it is clear that none of these studies has taken how the viability of debt service influence economic growth in Nigeria using the theoretical framework of Keynesian and Neoclassic theory which offers the potential to explore debt servicing. Therefore, this study fills the gap and adds to the existing knowledge of dependency theory as suggested by a recently published overview of the theoretical framework by Freeman et al. (2020) that debt service aspects of Keynesian and Neoclassical theory need to be developed and considered for analysis which can lead to exploring and improving economic growth of the country

3. Methodology

An empirical study is used to determine the long run relationship between debt service and economic growth in Nigeria using public sector financial management as mediating factor. Within the scope of this article, the researchers perform the regression by using a linear model. To accomplish the purpose of the study, a time series secondary data set ranging from 1990-2020 was employed by the authors and collected from the Central Bank of Nigeria's Statistical Bulletin for 2020 and National Debt Management Office for the period 1990 and 2020 to assess the relationship between dependent and independent variables. Data are analyzed, explained and presented by using descriptive statistics inferential statistics such as regression, correlation. The empirical results showed that debt service have long run relationship with economic growth in Nigeria. The following model is developed based on previous literature:

3.1. Model Specification

For empirical analysis purpose, data for this research work are secondary data obtained from the Central Bank of Nigeria's Statistical Bulletin for 2020 and National Debt Management Office for the period 1990 and 2020. The mathematical representation of the variables identified from this model is presented as follows:

$$Y_{lt} = \alpha_{it} + \beta_1 EDS_{lt} + \beta_2 IDS_{lt} + \beta_3 EXGR_{lt} + \beta_4 INR_{lt} + \varepsilon_{it} \quad (1)$$

where Y Represent dependent variables (Gross Domestic Product) and β_1- β_4 are the coefficient for independent variables

$$GDP = f(EDS, IDS, EXGR, INFR) \quad (2)$$

α= the constant term

GDP = Gross Domestic Product i. e a proxy to Economic Growth

EDS = External Debt Service

IDS = Internal Debt Service

EXGR= Exchange Rate

INFR = Inflation Rate

ε=Stochastic Error Term

4. Data Analysis and Results

4.1. Descriptive Statistics and Covariance Estimate

The descriptive statistics on Table 1 showed that the average values of the gross domestic product (GDP), Exchange Rate (EXR), Inflation Rate (INFR), Internal Debt Service (IDS), London club debt services (LCD), Paris Debt Service (PCD), and are 12. 85293, 9. 785313, 8. 528621, 10. 37841, 10. 42563 and 12, 10825. The standard deviation shows that GDP is the most volatile variables with 2. 544732 respectively while Inflation Rate (INFR) is the least volatile of the variables with 1. 36073. Furthermore, the table revealed that the skewness statistics of all the variables are negatively skewed. The Kurtosis statistics revealed that Exchange Rate (EXCR) is leptokurtic, which implies that the distributions are peaked relative to normal distribution, while other variables are mesokurtic, implying that the variables have normal distribution that is the distribution of the variables is bell shaped. Lastly, the Jarque-Bera statistic for the null hypothesis of normal distribution for all the variables expect Gross Domestic Product (GDP) cannot be rejected at 5% significant level as they are not significant at 5% confidence level.

Table 1. Descriptive Statistics Table

Variables	LOG(GDP)	LOG(EXR)	LOG(INFR)	LOG(IDS)	LOG(LCD)	LOG(PCD)
Mean	12. 85293	9. 785313	8. 528621	10. 37841	10. 42563	12. 10825
Std. Dev.	2. 544732	1. 782807	1. 36073	1. 917977	1. 267604	1. 985395
Skewness	-0. 29454	-0. 806516	-0. 202046	-0. 317718	-0. 026166	-0. 130941
Kurtosis	1. 797364	2. 253438	1. 630331	1. 966283	1. 828757	2. 142743
Jarque-Bera	2. 092252	3. 685764	2. 379165	1. 717739	1. 60364	0. 937382
Probability	0. 351296	0. 15836	0. 304348	0. 423641	0. 448512	0. 625821
Observations	30	30	30	20	30	30

Source: Author's Computation (2021)

4.2. Unit Root Test

This study adopted Augmented Dickey-Fuller test to investigate the stationarity of the variables. The results of the unit root test presented in Table 3 showed that all

the variables were stationary at the first difference except inflation rate which was stationary at level. Based on the mix order of integration in the result this study will use Auto-regressive Distributed Lag Bound co-integration technique because it is the estimation technique that accommodates mixed order of integration.

Table 2. Augmented Dickey-Fuller test

Variables	Level	After Differencing	Status
LOG(EXR)	-2. 469	-4. 726	I(1)
LOG(GDP)	-1. 707	-5. 625	I(1)
LOG(INFR)	-2. 809	-6. 539	I(0)
LOG(LDS)	-2. 348	-4. 928	I(1)
LOG(LCD)	-2. 244	-4. 729	I(1)
LOG(PCD)	-2. 285	-5. 059	I(1)

Source: Author's computation (2021)

4.3. Co-integration Estimate

Table 3 below displayed the Bound Co-integration test and it revealed that the value of the F-statistics which is 92. 8248is greater than both the upper and lower bound critical value at 5%, which implies that there is presence of co-integration among the variables in the model.

Table 3. ARDL Bound Co-integration Test

Estimated Model	**F-Statistics**	
92. 8248		
Critical Values	**Lower Bound**	**Upper Bound**
1%	3. 06	4. 15
5%	2. 39	3. 38

Source: Author's Computation (2021)

4.4. Regression Estimates on Debt Servicing and Economic Growth in Nigeria

Table 5 below showed the ARDLECM and it revealed that Exchange Rate also had a negative and significant impact on gross domestic product in the country. Exchange rate is one of the most important determinants of a country's relative level of economic growth. A higher valued currency makes a country's import less expensive and exports more expensive in the foreign market as this is confirm to the *apriori* expectation.

Also, the result revealed that Inflation Rate (INFR) had a positive impact on gross domestic product in Nigeria. This is in tandem to the findings of Nazifi, (2014) who found a positive impact.

Furthermore, the result showed that Internal Debt Service had a significant and positive impact on gross domestic product. This implies that if domestic debts are well managed and the money is channel to productive fiscal output it will definitely boost the economic situation of the country. This conform to the *apriori* expectation and in tandem with the findings of Tajudeen, (2020).

London club debt service has a positive significant impact on economic growth of the country. This implies that if external debt service are properly managed in the country it will improve the level of the economy positively. These findings conform to the *apriori* expectation and in tandem with the study of Chinaemerem et al. (2013).

In addition, the table below displayed the Error Correction Mechanism results which revealed the level of adjustment within the model. The result showed that the ECM term is negative and significant at 5% confidence level. The coefficient which is -0. 016 indicates that 1. 6 percent of disequilibrium in the previous year in gross domestic product is been corrected by London club debt service (LCD), Paris club debt service (PCD), Local Debt Service (LDS), Exchange Rate (EXTR) and Inflation Rate (INFR). The ECM result also revealed the speed at which the model adjust back to equilibrium.

Lastly, the coefficient of multiple determinations (R-squared) revealed that 99. 9 per cent of variation in gross domestic product is jointly explained by the independent variables while the remaining0. 01 per cent of the variations in the gross domestic product is explained by variables not included in the model. This implies that the variables employed in the model are suitable for the analysis.

Table 4. ARDLECM Regression

Variables	Coefficients	Std. Error	t-Statistics	Prob.
DLOG(EXR)	-4. 593	0. 129	-35. 359	0. 001
DLOG(INFR)	1. 984	0. 052	38. 491	0. 002
DLOG(LDS)	4. 762	0. 275	17. 324	0. 004
DLOG(PCD)	-0. 717	0. 232	-3. 089	0. 054
DLOG(LCD)	0. 916	0. 066	13. 910	0. 008
Coint-Eq(-1)*	-0. 016	0. 004	-44. 151	0. 001
R-squared: 0. 999			**Adjusted R-Squared**: 0. 998	
Log likelihood: 41. 5786			**Durbin-Watson Stat.** 1. 661	

Source: Author's Computation (2021)

4.5. Diagnostics Tests

Diagnostics tests are conducted to determine the appropriateness and robustness of the estimate. This study conducted Breuch-Godfrey Serial Correlation LM and heteroskedasticity ARCH tests. The results of the normality test indicated that the Jarque-Bera probability value was greater than 0. 05 confidence level indicating that the residuals from model were normally distributed. Also, Breusch-Godfrey Serial heteroskedasticity ARCH tests showed that the residuals are Homoskedasticity. Furthermore, Breuch-Godfrey Serial Correlation LM revealed that there is no serial correlation in the estimates. Lastly, Ramsey RESET Test indicated that is appropriate and free from error.

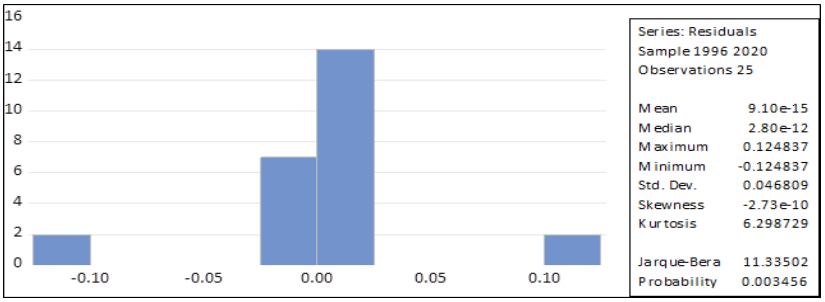

Figure 1. Normality Test

Source: Author's computation (2021)

Table 5. Diagnostics Tests

Heteroskedasticity Test: Breusch-Godfrey Serial	F-Statistics 1. 41	Prob. F(21, 3) 0. 247
Breusch-Godfrey Serial correlation test	F-Statistics 2. 474	Prob. F(2, 1) 0. 410
Ramsey RESET Test	F-Statistics 2. 466	Prob. F(1, 2) 0. 257

Source: Author's computation (2021)

5. Conclusion and Policy Recommendation

This study examined debt service and its impact on economic growth in Nigeria between the periods of 1990 and 2020. Based on the mixed level of stationarity of the variables as revealed by the unit root test, the study made use of auto-regressive distributed lag (ARDL) technique to analysis the data. The bound test showed that the variables co-integrate consequently the study estimated the ARDLECM. The result showed that External Debt Service (EDS), Internal Debt Service (IDS) and Exchange Rate (EXTR) had a negative and significant impact on gross domestic product in Nigeria while Inflation Rate had no significant impact. The findings of this study is in tandem with Keynesia Liquidity preference theory, Chinaemerem, (2013), Altaf & Shah (2017), Afrifa et al. (2014) and Gill et al. (2010). This implies that debt service had positively impact on economic growth of the country Nigeria. It was concluded that debt servicing has significant impact on the economic growth due to his positive relationship with gross domestic product, while exchange rate reflected a negative significant relation to Gross domestic product. This study recommends among others that government should ensure that any debt both internal and external debt should be deal that will open Nigeria to greater trade and investment and can stimulate the economic growth of the country.

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