Public Debts and Nigeria's Economic Growth

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Abstract: *The broad objective of this study was to analyze the impact of public debts on economic growth in Nigeria for the period 1981-2017. The study adopts ex-post facto research design. Multiple regression analysis was utilized in the study in which the ARDL model and Chow Breakpoint test were the methods used in the analysis. Data obtained from the Central Bank of Nigeria (CBN) statistical bulletin, volume 28, 2017 on gross domestic product growth (GDP), public investment (LPUINV), external debt (LEXD), domestic debt (LDDs), total public debt (LTPUBT), government expenditure (LGEX), national savings (LNS), consumer price index (CPI) and interest rate (INR) were analyzed in the study. The results revealed that external debt has a negative and significant impact on GDP while domestic debt has a negative and insignificant effect on GDP. Similarly, government expenditure has a positive and significant impact on GDP, while national savings and consumer price index have a positive and insignificant effect on LGDP. The results also showed that external debt has a negative and significant impact on LPUINV, while LDD has a positive and insignificant effect on LPUINV. More so, the results indicated no evidence of significant structural break between the variables. Thus, the study recommends that the government should discontinue the use of external debt in financing budget deficit in the economy but can intensify efforts to stimulating revenue internally through efficient investments and economic diversification. Based on the results still, the government should not utilize domestic debt in financing fiscal deficit, rather there is a dire need to enhance revenue domestically or reduce its current expenditures in order to effectively finance capital investment projects in Nigeria.*
Keywords: *External Debt, Domestic Debt, Economic Growth, Autoregressive distributed lag model, Chow Breakpoint Test*

I. Introduction

Macroeconomic challenges and poor human conditions facing the developing nations necessitate social and economic development plans, which have resulted in a fiscal deficit due to a low-income base and consequently, lead to public debts (John & Muhammad, 2013). By implication, a high level of public debt outstanding means high debt servicing due to an increase in the budget deficit, financed by raising public borrowings thereby increasing the level of the nation's public debt. The accumulation of such debt may not only entangle the nation in a debt trap but may also limit their sovereign fiscal options, which exposes the country to macroeconomic risks such as compressing the social and development spending. As a result, it would compromise the objectives of social and development plan for which the debt was raised (Fan, 2007).

The role of public debts in promoting economic growth has overtime been studied by several scholars, but recently it has undergone a very notable revival probably fuelled by the substantial weakening of public finances in different economies, occasioned by the 2008 financial crisis (Alejandro & Ileana, 2017). Several works exist on the dichotomy in favor of and against public borrowings as a way of driving the economy. Some of this literature include Ogiemudia and Ajao (2012), Sulaiman and Azeez (2012), Oke and Sulaiman (2012), etc. these scholars conceived foreign debt as a catalyst for economic growth, whereas others such as Ajayi and Oke (2012), Muritala (2012), Uma, Eboh and Obidike (2013), etc., upheld that foreign debt deters economic growth and development of nations. As the war becomes fierce between the scholars, the position of the third-party is likened to those who abstain themselves from identifying with either of the school of thoughts, but conceived that public debt is bad; however, countries cannot avoid it. In light of this, public debt was described as a necessary evil. This implies that borrowing remains good until it reached the point in which it makes the economy worse off.

Soludo (2003) cited in Attapattu and Padmasiri (2018), emphasized that most countries borrow for two broad macroeconomic reasons including to either finance higher investment or higher consumption and to circumvent hard budget constraint. These imply that countries borrow to boost economic growth and reduce poverty level in the economy. Accordingly, Soludo (2003), explained that the macroeconomic basis for which

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public debt is accumulated is geared towards achieving the goals of high investments, and consumption such as health and education or financing deficits in the transitory balance of payments as well as to outwit hard budget constraints. It is also accumulated to lower nominal interest rates abroad and lack of domestic long-term credit. On the other hand, the reason for debt accumulation by the government to financing budget deficits is mainly an attempt to complement the domestic savings to finance government projects and promote the nation's economic growth. In developing countries, where the advancement of the economies depends heavily on the borrowings, debt overhang is inevitable.

Arguably, scholars postulated that the less debt-burdened countries tend to have higher rates of growth than the higher debt-burdened nations. This is because the emerging countries and less developed countries accumulate more debt for the reason of promoting economic growth due to their inability to generate enough resources to bridge budget deficits gap and enhance economic growth. Governments prefer debt accumulation in financing budget deficits due to its anti-inflationary effects unlike imposing taxes or printing new money. Although taxes can be used by the government to finance the budget deficit, it however, tends to distort the structure of relative prices; and public debt, if it exceeds the carrying capacity of the economy, creates problems of international equity among nations (Akram, 2011).

In the view of Tajudeen (2012) cited in Isaac and Rosa (2016), reasonable borrowing level by developing nations is likely to accelerate their economic growth. When the economic growth of the nations improved, the poverty situation in the economy will positively be affected. For growth to be encouraged, nations at early development stages, borrow to compliment the inadequate domestic capital stock and provide more investment opportunities with rates of return higher than that of their counterparts in the developed economies. Thus, if the borrowed funds and ploughed back funds are adequately utilized for productive investments, it results in macroeconomic stability of the economy. Therefore, growth is likely to increase and allow for timely debt repayments.

According to Matiti (2013), the importance of resources for government spending cannot be overemphasized. Most of the public revenue is mainly provided by tax revenue while government borrowings topically bridge the resource gap between the receipt and the expenditure. The government borrowing could either be from the domestic market or abroad. However, in a situation where the domestic markets are undeveloped, foreign sources provide the bulk of financing the resource gap. Matiti (2013), further upheld that the domestic debt could have severe effects on the economy if not adequately balanced with the levels of economic development anticipated in the economy. Hence, domestic debt servicing tend to absorb the greater part of government revenues that would ordinarily be channeled towards developmental projects to accelerate economic growth. This implies that the government is left with fewer resources to spend on development projects. In this view, however, domestic debt servicing is argued to have a more harmful effect on economic growth than the external debt stock due to its shrinking effects (Abbas & Christensen, 2007).

Public debt is classified into domestic debt and external debt. Chowdhury (2001), opined that nations at their early stage of development, suffer from inadequate capital stocks and limited investment opportunities. Therefore, a reasonable level of external debt is required to complement the domestic resources to promote growth via capital accumulation and productivity growth. Thus, government external borrowing based on productive investment leads to macroeconomic stability. Burnside (2000) posited that external debt brings about the capital inflow of funds in the economy and as well as has a positive impact on the national savings, investments, and growth rates.

In Nigeria, developmental projects are substantially executed through external funding. Usually, however, the external funding of development projects by the country takes the form of external loans, which has accumulated continuously over time. For instance, Nigeria's external indebtedness is traceable to the pre-independence period when a loan of US$28 million dollars was contracted from the World Bank in 1958 for railway construction. Between 1960 and 1975, the loans' size of the nation was very small, and was associated with short-term maturity; the concessionary interest rate and the source were often via bilateral or multilateral. For example, the Nigerian external debt level in 1960 stood at US$150 million. By 1978, Nigeria was lured into the international financial centers, which enables it to go into a jumbo loan which was estimated at US$1 billion for the first time, at floating rates and with short-term maturities from private sources (Esther, Folorunso & Felix, 2008). In 1982, the level of Nigeria's external indebtedness rose to US$18.631 billion, representing over 160% of the gross domestic product (GDP) in Nigeria. A situation that had led to a debt crisis, and over time, progressively worsened. As a result, Nigeria adopted IMF-World Bank sponsored Structural Adjustment Programme (SAP) in 1986 with the aim to revamping the economy, and put the nation in the right part to service his debt.

In the words of Adepoju, Salau and Obayelu (2007), developing nations in Africa, Nigeria inclusive internally suffer from inadequate capital formation resulting from the "vicious circle of low-income, low-savings, and low-productivity". This situation, therefore, technically requires financial and managerial support sourced externally to bridge the resource gap. External debt, however, acts as the major constraint to capital

formation in Nigeria. The dynamics and the burden of external debt is an indication that its contribution is very insignificant to financing economic development projects in the economy. Although Nigeria is rich in both natural and human resources, the present day modern technology and development process still requires that foreign capital is needed to complement the capital requirements of the economy for development. It was in an attempt to complement the capital needs that necessitate Nigeria to embark on contracting jumbo foreign loans from 1978 with the aim to promote growth and development; and hence, improve the standard of living of the entire citizens of the country (Obi, 2014). The loans contracted then were mostly sourced from the multilateral institutions such as the International Monetary Fund (IMF), International Development Association (IDA), International Bank for Reconstruction and Development (IBRD), International Fund for Agricultural Development (IFA) and the European Investment Bank (EIB). Other loans were contracted from bilateral organizations such as London Club, Paris Club, and private creditors using promissory notes.

Most importantly, (Obadan, 2004), revealed that these periods coincide with the periods when excess loanable funds in the western world and international commercial banks seeking outlets were invoked, as loans at that periods were pushed to the unsuspecting developing nations with the disguise of promoting their economic development quest and thus, Nigeria obtained a good number of such loans. As such, the debt stock grew in height up to ₦36.8 billion in 2004, and the debt service payments growth had become a wedge on national development. Consequently, it led to the call for debt relief by Nigeria, which was granted to her in 2005.

Prior to the debt relief of 2005, the external debt accumulation of Nigeria rose from ₦2.3 billion to ₦328.5 billion in 1990, respectively. Between 2000 and 2010, the external debt stock of the country were ₦3176.3 billion and ₦896.8 billion, respectively. By 2014, it further rose to ₦1,631 billion, representing about 42% of the total real gross domestic product (RGDP) ratio of the country. These debt levels, however, further compound the tragedy of exposing the economy to external shocks resulting from the external debt overhang thesis (Peter & Ferdinand, 2016). The upsurge in the external debt accumulation of the country was blamed on the persistent hike in the general price level, fiscal imbalances, excessive government spending and inadequate growth in the gross domestic product as well as the decline in public revenue since the commencement of the oil crisis of the early 1980s.

Furthermore, the domestic debt in Nigeria had up till now been managed by the Central Bank of Nigeria (CBN) via issuance of government instruments including the Treasury Certificates; Treasury Bills (NTBs), Treasury Bonds and Federal Government Development Stocks. The strategy of debt management adopted had led to inefficiencies, which resulted in fundamental challenges. In taking these difficulties into consideration, an autonomous debt management office (DMO) was established by the government with the aim of achieving efficient debt management in the economy (Sunday et al., 2016). DMO was established in 2000, charged with the responsibility to coordinate the management of debt for all government levels in the country. While the Federal government guaranteed the external borrowings of the state governments, the domestic borrowings of the states require analysis and confirmation by the Federal Government in line with the guidelines and clear criteria, which illustrates that the states can repay the debt based on their Federation Allocation and internally generated revenue (Sunday et al., 2016).

Generally, Nigeria's debt profile for the past decades has generated much concern among the policy-makers, scholars, and economists given the high level of the public debt without corresponding economic growth in the economy. The most significant and the first rising in the public debt of Nigeria occurred in 1987, with the total public debt being ₦137.58 billion, representing over 96%. Subsequently, the public debt in Nigeria increases unabated such that in 2004, the total public debt was ₦6, 188.03 billion. In 1986 however, the total debt which was largely driven by the domestic debt sharply witnessed a reversal and was dominated by the external debt. Thus, the dominance of the external debt, as well as the continuous rise in total debt, remained upward side until 2005, when debt relief was granted to the country by the Paris Club (Sunday et al., 2016). Consequently, the debt forgiveness saw the total debt as well as the external debt plummeting by 60% and 90.8%, respectively between 2004 and 2006 to ₦2, 533.47 billion and ₦451.5 billion. Incidentally, as external debt declined, domestic debt continued to rise unabated. Hence, in 2011, the total debt that was driven by the domestic debt had exceeded the 2004 level and stood at ₦6,519.65 billion. By 2012, Nigeria's total debt had hit an all-time height of ₦7,564.4 billion. Between 2006 and 2012, the domestic debt had accounted for about 82 to 87% of the total debt (Sunday et al., 2016). However, with the debt relief of 2005, one may have expected that the era of rapid public debt growth was over but the reverse was the case, as the public debt continued to increase unabated. It is against this backdrop, that this research investigates the impact of public debt accumulations on economic growth in Nigeria using a disaggregated approach.

II. Review of Related Literature

2.1. Theoretical Review

Public debt has been described as one of the major indicators of the macroeconomic variables, which forms the image of countries in the international markets. Generally, it is one of the determinants of foreign direct investment flows. Prudent management of public debt increases economic growth and stability via resources mobilization with low borrowing cost and limited financial risk exposure (Christabell, 2013). Public debt can also be described as the total debts of a country, which include debts of governments at all levels such as local, state and national governments, thereby showing how many public expenditures are financed through borrowing instead of taxation (Makau, 2008 cited in Christabel, 2013). Public debt is one of the approaches used in financing government projects, even though the approach is not the only way the government can finance its operations as she can also create money to monetize its debts, and by creating money to finance government operations, the need to pay interest may be removed (Martin, 2009).

According to Kibui (1997), the fundamental factor that causes public debt to rise is over-reliance on external borrowings to augment capital formation in the nation's economy. If the interest payment is high, the deficit on the current account will also be high thereby resulting in the huge debt burden. Isaac and Rosa (2016) also postulated that sub-national governments acquire debt mainly to financing public investment projects that compliment the private investments to translate into improved economic growth, from which the contracted debt becomes sustainable and no risk for their finances.

Nassir and Wani (2016), opined that a debt implies an obligation to pay money, deliver goods, or render service under an express or implied agreement. Hence, they described public debt as the total debts of the nation which include debts of national, state and local governments that revealed how much public spending is financed through borrowing instead of taxation. Obi (2014), argued that most theoretical literature on the nexus between external debt stock and growth-focused largely on the adverse effects of debt overhang. Debt overhang according to Krugman (1998), is defined as a condition by which the expected repayment on external debt falls short of the contractual value of debt. If the level of a nation's debt is expected to exceed the country's ability to repay with some probability in the future, expected debt service is likely to be an increasing function of the output level of the county. The returns from investing in the domestic economy may effectively be taxed away by existing foreign creditors and investment by foreign and domestic investors, and hence, economic growth is discouraged.

2.2. The Ricardo Theory of Public Debt

This theory of public debt was propounded by David Ricardo in 1819. In his Principles, Ricardo developed the theory of public debts by stating that the ordinary and extraordinary spending of government were mainly payments made to sustain unproductive laborers. Therefore, any saving from the government expenses would be included in the income if not to the capital of the contributors. Ricardo in a letter written to McCulloch in 1816 believed that public expenditure was wasteful venture undertaken by the state. Ricardo's theory of public debts was then, based on the fact that the primary burden to the community was derived from the wasteful nature of public expenditure itself rather than from the methods adopted to finance such expenditure (Precious, 2015).

The theory postulated that financing public expenditure should be focused on drawing the funds from the liquid resources of the community. This is because to focus on the economy, does not make any significant difference whether the funds were raised by loans or taxes. Accordingly, Ricardo argument about payments of interest on public debt deals with a transfer of wealth from one pocket to another within the society. Thus, when countries borrow, it is uncertain whether the loan would be used productively or unproductively. If the loan is used productively, it leads to growth, but it is used unproductively, it deters economic growth in the economy (Okoye, Modebe & Evbuomwan, 2013). In conclusion, this theory is relevant to this study as it would help to determine whether actually, the government expenditures in Nigeria have over time been used productively or unproductively according to the theory.

2.3. The Keynesian Theory of Public Debt

The Keynesian theory of public debt was developed partly as a result of the economic crisis created by the great depression of the 1930s in the 19th century. In the theory, constant unbalanced budgets and rapid increase in public debt affect the nations' financial stability. It conceived that huge public debt is a national asset rather than a liability and hence, continuous deficit spending is very essential to the economic growth of nations because, it leads to full employment (Precious, 2015).

The Keynesian theory postulated that the economy tends to equilibrium at full employment, which was an attack on the classical principles of budgeting and public finance. By assumption, Keynes assume that if there were unemployed resources that the private sector could not employ, these resources can be put to use by adopting an unbalanced budget. Accordingly, Keynes upheld that a rise in public debt via the multiple effects

would raise the National Income. It linked public borrowing with deficit financing and urge the government to borrow for all purposes in order to increase effective demand in the economy, which would, in turn, result in increased employment and output.

Lerner (1955), opined that duly importance should be given to certain advantage of public borrowing while considering burden thesis of public debt. The economic effect of public debt is assessed in the consideration of the nature of the expenditure for which debt is incurred and in terms of the income generating potentialities. In modern theory, duly importance was given to the net burden of public debt. Furthermore, the theory postulated that additional flow of income generated by increased debt to finance expenditure leads the payment of taxes to serve the debt. During the period of unemployment, public debt increase contributes to current capital for the nation. More so, the theory stated that public borrowing promotes the development of more and more institutionalized sources of savings like stock, capital market, insurance companies, and Banks.

2.4. Keynesian Growth theory

The Keynesian theory specifically focused on the role of money, the principles of effective demand and on the function of savings as well as the savings transition to investments and multiplication effect. While Harrod started from the accelerator principle, Dommar begun from the multiplication effect. In the end, the two authors came to the same conclusion that the output growth is jointly determined by the national capital-output ratio and national savings ratio. In economic theory, the theory is simply referred to as the Harrod-Domar growth model (Precious, 2015). The model expressed through a mathematical equation, showed the existence of a direct relationship between savings and economic growth. The model is written as $Y= f(k,s)$; Where Y depicts output, k represents a national capital-output ratio and 's' is the national savings ratio.

2.4 Neo-Classical Growth Theory

This theory dated back to 1956, when Robert Solow put forward a formal model which postulated that the key variable in growth is labor productivity (i.e output per worker). For this model, the role of technological change became imperative, and even more important than capital accumulation. The model assumed that output (Y) is produced by employing technology, labor, and physical capital. The model is expressed as $Y= f (A,K,L)$; where Y is the aggregate output, A is the number based on the current state of technology, K is the quantitative measure of the size of the stock of manufactured capital, and L the quantity of labor employed during that period of time. K, A, and L are the only factors of production explicitly included in the model. All factors are required for the production of output, with the exponents in the equation indicating their relative contributions. Increase in output growth results from increases in the factors of production and productivity that increases as a result of technological change, in addition to changes in organization and practices (Precious, 2015).

2.5. Theoretical Framework

This study adopts the neo-classical growth theory as the theoretical framework guiding this research work. The theory postulated that output (Y) is produced by employing technology, labor and physical capital [i.e. $Y= f (A,K,L)$] (Precious, 2015). The theory believed that an increase in the growth rate of output results from increases in the factors of production and productivity that increases as a result of technological change alongside the changes in organization and practices. Thus, an increase in government expenditure could be justified if it results from a rise in education and health services because they are assumed to be the most important investments in human capital. It is against the backdrop that the neo-classical growth theory was adopted considering the fact that public debt if borrowed to finance health, education, and development investments, it is referred as being productive, which can contribute positively to economic growth via increased labor, capital, and technology.

2.6. Empirical Review

Panagiotis (2018), empirically investigated the nexus between public debt and the determinants of economic growth such as private and government consumptions, investment, trade openness, and population growth in Greece through the applications of unit root tests, and auto-regressive distributed lag (ARDL) model. The unit root tests indicated mixed integration of order zero and order one among the variables. The results of the ARDL model revealed a long-run relationship between variables. It also showed that private and government consumption, investment and trade openness had positive effects on economic growth; while government debt and population growth had a negative impact on growth. The study also addresses the break effects issue between government debt and economic growth. The results indicated that the nexus between debt and growth depends on debt breaks. Particularly, at debt levels before 2000, increases in the government debt-to-GDP ratio were associated with insignificant effects on economic growth. However, as the government debt rises after 2000, the effect on economic growth diminishes rapidly and the growth impacts become negative.

Gitana, Agnė, and Aušra (2018), empirically investigated the impact of government spending on economic growth in the European Union (EU) over the period 1995-2015. Descriptive statistics analysis, correlation analysis, and Granger causality test was employed in the analysis. The results indicated that government spending had a significant influence on economic growth in eight EU countries. Alejandro and Ileana (2017), examined the impact of government debt on gross domestic product in 16 Latin American economies including Bolivia, Argentina, Chile, Brazil, Costa Rica, Colombia, Dominican Republic, Mexico, Honduras, Panama, Nicaragua, Peru, Paraguay, Venezuela and Uruguay for the period 1960- 2015 using Two-Stage Least Squares (2-SLS) in the analysis. The variables employed in the analysis include the initial level of GDP per capita, the growth rate of GDP per capita, gross government debt as a share of GDP, investment rate proxied as gross fixed capital formation as a share to GDP and population growth rate. The results indicated that debt has a positive impact on GDP growth but declines to close to zero beyond public debt-to-GDP ratios between 64% and 71%; up to this threshold, additional debt has a stimulating impact on growth.

Nassir and Wani (2016), investigated the relationship between public debt and economic growth in Afghanistan for the period 2008-2012 using analysis of variance (ANOVA). The variables employed in the study include the gross domestic product (GDP), government stock, Advances from Commercial banks and external debt. The results showed that government stock, Advances from Commercial banks and external debt have negative and insignificant influence on the gross domestic product (GDP) in Afghanistan. Thus, the study recommended that the government should develop a framework for recording and monitoring all contingent liabilities and also formulate and implement a policy for the management of the contingent liabilities. More so, it recommended that the government should continue to implement wider economic reform policies that promote investment in Treasury bonds and encourage institutional investors such as pension funds and insurance companies to invest in Treasury bonds. Isaac and Rosa (2016), examined the effect of public debt and public investments on economic growth in Mexico for the period 1993-2012 using dynamic models of panel data and the generalized method of moments in the analysis. The variables used in the study were a nominal budget deficit, public income, public spending, the volume of interest paid, the nominal effective rate of interest, and the total value of domestic public debt. The empirical results showed that public debt has a positive influence on public investment and economic growth in the economy.

Naeem (2015), examined the consequences of public debt for economic growth investment in the Philippines for the period 1975-2010 using the autoregressive distributed lag technique. The results show that public external debt had a negative and significant impact on economic growth and investment, which confirmed the existence of a debt overhang effect. However, the study could not confirm the existence of crowding out hypothesis since debt servicing revealed insignificant relationships with investment and economic growth in the economy. The study also indicated that domestic debt had a negative influence on the investment and positive effect on economic growth. Therefore, the study recommended that for economic growth to be accelerated, the developing countries should adopt those policies that are likely to result in reducing their debt burden, and must be allowed to reach unsustainable level.

Precious (2015), examined the effects of both public external and domestic debt on economic growth in Swaziland for the period 1988-2013 by applying unit root test and ordinary least square (OLS) approach. The variables used in the study were real gross domestic product growth rate, external debt, domestic debt, government expenditure, and inflation rate. The study discovered that external debt had insignificant influence on economic growth in Swaziland, while domestic debt had a positive and significant impact on economic growth. Hence, the study recommended that the government of Swaziland should encourage sustainable external and domestic borrowings and utilize the funds in productive economic activities.

Reza, Michael, and Mona (2014) investigated the nexus between savings and economic growth in Iran over the period 1972-2010 with the application of the stationarity test and autoregressive distributed lag (ARDL) model. The results of the stationarity test indicate mixed order of integration; i.e. order zero and order one. The study showed that savings had a positive and significant impact on total and non-oil economic growth. Both types of economic growth were also found to have a positive and significant impact on savings. Similarly, the results showed that long-run causality exists between savings and economic growth, and between saving and non-oil economic growth, and hence, these relations are bi-directional.

Lucky and Godday (2017), empirically examined the nexus between the public debts structure and the growth performance of the Nigerian economy for the period 1990-2015 using simple and multiple regression analyses. The variables used in the analysis include gross domestic product, domestic debt, external debt, and total debt. The results of the simple regression total public debt have a positive and significant impact on gross domestic product in Nigeria. Similarly, the results of the multiple regression analysis revealed that whereas the external debt is negative and significant to economic growth, the domestic debt has a positive and significant effect on the economic growth in Nigeria. Therefore, the study recommended that Nigeria should pursue domestic debts policies as against its external debts counterpart. Elom-Obed, Odo, Elom, and Anoke (2017), carried out research on the nexus between public debt and economic growth in Nigeria for the period 1980-2015

using cointegration test, Vector Error Correction Model (VECM) and Granger causality test. The variables employed in the investigation were the real gross domestic product, domestic private savings, external debt, and domestic debt. The empirical results revealed that external debt and domestic debt have negative and significant effects on economic growth in Nigeria. More so, the results showed that domestic debt and external debt granger cause real gross domestic product (RGDP) with causality runs from external debt and domestic debt to RGDP.

Stephen and Obah (2017), analyzed the impact of national savings on economic growth in Nigeria over the period 1990-2015 with the applications of descriptive statistics analysis and Ordinary Least Square (OLS). The variables utilized in the investigation were the gross domestic product (GDP) and national savings. The result indicated that national savings had a positive and significant impact on gross domestic product (economic growth) in Nigeria. Abula and Ben (2016), examined the effect of public debt on economic development in Nigeria from 1986 to 2014. Johansen cointegration test, Error Correction Method (ECM) and the Granger Causality test were utilized in the analysis. The variables employed in the study include gross domestic product, external debt stock, domestic debt stock, external debt service payment and domestic debt service payment. The results showed evidence of long-run relationship among the variables. The results of the ECM indicated that external debt servicing and external debt stock have a negative and insignificant impact on economic development in Nigeria while domestic debt stock has a significant influence on economic development. The results also showed that domestic debt service payment has a negative and significant effect on economic development in Nigeria. Therefore, the study recommended that the government should reduce its external debt stock level but should accumulate more domestic debt accumulation as it will contribute significantly to the development of the economy.

Similarly, Okwu, Obiwuru, Obiakor, and Oluwalaiye (2016), investigated the effects of domestic debt on economic growth in Nigeria from 1980 to 2015 through the applications of descriptive statistics, unit root test, cointegration test, and error correction model (ECM) in the analysis. The variables used in the investigation were the real gross domestic product, domestic debt stock, domestic debt service expenditure, and average banks' lending rate. The results indicated evidence of the significant and positive impact of external debt service on economic growth while domestic debt service expenditure had a negative and significant impact on the growth of the economy. On the other hand, the bank's lending rate had a negative and insignificant effect on growth in Nigeria. More so, Igbodika, Jessie and Andabai (2016), investigated empirically the nexus between domestic debt and growth performance of Nigerian economy from 1987 to 2014 through the application of ordinary least square (OLS) technique. Gross domestic product, domestic debt, interest rate, and inflation rate were the variables used in the analysis. The empirical results indicated that the interest rate had a negative and significant effect on the gross product (GDP) in Nigeria. The results also showed that domestic debt had a positive and significant influence on the gross domestic product in Nigeria. Peter and Ferdinand (2016), studied the nexus between debt burden and development tangle in Nigeria for the period 1980-2014 by employing unit root test, cointegration test, and Granger causality test. Real gross domestic product (RGDP), domestic debt, external debt, domestic debt burden, external debt burden, total debt burden, and total debt/GDP ratio were the variables employed in the study. The results of the cointegration indicate evidence of long-run relationship among the variables. More so, the Granger Causality results revealed that various debt stocks granger cause the performance of the growth of the Nigerian economy.

Sunday, Ngozi, Michael, and Ogochukwu (2016) carried out research on the impact of public sector borrowings on interest rates, prices, and output in Nigeria. Vector Autoregressive (VAR), Granger causality test, impulse response, and variance decomposition of the various innovations were engaged in the analysis to study the impact of the variables. The variables specified in the model of the study include real gross domestic product (RGDP), prime lending rate, external debt, domestic debt, and composite consumer price index. The estimation results showed that shock to external debt stock raises the prime lending rate. The results indicated that external and domestic debts had an insignificant impact on the output and general price level. Friday, Fidelis, Udeme and Olumide (2016), assessed the effect of government capital expenditures on economic growth in Nigeria for the period 1970- 2012 by applying stationarity test, cointegration test, and vector error correction model (VECM). Both short and long-run impact of government capital expenditures on economic growth were estimated. Government capital expenditures had differential effects on economic growth. Capital expenditures on agriculture had insignificant influence on growth both in the long and short runs. More so, the results showed that capital expenditures had a positive and significant effect on education. It also revealed that health capital expenditures had a positive impact on economic growth as expenditures on infrastructure also had a positive and significant impact on growth in the economy.

2.7. Gap in Empirical Review

This empirical study is an extension of other studies carried out on the topic of public debt and economic growth across the globe including Nigeria. From the studies reviewed, the study discovered a very huge gap in literature ranging from geography to wrong applications of analytical methods and time scopes. The

studies associated with the geographical or location gaps include Panagiotis (2018), Isaac and Rosa (2016), Naeem (2015), Victor and Christopher (2016), Muhammad, Muhammad and Khadija (2010), etc; most of which were carried out in the developed economies such as Greece, Mexico, Philippines, etc. However, some other studies as reviewed that applied wrong methods of analysis which this study would correct to achieve robust results at the end of this research also include Victor and Christopher (2016), and Shahnawaz, Muhammad and Muhammad (2010) who employed cointegration test and VECM approach instead of ARDL model after achieving mixed order of integration at both level and first differencing.

Others involve Muhammad, Muhammad and Khadija (2010); Lucky and Godday (2017); Igbodika, Jessie and Andabai (2016) who applied OLS in their investigations but failed to test for unit root; Abula and Ben (2016) who utilizes ECM instead of VECM when the study involves multiple regression analysis; Tajudeen (2012) who combined both cointegration test and VAR model instead of ARDL model after achieving mixed order of integration among the variables, etc. Thus, the above gap and the desire to contribute to knowledge in literature motivate for this research.

III. Research Methodology

In order to examine the impact of public debts on economic growth in Nigeria for the period 1981 to 2016, unit root test through the application of the Augmented Dickey-Fuller (ADF) unit root test, autoregressive distributed lag (ARDL) and Chow Structural Breakpoint were analyzed in the study. The unit root test is conducted to examine the order of integration among the series used in the investigation. The ARDL model, on the other hand, is applied to investigate the short-run and long-run coefficients of the variables, while Chow Structural Breakpoint examined the significant structural break between public debts and economic growth in the economy. The variables utilized in the model consists gross domestic product growth (GDP), public investment (PUINV), external debt (EXD), domestic debt (DD), total public debts (TPUBT), government expenditure (GEX), national savings (NS), consumer price index (CPI) and interest rate (INR). Data used in the analysis are obtained from the statistical bulletin of the Central Bank of Nigeria (CBN), volume 28, 2017 publications.

3.1 Model Specification

This model specification follows the theoretical framework of this study (neo-classical growth theory), with modification. The theory assumed that output (Y) is a function of technology, labor, and physical capital. The equation of the neo-classical growth theory is expressed as:

$$Y = f(A, K, L) \qquad\qquad 1$$

Where Y is the aggregate output, A is the number based on the current state of technology, K is the quantitative measure of the size of the stock of manufactured capital, and L is the quantity of labor employed during that period of time (Precious, 2015).

The above model has three important predictions. First, increasing capital relative to labor creates economic growth, since people can be more productive given more capital. Second, poor countries with less capital per person grow faster because each investment in capital produces a higher return than rich countries with little capital. Third, because of diminishing returns to capital, economies will eventually reach a point at which any increase in capital will no longer create economic growth. An increase in government expenditure means an increase in government acquisition of goods and services for current or future use. However, this increase is justified if it emanated from an improvement in health services and education, as they are believed to be the most important investments in human capital. This research adopts this theory, considering the fact that if public debt is borrowed to finance education, health and development investments, it is considered to be productive and expected to positively contribute to economic growth through improved capital, labor, and technology. This will result in an increase in government spending. Then, instead of having the function: $Y = f(A, K, L)$, the model is modified as:

Equation 1:

$$GDP = f(EXD, DD, GEX, NS, CPI) \qquad\qquad 2$$

Where; GDP is the gross domestic product growth, EXD is the external debt, DD is domestic debt, GEX is the government expenditure, NS is the national savings and CPI is the consumer price index.

In linear function, the relationship is specified thus:

$$GDP_t = \varphi_0 + \varphi_1 EXD_t + \varphi_2 DD_t + \varphi_3 GEX_t + \varphi_4 NS_t + \varphi_5 CPI_t + U_t \qquad\qquad 3$$

In log function, it is illustrated as:

$$LGDP_t = \varphi_0 + \varphi_1 LEXD_t + \varphi_2 LDD_t + \varphi_3 LGEX_t + \varphi_4 LNS_t + \varphi_5 CPI_t + U_t \qquad\qquad 4$$

Where; LGDP   is the explained variable; whereas LEXD, LDD, LGEX, LNS, and CPI are the explanatory variables; U_t is the error term; $\varphi_0 =$ constant term; L is the log function, whereas φ_s are the coefficients of the regression equation.

Equation 2:
PUINV = f (EXD, DD, NS, INR)
        5
Where; PUINV is the public investment, EXD is the external debt, DD is domestic debt, NS is the national savings and INR is the interest rate.
In linear function, the relationship is specified thus:
$PUINV_t = \varphi_0 + \varphi_1 EXD_t + \varphi_2 DD_t + \varphi_3 NS_t + \varphi_4 INR_t + U_t$
        6
In log function, it is illustrated as:
$LPUINV_t = \varphi_0 + \varphi_1 LEXD_t + \varphi_2 LDD_t + \varphi_3 LNS_t + \varphi_4 INR_t + U_t$
        7

Where; LPUINV is the dependent variable; whereas LEXD, LDD, LNS, and INR are the explanatory variables; U_t is the error term; $\varphi_0 =$ constant term; L is the log function, whereas φ_s are the coefficients of the regression equation.

Equation 3:
PUINV = f (TPUBT, NS, INR, GEX)
        8
Where; PUINV is the public investment, TPUBT is the total public debts, NS is the national savings and INR is the interest rate.
In linear function, the relationship is specified thus:
$PUINV_t = \varphi_0 + \varphi_1 TPUBT_t + \varphi_2 NS_t + \varphi_3 INR_t + \varphi_4 GEX_t + U_t$
        9
In log function, it is illustrated as:
$LPUINV_t = \varphi_0 + \varphi_1 LTPUBT_t + \varphi_2 LNS_t + \varphi_3 INR_t + \varphi_4 LGEX_t + U_t$
10

Where; LPUINV is the dependent variable; whereas LTPUBT, LNS, INR, LGEX are the explanatory variables; U_t is the error term; $\varphi_0 =$ constant term; L is the log function, whereas φ_s are the regression equation coefficients.

3.1.1 A Priori Expectation
Theoretically, the research expects that external debt, domestic debt, government expenditure, and national savings would have a positive relationship with the gross domestic product (GDP) while inflation rate and interest rate are expected to have a negative relationship with the gross domestic product in Nigeria. More so, external debt, domestic debt, national savings are expected to have a positive effect on public investment while the inflation rate is expected to a negative influence on public investment in the economy.

IV. Empirical Results And Discussion
This stage of the study presents the estimation results and consequently, discusses the results in line with the objectives of the research.

4.1 Unit Root Test
        The unit root test is conducted to examine the order of integration of the variables used in the study through the application of the Augmented Dickey-Fuller (ADF) unit root test. The results of the ADF unit root test are presented in tables 1 and 2 below.

Table 1: ADF Unit Root Test between GDP and Public Debts

Trend and Intercept

Level			First Difference			
Variables	ADF Statistic	5% Critical Value	ADF Statistic	5% Critical Value	Remarks	Rank
LGDP	-0.792308	-2.945842	-3.157453	-2.948404	Stationary	I(1)
LEXD	-2.993751	--2.945842	-4.567700	-2.948404	Stationary	I(0)

	Level		First Difference			
LDD	-1.621270	-2.945842	-4.537783	-2.948404	Stationary	I(1)
LGEX	-0.849119	-2.945842	-7.214707	-2.948404	Stationary	I(1)
LNS	-0.492972	-2.945842	-4.347939	-2.948404	Stationary	I(1)
CPI	-2.377867	-2.858234	-5.754351	-2.948404	Stationary	I(1)

Sources: Researcher's computation from E-view 9

Table 1 above demonstrates the results of the unit root test between gross domestic product (GDP) and its determinants in Nigeria. The results showed that all the variables including LGDP, LDD, LGEX, LNS and CPI except LEXD were non-stationary in level. However, all the variables became stationary after first differencing. These results imply that all the variables used in this study possessed long-run properties after the first differencing. In other words, their mean, variance and covariance are constant over time. This also showed that all the variables became integrated of the same order after first differencing.

Table 2: ADF Unit Root Test between Public Investments and Public Debts

Trend and Intercept

	Level		First Difference			
Variables	**ADF Statistic**	**5% Critical Value**	**ADF Statistic**	**5% Critical Value**	**Remarks**	**Rank**
LPUINV	-1.026295	-2.945842	-6.168753	-2.948404	Stationary	I(1)
LEXD	-2.993751	--2.945842	-4.567700	-2.948404	Stationary	I(0)
LDD	-1.621270	-2.945842	-4.537783	-2.948404	Stationary	I(1)
LTPUBT	-2.561698	-2.945842	-4.359818	-2.948404	Stationary	I(1)
LNS	-0.849119	-2.945842	-7.214707	-2.948404	Stationary	I(1)
INR	-3.236353	-2.945842	-8.222024	-2.948404	Stationary	I(0)

Sources: Researcher's computation from E-view 9

Table 3 above illustrates the results of the unit root test between public investments (PUINV) and its determinants in Nigeria. The results indicated that all the variables including LPUINV, LDD, LTPUBT, and LNS except LEXD and INR were non-stationary in level. However, all the variables became stationary after first differencing. These results imply that all the variables used in the research possessed long-run properties after the first differencing. In other words, their mean, variance and covariance are constant over time
.

4.2 Auto Regressive Distributed Lag (ARDL) Bounds Cointegration Tests

The ARDL Bounds cointegration test is the estimation procedure, which deals with the analysis of the long-run relationship and short-run dynamic interactions among the underlying variables. This method was developed by Pesaran and Shin (1999) and Pesaran, Shin and Smith (2001), mainly to examine the long-run and short-run interactions of the variables under study. ARDL model is applied when there is a mixed order of integration among the variables [i.e. I(1) and I(0)]. This technique ensures unbiased estimation results of the long-run model (Harris & Sollis, 2003). The ARDL results are shown in table 3 below.

Table 3: ARDL Model between LGDP and Public Debts Disaggregated
Dependent Variable: LGDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LGDP(-1)	0.602348	0.102779	5.860603	0.0000
LEXD	-0.069716	0.031626	-2.204362	0.0362
LEXD(-1)	0.074462	0.026502	2.809692	0.0091
LDD	-0.054168	0.109976	-0.492545	0.6263
LDD(-1)	0.168500	0.109692	1.536126	0.1361
LGEX	0.184218	0.065830	2.798386	0.0094
LNS	0.092092	0.059563	1.546121	0.1337
CPI	0.000109	0.000643	0.169410	0.8667
C	1.132546	0.295044	3.838572	0.0007
R-squared	0.999200	Mean dependent var		8.543717
Adjusted R-squared	0.998963	S.D. dependent var		2.260913
F-statistic	4215.147	Durbin-Watson stat		1.971407
Prob(F-statistic)	0.000000			

Sources: Researcher's computation from E-view 9

Estimation model: $LGDP_t = 1.132546 - 0.069716LEXD_t - 0.054168LDD_t + 0.184218LGEX_t + 0.092092LNS_t + 0.000109CPI_t$

Table 3 above illustrates the results of the ARDL model between gross domestic product (LGDP) and public debts in Nigeria. The estimation results revealed that at lag zero, external debt (LEXD) has a negative and significant impact on LGDP while domestic debt (LDD) has a negative and insignificant effect on LGDP. The results also indicated that at lag zero, government expenditure (LGEX) has a positive and significant impact on LGDP, while national savings (LNS) and consumer price index (CPI) have a positive and insignificant effect on LGDP in Nigeria. These claims are evident by the coefficients and the p-values of the corresponding variables. From the results, the coefficients of LEXD, LDD, LGEX, LNS and CPI are -0.069716, -0.054168, 0.184218, 0.092092, and 0.000109, respectively, while their corresponding p-values include 0.0362, 0.6263, 0.0094, 0.1337, and 0.8667, respectively. The results also showed R^2 value of 0.999200, which implies that 99.92% of the variations in LGDP are explained by the explanatory variables. Similarly, the results indicate the F-statistic of 4215.147 and Prob(F-statistic) of 0.000000. The results as well showed a Durbin-Watson stat of 1.971407.

Table 4: ARDL Bounds Test between LGDP and Public Debts Disaggregated

Test Statistic	Value	K		
F-statistic	5.821029	5		
Critical Value Bounds				
Significance	I0 Bound	I1 Bound		
10%	2.26	3.35		
5%	2.62	3.79		
2.5%	2.96	4.18		
1%	3.41	4.68		

Source: Researcher's compilation from E-view 9

Table 8 reveals the results of the ARDL bounds test. From the results, evidence of a long-run relationship is found among the variables under study. This claim is supported by the F-statistic of 5.821029, which is greater than the 5% chosen critical value bounds. Hence, the study concludes that a long-run relationship exists among the variables under

Table 5: ARDL Model between Public Investments and Public Debts

Dependent Variable: LPUINV

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LPUINV(-1)	0.663153	0.115410	5.746077	0.0000
LEXD	-0.005832	0.127907	-0.045599	0.9640
LEXD(-1)	-0.385730	0.167697	-2.300153	0.0313
LEXD(-2)	0.404800	0.173756	2.329695	0.0294
LEXD(-3)	-0.346538	0.162646	-2.130621	0.0445
LEXD(-4)	0.323715	0.108782	2.975825	0.0070
LDD	-0.202475	0.369640	-0.547764	0.5894
LDD(-1)	0.583142	0.338422	1.723121	0.0989
LNS	-0.128408	0.146651	-0.875602	0.3907
INR	0.030887	0.019007	1.624977	0.1184
C	0.009487	0.315277	0.030091	0.9763
R-squared	0.984955	Mean dependent var		5.235353
Adjusted R-squared	0.978116	S.D. dependent var		1.722146
F-statistic	144.0286	Durbin-Watson stat		2.187309
Prob(F-statistic)	0.000000			

Sources: Researcher's computation from E-view 9

Estimation model: $LPUINV_t = 0.009487 - 0.385730LEXD_t + 0.583142LDD_t - 0.128408LNS_t + 0.030887INR_t$

Table 5 above reveals the results of the ARDL model between public investments (LPUINV) and public debts in Nigeria. The results showed that at lag one, external debt (LEXD) has a negative and significant impact on LPUINV while domestic debt (LDD) has a positive and insignificant effect on LPUINV. Similarly, the results indicated that at lag zero, national savings (LNS) has a negative and insignificant impact on LPUINV, while interest rate (INR) has a positive and insignificant effect on LPUINV in Nigeria. These claims are evident by the coefficients and the p-values of the corresponding variables. For example, the coefficients of LEXD, LDD, LNS and INR are -0.385730, 0.583142, -0.128408, and 0.030887, respectively, whereas their associated p-values include 0.0313, 0.0989, 0.3907, and 0.1184, respectively. The results also indicated R^2 value of 0.984955, which implies that 98.5% of the variations in LPUINV are explained by the explanatory variables. More so, the results showed F-statistic of 144.0286 and Prob(F-statistic) of 0.000000. The results as well showed a Durbin-Watson stat of 2.187309.

Table 6: ARDL Bounds Test

Test Statistic	Value	k		
F-statistic	3.723470	4		
Critical Value Bounds				
Significance	I0 Bound	I1 Bound		
10%	2.45	3.52		
5%	2.86	4.01		
2.5%	3.25	4.49		
1%	3.74	5.06		

Source: Researcher's compilation from E-view 9

Table 6 shows the results of the ARDL bounds test. The results indicate no evidence of a long-run relationship among the variables under study. This is evident by the F-statistic of 3.723470, which is less than the 5% chosen critical value of the upper bounds. Thus, the study concludes that a long-run relationship does not exist among the variables under study.

Table 7: ARDL Model between Public Investments and Its Determinants
Dependent Variable: LPUINV

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LPUINV(-1)	0.231283	0.105771	2.186635	0.0367
LTPUBT	-0.225549	0.093727	-2.406457	0.0225
LNS	-0.517246	0.091038	-5.681627	0.0000
INR	-0.009803	0.014393	-0.681103	0.5010
LGEX	1.425400	0.185412	7.687742	0.0000
C	-0.030937	0.173258	-0.178562	0.8595
R-squared	0.991731	Mean dependent var		4.933975
Adjusted R-squared	0.990353	S.D. dependent var		1.934464
F-statistic	719.6147	Durbin-Watson stat		1.865547
Prob(F-statistic)	0.000000			

Sources: Researcher's computation from E-view 9
Estimation model: $LPUINV_t = -0.030937 - 0.225549LTPUBT_t - 0.517246LNS_t - 0.009803INR_t + 1.425400LGEX_t$

Table 7 above illustrates the results of the ARDL model between public investments (LPUINV) and public debts and other determinants in Nigeria. The results indicated that at lag zero, total public debts (LTPUBT) and national savings (LNS) have a negative and significant impact on LPUINV. Similarly, the results showed that the interest rate (INR) has a negative and insignificant effect on LPUINV while government expenditure (LGEX) has a positive and significant effect on LPUINV in Nigeria. These arguments are evident by the parameters and the p-values of the corresponding variables. From the estimation results, the parameters of LTPUBT, LNS, INR and LGEX are -0.225549, -0.517246, -0.009803, and 1.425400, respectively, whereas their associated p-values include 0.0225, 0.0000, 0.5010, and 0.0000, respectively. The results also indicated R^2 value of 0.991731, which implies that 99.2% of the variations in LPUINV are explained by the explanatory variables. More so, the results showed F-statistic of 719.6147 and Prob(F-statistic) of 0.000000. The results as well showed a Durbin-Watson stat of 1.865547.

Table 8: ARDL Bounds Test

Test Statistic	Value	k		
F-statistic	1.380221	4		
Critical Value Bounds				
Significance	I0 Bound	I1 Bound		
10%	2.45	3.52		
5%	2.86	4.01		
2.5%	3.25	4.49		
1%	3.74	5.06		

Source: Researcher's compilation from E-view 9

Table 8 shows the results of the ARDL bounds test. The results revealed no evidence of a long-run relationship among the variables under review. This argument is supported by the F-statistic of 1.380221, which is less than the 5% chosen critical value of the upper bounds. Hence, the study concludes that there is no evidence of a long-run relationship among the variables under study.

4.3 Chow Structural Breakpoint Test
4.3.1 Structural Stability Test
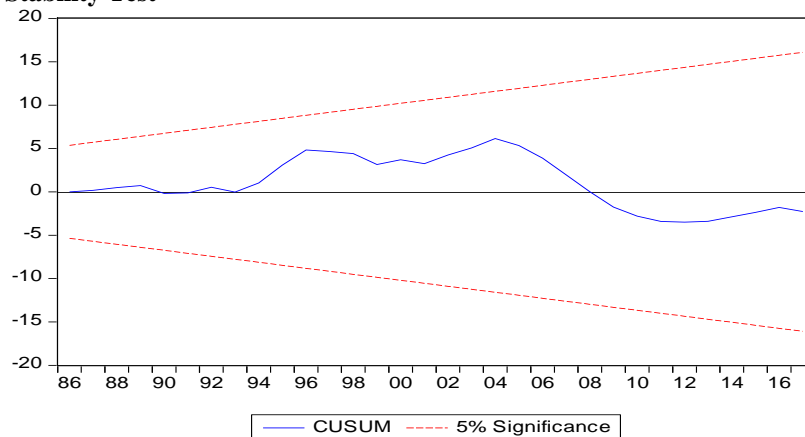
Graph 1: CUSUM Test for Structural Stability

Graph 1 above illustrates the CUSUM test for structural stability. It was applied in this study to check the structural stability of the estimated parameters. The results of the test showed that the estimated parameters are stable over the study time as the CUSUM stat, in this case, is within the upper and lower limits.

4.3.2 Chow Breakpoint Test

Table 9: Chow Breakpoint Test: 2006

Equation Sample: 1981 2017			
F-statistic	2.830467	Prob. F(3,31)	0.0545
Log-likelihood ratio	8.957542	Prob. Chi-Square(3)	0.0299
Wald Statistic	8.491401	Prob. Chi-Square(3)	0.0369

Source: Researcher's compilation from E-view 9

The results in table 9 depict Chow Breakpoint test between gross domestic product (LGDP) and public debt stocks (external and domestic debts). The results indicated that significant structural break does not exist between the variables. This claim is evident by the F-statistic and the p-value of the estimation equation. From the results, the F-statistic and p-value are 2.830467 and 0.0545, which is greater than the 5% level of significance. Thus, the result further affirmed the finding above.

4.4 Policy Implications of the Results

The study investigated the impacts of public debts on economic growth in Nigeria from 1981 to 2017 using the ARDL model. The results revealed that external debt (LEXD) has a negative and significant impact on LGDP while domestic debt (LDD) has a negative and insignificant effect on LGDP. Hence, it is estimated that a 1% rise in external debt will result in 0.0874 units decrease in LGDP, while a 1% increase in domestic debts will decrease LGDP in Nigeria by 0.054168 units. These results imply that there is an existence of debt overhang in Nigeria's economy. The results also showed that government expenditure (LGEX) has a positive and significant impact on LGDP, while national savings (LNS) and consumer price index (CPI) have a positive and insignificant effect on LGDP in Nigeria. Thus, the study estimated that 1% increase in LGEX, LNS and CPI will increase LGDP by 0.156, 0.087 and 0.0002 units, respectively.

The results also indicated that external debt (LEXD) has a negative and significant impact on public investments (LPUINV) while domestic debt (LDD) has a positive and insignificant effect on LPUINV. In this view, the study estimated that 1% increase in external debt (LEXD) will decrease public investments of Nigeria by 0.386 units, while 1% rises in domestic debt will increase LPUINV by 0.58 units. Similarly, the results revealed that national savings (LNS) has a negative and insignificant impact on LPUINV, while interest rate (INR) has a positive and insignificant effect on LPUINV. Hence, it is estimated that 1% increase in LNS will lead LPUINV to decrease by 0.13 units, whereas 1% rise interest rate (INR) will result to 0.03 units increase in LPUINV in the economy. Furthermore, the results of the Chow Breakpoint test indicated no evidence of significant structural break between LGDP and public debts (external and domestic debts). The results imply that the GDP function has not changed between the two sample periods (1981-2006 and 2007-2017). Similarly, the estimation results showed that LTPUBT and LNS have a negative and significant impact on LPUINV. The results also revealed that interest rate (INR) has a negative and insignificant effect on LPUINV while LGEX has a positive and significant effect on LPUINV in Nigeria. Therefore, the study estimated that 1% rise in total public debts and LNS will fall LPUINV by 0.23 and 0.52 units, respectively, and 1% increase in interest rate will decrease LPUINV 0.01 units, while 1% rise in LGEX will raise LPUINV by 1.43 units.

V. Conclusion and Recommendations

The study investigated the impact of public debts on economic growth in Nigeria for the period 1981-2017. ARDL model and Chow Breakpoint test were utilized in the analysis. Data sourced from the Central Bank of Nigeria (CBN) statistical bulletin on gross domestic product growth (GDP), public investment (PUINV), external debt (EXD), domestic debt (DD), total public debts (TPUBT), government expenditure (GEX), national savings (NS), consumer price index (CPI) and interest rate (INR) were analyzed in the research. The stationarity test conducted indicated that LGDP, LPUINV, LDD, LGEX, LTPUBT, LNS and CPI except for LEXD, INR and LEXD were non-stationary in level. However, all the variables became stationary after the first differencing.

The results of the ARDL model revealed that external debt has a negative and significant impact on LGDP while domestic debt has a negative and insignificant effect on gross domestic product. The results also showed that government expenditure and consumer price index have a positive and significant impact on LGDP, whereas national savings (LNS) has a positive and insignificant effect on LGDP in Nigeria. Furthermore, the results demonstrated that external debt has a negative and significant impact on public investment, while domestic debt has a positive and insignificant effect on public investment. It was also showed that national savings (LNS) has a negative and insignificant impact on LPUINV, whereas interest rate has a positive and insignificant effect on public investments. However, the results showed no evidence of a long-run relationship

between the public investments and the public debts in the economy. More so, the results indicated no evidence of significant structural break between gross domestic product (LGDP) and public debts in the economy.

Finally, the results revealed that LTPUBT and LNS have a negative and significant impact on LPUINV. It also revealed that interest rate (INR) has a negative and insignificant effect on LPUINV while LGEX has a positive and significant effect on LPUINV in Nigeria. Thus, the study recommends that the government should discontinue the use of external debt in financing budget deficit in the economy, but can intensify efforts to stimulate revenue internally through efficient investments and economic diversification. More so, as domestic debt has a negative relationship with the gross domestic product (GDP), the government should not continue to utilize domestic debt in financing fiscal deficit; rather, there is a dire need to enhance efforts to stimulate the revenue or reduce its current expenditures in order to finance capital investment projects in Nigeria.

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