PUBLIC DEBT AND ECONOMIC GROWTH IN NIGERIA: AN EMPIRICAL INVESTIGATION

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Abstract

This paper empirically investigated the effect of public debt on economic growth in Nigeria, covering the period 1981-2018. Employing a co-integration approach, the study revealed prominent among others that a significant short-run relationship exists between Nigeria's public debt and economic growth. Also, the study further showed that whereas both the domestic debt and the external debt variables were statistically significant, only the latter failed the a priori expectation test and thus, exerts a negative contribution to economic growth in Nigeria. On the basis of the findings, the study concluded that most of the external borrowings in Nigeria end up being misappropriated. Hence, the recommendation is that there should be proper ways of monitoring public borrowings with special emphasis on all external debts contracted with a view to ensuring that misappropriation is drastically reduced, if not eradicated.

Keywords: Public debt, Co-integration approach, Economic growth.

1.0 Introduction

Sovereign nations, especially the less development countries (LDCs), which are characterized by low capital formation owing to low levels of domestic savings and investment, pursue policies aimed at attaining sustainable economy (Adepoju, Salau and Obayelu, 2007). It is expected that these LDCs when faced with paucity of funds, resort to borrowing from external sources so as to supplement domestic savings (Aluko and Arowolo, 2010; Safdari and Mehrizi, 2011; Sulaiman and Azeez, 2011). Soluso (2003) asserted that countries borrow for two broad reasons: macroeconomic, that is, to finance higher levels of consumption and investment or to finance transitory balance of payment deficit and avoid budget constraint and in turn, boost economic growth and reduce poverty. The constant need for governments to borrow in order to finance budget deficit has led to the creation of external debt (Osinubi and Olaleru, 2006).

Public debt constitutes a medium used by countries to bridge their deficits and carry out economic projects that are able to increase the standard of living of the citizenry and promote sustainable growth and development. Hameed, Ashraf and Chaudary (2008) stated that public

borrowing ought to accelerate economic growth especially when domestic financing is inadequate. Public debt also improves total factor productivity through an increase in output which in turn enhances Gross Domestic Product (GDP) growth of a nation. Therefore, the importance of public debt cannot be overemphasized as it is an ardent booster of growth, improving living standards and alleviating poverty.

However, it is widely recognized in the international community that excessive foreign indebtedness in most developing countries is a major impediment to their economic growth and stability (Audu, 2004; Mutasa, 2003). Public borrowing should have a significant impact on the growth and investment of a nation up to a point where high level of external debt servicing sets in and affects the growth as the focus moves from financing private investment to repayments of debts (Nur, Shafinar and Abdul, 2019; Sasmal and Sasmal, 2018).

Developing countries like Nigeria have often contracted large amount of public debt that has led to the mounting of trade debt arrears at highly concessional interest rates. Gohar and Butt (2012) opined that accumulated debt service payment creates a lot of problems for countries especially developing nations. The reason being that a debt is actually serviced for more than the amount it was acquired and this slows down the growth process in such nations.

It is instructive to note that the inability of the Nigerian economy to meet its debt service obligations has resulted in debt overhang or debt service burden that has militated against her growth and development (Audu, 2004). The genesis of Nigeria's debt service burden dates back to 1978 after a fall in world oil prices. Prior to this occurrence, Nigeria had incurred some minor debts from World Bank in 1958 with a loan of US$28million dollars for railway construction and the Paris Club debtor nations in 1964 from the Italian government with a loan of US$13.1 million for the construction for the Niger dam. The first major borrowing of US$1 billion known as the "Jumbo loan" was in 1978 from International Capital Market (ICM) (Adesola, 2009).

Pattilo, Poirson and Ricci (2002) asserted that at low levels debt has positive effects on growth but above particular points or thresholds accumulated debt begins to have a negative impact on growth. Furthermore, Fosu (2009) observed that high debt service payments shift spending away from health, educational and social sectors. This obscures the motive behind public borrowing which is to boost growth and development rather than get drowned in a pool of debt service payment which eats up most of the nation's resources and hinders growth due to high interest payments on external debt.

Nigeria as a developing nation has adopted a number of policies such as the Structural Adjustment Programme (SAP) of 1986 to liberalize her economy and boost Gross Domestic Product (GDP) growth. In a bid to ensure the implementation of these policies the government embarked upon massive borrowing from multilateral sources which resulted in a high external debt service burden and by 1992 Nigeria was classified among the heavily indebted poor countries (HIPC) by the World Bank.

According to Omotoye, Sharma, Ngassam and Eseonu (2006), Nigeria is the largest debtor nation in Sub Sahara Africa. When compared with other Sub Saharan nations such as South Africa, Nigeria's external debt stock follows an upward pattern over the years while the former is relatively stabilized (Ayad and Ayadi, 2008). Nigeria external debt stock rose from US$28,454.8 million in 1997 to US$31,041.6 and US$37,883.1 million in 2001 and 2004 with 80.3,364.67 and 52.58 percentages of GDP respectively. On the other hand, South Africa's external debt stock stood at US25, 272.4 million, US$24,050 million and US$27,112.4 million in 1997, 2001 and 2004 with 16.98, 20.34 and 12.52 percentages of GDP respectively.

The unabated increase in the level of external debt service payment has led to huge imbalances in fiscal deficits and budgetary constraints that have militated against the growth of the Nigerian economy. The resultant effect of the debt quagmire in Nigeria could create some unfavourable circumstances such as crowding out of private investment, poor GDP growth (Okonjo-Iweala, 2011).

Huge external debt does not necessarily imply a slow economic growth; it is a nation's inability to meet its debt service payments fueled by inadequate knowledge on the nature, structure and magnitude of the debt in question (Were, 2011). It is no exaggeration that this is the major challenge faced by the Nigerian economy. The inability of the Nigerian economy to effectively meet its debt servicing requirements has exposed the nation to a high debt service burden. The resultant effect of the debt service burden creates additional problems for the nation particularly and increasing fiscal deficit which is driven by higher levels of debt servicing. The debt crisis reached its maximum in 2003 when US$2.3 million was transferred to service Nigeria's external debt. In the year 2005 the Paris Club group of creditor nations forgave 60% (US$18 billion) of US$30.85 billion debt owed by Nigeria.

According to Paito (2012), deficit is financed through borrowings (domestically or foreign) or use of foreign reserve to settle the deficit. Patio (2012) further posits that by borrowing, it means that the government has to agree on the terms of payments which usually are attached with strange regulations. Hence, this will perpetrate the deficit as more money will be spent by government on servicing the debt which creates more expenditure and deficit. He argues that persistence of this may result in high and variable inflation, debt crises with crowding out of investment and growth coupled with macro-economic imbalance in general.

However, it has also been said that there is nothing intrinsically wrong in obtaining loan whether foreign or domestic, provided such funds are invested appropriately in creating wealth and improving the quality of lives of the people. In the same vein, opinion stands divided as per the actual role of public borrowing in Nigeria. While some individuals see it as beneficial, others are of the view that public debt has failed to produce the desired economic benefits, being characterized by strange terms, occasioning high interest payments and unpalatable debts service agreements. Coupled with this is the perceived high incidence of corruption among government

officials who allegedly connive with some of the lender agencies to defraud Nigeria of billions of naira.

Despite the debt relief of US$18 billion received from the Paris Club in 2005 the situation remains largely the same (Bakare, 2010). The questions then are: Why has public borrowing not accelerated the pace of growth of the Nigerian economy? What is the nature of relationship between public debt and economic growth in Nigeria? To what extent has aggregate domestic debt affected economic growth in Nigeria? How has aggregate external debt affected economic growth in Nigeria? To what extent has inflation affected economic growth in Nigeria?

There are various empirical studies that have tried to investigate the impact of public debt burden on economic growth in Nigeria which have arrived at different results applying different methodologies (Bhattarchanya & Nguyen, 2003; Fosu, 2007; Hunt, 2007; Ayadi, 2008). It is against this backdrop that this study empirically investigated the effect of public debt on economic growth of Nigeria, and hypothesizes that "there is no significant relationship between public debt and the level of economic growth in Nigeria".

Besides this introductory part of this study are section two on the review of relevant literature, section three covers the methodology adopted for the study, section four is on the analysis of data and interpretation of the results, while section five is on the conclusion and recommendations of the study.

2.0 Review of Related Literature

2.1 The Conceptual Framework

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 Christabell, 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 change 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 Kibul (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 finance public investment projects that complement 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 country. The returns from investing in the domestic economy may effectively be taxed away existing foreign creditors and investment by foreign and domestic investors, and hence, economic growth is discouraged.

2.2 Theoretical Review

Obviously, there are several theories of public debt such as the Mercantilist doctrine, the classical theory, the neo-classical theory and others. This paper however, is anchored on the neo-classical theory.

2.2.1 Neo-Classical Growth Theory

This theory dates back to 1956 when Robert Solow put forward a formal model which postulated that the key variable in growth is labour 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, labour 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 labour employed during that period of time K, A and L are the only factors of production explicitly included in the model. All factors are relative for the production of output, with the exponents in the equation indicating their relative contribution and productivity that increases as a result of technological change, in addition to 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 to as being productive, which can contribute positively to economic growth via increased labour, capital and technology (Precious, 2013; Eze, Nweke and Atuma, 2019).

2.3 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. These results of the ARDL model revealed a long-run relationship trade openness had positive effects on economic growth; while government debt and population growth has 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, the effect on economic growth diminished rapidly and the growth impacts become negative.

Alenjandro and Ifeana (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 result 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 showed that public external debt has a negative and significant impact on economic growth and investment, which confirm the existence of a debt overhang effect. However, the study could not confirm the existence of crowding out hypothesis since debt servicing revealed significant 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 has insignificant influence on economic growth. Hence, the study recommended that the government of Swaziland encouraged sustainable external and domestic borrowings and utilized the fund in productive economic activities.

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 in Nigeria. Therefore, the study recommended that Nigeria should pursue domestic 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 co-integration 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 caused real gross domestic product (RGDP) with causality runs from external debt and domestic debt of 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 co-integration test, Error Correction Method (ECM) and the Granger Causality test are 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 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, co-integration 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 services on economic growth while domestic debt service expenditure has a negative and significant impact on the growth of the economy. On the other hand, the bank's lending rate has a negative and insignificant effect on growth in Nigeria.

Igbodika, Jessie and Andabai (2016) investigated 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 has a negative and significant effect on the gross domestic 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 Fersinand (2016), studied the nexus debt burden and development tangle in Nigeria for the period 1980-2014 by employing unit root test, co-integration 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 co-integration indicate evidence of long-run relationship among the variable. The Granger Causality results revealed that various debt stocks granger caused 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 Autoregresive (VAR), Granger causality test, impulse response and variance decomposition of the various innovations were engaged in the analysis of the 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 stock to external debt stock raises the prime lending rate. The results indicated that external and domestic debts have an insignificant impact on the output and general price level.

3.0 Methodology

3.1 Research Design

In order to examine the impact of public debts on economic growth in Nigeria for the period 1981 to 2018, unit root through the application of the Philip-Peron unit root test, co-integration and vector autoregressive model (VAR) 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 co-integration and vector error correction model, on the other hand, were applied to investigate the short- run and long-run coefficients of the variables and then estimate the model of public debt and economic growth in Nigeria. The variables utilized in the model consist of the gross domestic product (GDP), aggregate external debt (TXD), aggregate domestic debt (TDD), and the inflationary rate proxied with the consumer price index (CPI). Data used in the analysis are obtained from the statistical bulletin of the Central Bank of Nigeria (CBN), 2018 publications.

3.2 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, labour, and physical capital. The equation of the neo-classical growth theory is expressed as: Y=f (A, K, L) 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 labour employed during that period of time (Precious, 2015).

The above model has three important predictions. First, increasing capital relative to labour 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 emanates from an improvement in health services and education, as they are believed to be the most important in human capital. This research adopts this theory, considering 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, labour, and technology.

This will result in an increase in government spending. Then, instead of having the GDP = f (TDD, TXD, INFL) ……3.1

Where: GDP is the gross domestic product, TDD is domestic debt, TXD is the external debt and INFL is the inflammatory rate of consumer price index. In linear function, the relationship is specified thus: $GDPt = ß_0 + ß_1 TDD_t + ß_2 TXD_t + ß_3 INFL_t + U_t$ ……3.2

In log function, it is illustrated as: $LGDPt = ß_0 + ß_1 TLDD_t + ß_2 LTXD_t + ß_3 LINFL_t + U_t + U_t$……..3.3. Where:

LGDP is the explained variable; whereas LTDD, LTXD, and LINFL are the explanatory variables; Ut is the error term; L is the log function, whereas ßs are the coefficients of the regression equation. Hence,

GDPt = Gross domestic product in year, t;

TDDt = Total domestic debt in year, t;

TXDt = Total external debt in year, t;

INFL = Inflation rate in year, t;

Meanwhile, the a priori expectation is expected to take the form:

$ß_1 > 0; ß_2 > 0; ß_3 < 0$.

4.0 Data Presentation and Analysis

4.1.1 Unit Root Test Results

This section begins with the analysis of the unit root test, recalling that the unit root test is essentially conducted to confirm the stationarity status of the individual data set and hence its quality for inclusion in the analysis to avoid spurious results.

Table 1: Unit Root Test for the Variables Employed

Philip-Peron Unit Test					
Variable		**T-statistic**	**Critical value**	**Order of Integration**	**Significance**
1	GDP	**-7.918615**	**-3.632900**	**1(2)**	**1%**
2	INFL	**-10.97355**	**-2.630762**	**1(1)**	**1%**
3	TDD	**-3.425086**	**-2.632688**	**1(2)**	**1%**
4	TXD	**-2.393118**	**-1.950394**	**1(1)**	**5%**

Source: Views, 10.0

The Unit root is carried out using the Philip-Peron test in order to determine whether the set is stationary and the order of integration. While two of the explanatory variables (external debt and inflation) turned out to be stationary at first difference, the other two (gross domestic product and domestic debt), were significant at second difference, thus necessitating the application of the vector autoregressive modeling (VAR).

4.1.2 The Co- integration Result

Thus, with the data set turning out to be stationary, we then applied the Johansen co-integration test which adopts no exogenous variables. The essence of this test is to establish the presence of a short or long-run equilibrium existing between the variables and hence the estimated regression equation result. This result is presented in table 2.

Table 2: Co-integration and Test Results

Johanssen Co-integration Test			
Model		**Number of Co-integrating Equations**	**Nature of Equilibrium**
1	**Public Debt and Economic Growth**	**2**	**Long-run is suspected**

Source: Views, 10.0

The above Johansson co-integration tests revealed evidence of 2 co-integrating equations for the GDP model. However, the result of the vector error correction model (VECM) failed to prove the existence of a long run relationship between the explanatory variables and economic growth

in Nigeria (See VECM result in the appendices. On the basis of this therefore, the result is estimated in the short run.

4.1.3. Granger Causality Test

These results produced evidence on bi-causal relationship between aggregate domestic debt and gross domestic product, while gross domestic product granger causes aggregate external debt. Other pair of inflation and gross domestic product produced no statistically significant causal relationship.

4.2 The Influence of Public Debt on Economic Growth in Nigeria

In order to determine the relationship between public debt and the level of economic growth in Nigeria, we refer to table 3. From table 3, with the F-Ratio calculated 609, 3259, having a p-value (0.0000) being less than 1%, we therefore reject HO_1 and accept Ha to conclude that at 1% level of significance, there is a significant relationship between public debt and the level of economic growth in Nigeria. The resulting estimated equation is given as:

$$\mathbf{GDPt = 5191.92 + 10.34TDD_t - 1.45TXD_t - 106.34INFL_t + U_t \ldots\ldots\ldots\ldots 3.2}$$

Table 3: AVOVA Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5191.923	1677.230	3.095534	0.0039
INFL	-106.3447	54.77264	-1.941567	0.0605
TDD	10.34179	0.299975	34.47554	0.0000
TXD	-1.453030	0.591732	-2.455552	0.0193
R-squared	0.981740	Mean dependent var		27569.37
Adjusted R-squared	0.980129	S.D. dependent var		37734.89
S.E. of regression	5319.327	Akaike info criterion		20.09538
Sum squared resid	9.62E+08	Schwarz criterion		20.26776
Log likelihood	-377.8123	Hannan-Quinn criter.		20.15671
F-statistic	609.3259	Durbin-Watson stat		2.636320
Prob(F-statistic)	0.000000			

From the ANOVA results both the aggregate domestic debt and aggregate external debt exert significant effects on economic growth, at least, within the period under investigation, 1981-2018. Generally, the model also indicates that the changes in the explanatory variables taken together have been able to explain at least 98% of the variables in the dependent variable, gross domestic product, thus, leaving only about 2% to chance occurrence.

5.0 Conclusion and Recommendations

5.1 Summary of Findings

This study empirically determined the effect of public debt on economic growth in Nigeria, covering the period, 1981-2018, to reveal that a significant relationship exists between public debt and economic growth in Nigeria with the model exhibiting a short-run causal relationship. Both the aggregate domestic debt and aggregate external debt exert significant effects on economic growth. Also, whereas both the domestic debt and inflation variables, with their positive and negative coefficients, respectively met the priori expectation, the external debt variable, on the other hand, with the negative coefficient, failed the priori expectation test.

5.2 Conclusion

The conclusion from this study therefore, is that the negative coefficient of the external debt variable is indicative of the fact that external borrowings in Nigeria, within the period under review, ended up being misappropriated, since the borrowings contributed negatively to economic growth.

5.3 Recommendations

On the basis of these findings therefore, this study recommends that the Nigerian Debt Management Office should pay more attention to external borrowings in Nigeria. To this end, agencies such as the Economic and Financial Crimes Commission should prosecute culprits without delays to serve as deterrent. Also, since short-term domestic borrowings manifest more under gross domestic product, more of the short-term domestic borrowings should be contracted than the external borrowings, in order to engender economic growth.

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