



## **Impact Of Public Debt On An Emerging Economy: Evidence From Nigeria (1980 – 2009)**

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***Abstract:***

*The continuous increase in Nigeria's public domestic debt profile has raised concerns regarding its effect on economic growth as well as on the crowding-out of private lending in the economy. Using the Ordinary Least Square (OLS) regression technique and time series data from 1980 to 2009 to evaluate the modified Barro Growth Model, the results show that domestic debt in Nigeria has an inverse and significant impact on economic growth. This gives credence to the long run traditional hypothesis of effect of domestic debt on economic growth. The study also found that domestic debt robustly crowds-out private lending in Nigeria such that a 10% increase in domestic debt results in a 2.2% decrease in private lending and the consequent adverse effect on economic performance. To this end, the study recommends that government should put in place adequate macroeconomic policies to restructure its revenue base and minimize tax evasion and avoidance. The study also recommends an analysis of the economic and social profitability of domestic debt finance projects to ensure that they are self liquidating.*

***Keywords:*** *Public Domestic Debt, Budget Deficit, Public Expenditure, Private Sector Lending and Money Supply.*

## **1.Introduction**

There is virtually no country in the world whose aims are not geared towards achieving economic growth and development. However, this is only possible if a country has adequate resources at its disposal (Chimobi and Igwe, 2010). In many developing countries, the resources to finance the optimal level of economic development are in short supply. This is because their economies are plagued with problems associated with low domestic savings, low tax revenue, low productivity and limited foreign exchange earnings. As a result of this, developing countries inevitably resort to public debt finance to bridge the gap between the resources available to them and what is required for their advancement.

Rapid and sustained output growth of the domestic economy of Nigeria has since the political independence in 1960 been of paramount importance to successive governments in the country. Consequently, governments have since implemented several national development plans and programmes aimed at boosting productivity, as well as, diversifying the domestic economic base. The infrastructural and capital resources required for the attainment of these objectives have however been scarce. This has necessitated the intervention of the governments in the economy through the provision of the required huge capital outlay necessary for large-scale production in heavy industries and for the provision of other infrastructure. Government interventions were made possible by the oil boom of the early 1970s when Nigeria earned unprecedented amount of foreign exchange earnings from the export of crude oil (Sikkam, 1998). Government expenditure thus grew rapidly with a similar growth in the bureaucracy. But the oil glut that followed meant that government revenue decline significantly (Akor, 2001). However, as oil boom declined in the 1980s, priority of government did not change in terms of provision of electricity, good road, hospital, schools and other social amenities to her citizenry. As governments were reluctant in reducing the bloated expenditures that resulted during the oil boom, they were forced to seek alternative means of financing their expenditures. Governments thus resorted to fiscal deficits.

Fiscal deficits, a situation where current expenditure exceeds current expected income, have become a recurring feature of public sector financing in Nigeria. Available statistic shows that government retained revenue as a percentage ratio of GDP averaged 12.5% between 1980 and 1989, which increased to an average of 14.4% between 1990 and 1999, and later fell to 11.9% between 2000 and 2009. Total government expenditure as a percentage of GDP averaged 50% between 1980 and 1989. This figure declined to an

average of 24.7% between 1990 and 1999, and in 2000, recorded an average of 13.6% (CBN, 2009). From the above statistics, it is clear that the budget is in deficit as government expenditure exceeds government revenue. Akor, (2001) asserted that the policy of fiscal deficits has posed challenges to the Nigerian economy with regards to its effectiveness and the accumulation of debts, the justification for growth notwithstanding. Rosen (1999) opined that the debt at a given time is the sum of all past budget deficits. That is, the debt is the cumulative excess of past spending over past receipts. He also noted that, it could either be domestic debt or external debt. Many developing countries including Nigeria resorted to domestic debt as a result of capital flight that characterized external debt. Alison et al (2003) revealed the three theoretical reasons often advanced for government domestic debts. The first is for budget deficit financing; second is for implementing monetary policy (buying and selling of treasury bills in open market operation) and the third is to develop the financial instruments so as to deepen the financial markets.

The beginning of the existing market for government borrowing in Nigeria is the financial reforms introduced by the colonial government in 1958. These reforms led to the creation of the Central Bank of Nigeria (CBN) and the creation of marketable public securities to finance fiscal deficit. According to paragraph 35 of the Central Bank of Nigeria (CBN) Ordinance of 1958, the bank shall be entrusted with the issue and management of Federal Government Loans publicly issued in Nigeria upon such terms and conditions as may be agreed between the Federal Government and the Bank.

Since the early 1960s, the ratio of domestic government debt to Gross Domestic Product (GDP) in Nigeria has risen sharply. By 1964, the level of domestic debt was 5.5% of GDP. A decade later (by 1974), this ratio went up slightly to 6.9% of GDP. But by 1984 and 1994, the domestic debt/GDP ratio was 43.06 % and 45.29% respectively. Although it declined heavily to 12.01% after then and later increased slightly to 13.06% in 2009 (CBN, 2009). Asogwa (2005) opined that, Nigeria has not been alone in experiencing escalating levels of government domestic indebtedness, but in comparison to other countries in sub-Saharan Africa; Nigeria's domestic debt to GDP ratio is clearly on the high side. Adofu and Abula (2010) noted that several factors have been advanced to explaining the changing domestic debt profile between the 1960s to date and these factors include: high budget deficits, low output growth, high inflation rate and narrow revenue base witnessed since the 1980s.

However, despite this increase in the development of finance through domestic debt in Nigeria, Yaque (2011) noted that the growth rate of Nigeria economy is sluggish. The average growth rate of real GDP between 1980 and 2009 was 4.6%; incidence of poverty in the country was put at 54% in 2004 while rural poverty rate was 63.7% (NBS, 2006). Sola (2009) observed that the Nigerian economy is characterized by a prolonged period of economic stagnation, rising poverty level, low capacity utilization, high unemployment rate and high level of income inequality.

This study is therefore an attempt to assess the impact of public domestic debt on the growth of the Nigerian economy as well as ascertain if it crowds out private lending in Nigeria. The rest of the paper is divided into the following sections. Section 2 is theoretical framework and literature review, section 3 is structure and trend of public debt in Nigeria, section 4 is methodology of the study, section 5 is discussion of empirical results and section 6 is summary, conclusion and policy recommendations.

## **2.Theoretical Framework and Literature Review**

The output effect of public domestic debt on economic growth has long been recognized in the literature but there is however, no consensus as the direction of the impact. Domestic debt may have positive as well as negative impacts on economic growth. Singh (1999) and Sheikh, Farida and Tariq (2010) asserted that the effect of domestic debt on economic growth can be analysed in the context of traditional and Ricardian view.

The traditional view holds that a tax cut financed by government borrowing would have many effects on the economy. The immediate impact of the tax cut would be to motivate consumer spending. Higher consumer spending affects the economy in both short run and long run. In the short run, higher consumer spending would raise the demand for goods and services and this raises output and employment. As the marginal propensity to consume is higher than marginal propensity to save, the increase in private savings falls short of government dis-savings. This increases the interest rate in the economy, encouraging capital inflow from abroad which will lead to greater output.

In the long run, the higher interest rate would discourage investment, and this crowds out private investment, which leads to poor economic output. This means that domestic debt has negative impact on economic growth.

In the Ricardian view, government debt is considered equivalent to future taxes (Barrn ,1974), and as noted in Sheikh, Faridi and Tariq (2010), the utility quality of the consumers, the discounted sum of future taxes is equivalent to the current deficit. So, the

shift between taxes and deficits does not produce aggregate wealth effects. The increase in government debt does not affect aggregate demand. The rational consumer facing current deficits saves for the future rise in tax and consequently total savings in the economy are not affected. This theory means that domestic debt has a neutral effect on the economy's output.

Sheikh, Faridi and Tariq (2010) further established that domestic debt has a positive impact on growth, inflation and saving from a well developed capital markets which enhance the volume and efficiency of private investment. They are of the view that moderate level of non inflationary domestic debt has a direct influence on economic growth enhancing private savings and strengthening financial intermediation.

Checherita and Rother (2010) empirically investigated the impact of high and growing government debt on economic growth of the Euro countries for a period which spanned between 1970 and 2009. They established that the channel through which government debt (domestic or external) influence economic growth are private savings, public investment, total factor productivity and real increase rate. The study revealed a non linear negative impact of government debt on economic growth.

Schelarek (2004) examined the effects of gross government debt on economic growth for a sample of 24 industrial countries and discovered a direct and non significant effect of government debt on economic output. Abbas and Christensen (2007) investigated the relationship between domestic debt and economic growth for 93 less developing countries during the period 1975-2004 employing Granger causality regression model. The study shows that moderate level of marketable domestic debt as a percentage of GDP i.e less than 35 percent of total bank deposit have direct and significant impact on economic growth and if it exceed 35 percent of total bank deposit will lead to negative effect on economic growth. In another cross country survey, Christensen (2005) analyzed the role of domestic debt market and economic growth in 27 sub Saharan African countries and found that domestic debt market in these countries are characterized generally by small highly short term and a narrow investor base. The study revealed that domestic debt significantly crowds out private lending in these countries which lead to poor economic performance. The process of crowding-out arises from the fact that once the government borrows heavily from domestic market, a shortage of funds arises, prompted by increased demand for investible funds which drives interest rate up, leading to the reduction of private borrowing and hence hunting private investment which adversely affect economic performance (Maana, Owino and Mutai, 2008)

Maana, Owino and Mutai (2008) examined the impact of domestic debt on Kenya's economy for the period 1986 to 2007. The study also sought to establish whether domestic debt crowds-out private sector lending. The study use modified Barro growth model version employing Generalized Method of Moment (GMM) and revealed that domestic debt expansion has a positive but not significant effect on economic growth during the period. The study also revealed that the significant rise in domestic debt during the period resulted in higher domestic interest payments which present a significant burden to the budget. However, they assented that due to the considerable level of financial development in Kenya, there is no evidence that the growth in domestic debt crowds -out private sector lending in the country.

Sheikh, Faridi and Tariq (2010) econometrically examined the relationship between domestic debt and economic growth in Pakistan for the period 1972 to 2009 applying the Ordinary Least Square (OLS) technique. The study revealed that domestic debt has positive and significant impact on economic growth such that an increase in total domestic debt worth of one million would enhance GDP by 4.09 million. They attributed the growth in the economy to the marketable nature of domestic debt in the country. The study also observed that there is an inverse and significant relationship between domestic debt servicing and economic growth and concluded that the negative impact of domestic servicing on economic growth is stronger than the impact of domestic debt on economic growth. Kamal (2001) analysed the effect of Debt Accumulation and its implication for growth and poverty in Pakistan and found that debt accumulation (domestic and external) and debt servicing are not pro-poor.

EL-Mahdy and Torayeh (2009) examined debt sustainability and economic growth in Egypt for the period 1981-2006 using co-integration technique. The study showed that domestic debt has negative and robust relationship with economic growth. They established that if debt rise beyond the overall size of the economy, the sustainability of domestic debt become a serious issue and using algebraic method, the study found that debt in Egypt is sustainable. The study however suggested that for domestic debt to be sustained in future, substantial fiscal reforms are needed and policies should be adopted to maintain an increasingly growing interest rate differential.

In Nigeria, many authors have also attempted to examine domestic debt and economic growth in the country. For example, Akujuobi and Onuorah (2007) established that developing countries should embark on programmes that promote economic development. In line with economic development theories, such countries borrow to do

this when they do not have enough saving to match the level of desired investment. They noted further that Nigeria's government is under pressure with the lean resources for alleviating poverty and providing basic social services to the citizenry. With this the author examined empirically the impact of debt on Nigeria's economic growth and found that domestic debt has direct and significant impact on economic development and attributed the direct and robust relationship to the fact that domestic debt only transfer income from generation to generation and that saving it does not alter the national income. The study also revealed that external debt has a negative impact on economic output. They suggested that debt should be channeled to real productive projects which have the capacity to contribute to the nation's economic performance.

Ogege and Ekpudu (2010) also examined the effect of debt burden (external and internal) on the Nigerian economy and found that debt burden has inverse impact on economic growth. They suggested that the nation should avoid borrowing in order to reduce its burden. The study also showed that debt burden in Nigeria has resulted in various distortions in macroeconomic stability. Essentially these distortions which are structural in nature, and affect the level of per capita income, are instrumental to the rising poverty in the country.

Uzochukwu (2005) using per capital income approach investigated the impact of public debt and economic growth on poverty in Nigeria. The study revealed that domestic, external and debt service payment have inverse impact on economic output and lead to backward reduction in poverty.

Adofu and Abula (2010) investigate empirically the effect of domestic debt and economic growth in Nigeria using the Ordinary Least Square (OLS) regression technique and employing time series data from 1986 to 2005. The study revealed that domestic debt has negative effect on economic growth such that domestic debt decreases gross domestic product by 42.8 percent, and advocated that the Nigerian government should reduce domestic borrowing and improve on her Tax Structure.

Bolaji, Olukayode and AddilMaliq (2010) used a disaggregated approach to determine the long-run effect of debt financing mix (that include Treasury Bill, Development stock, Treasury Certificate and Bond, Multilateral Debt Source and international lending clubs) on economic growth and development in Nigeria. The study posited that development stock and treasury certificate bond which are component of domestic debt are the best debt financing mix to propel the development of the Nigerian economy in providing infrastructural facilities and undertaking developmental projects that will enhance the

standard of living of the citizen, as well as increase the national output and aid the achievement of other target macroeconomic objectives of the government.

Amassoma (2011) studied the casual nexus between external debt, domestic debt and economic growth in Nigeria between 1970 and 2009 using Vector Autoregressive (VAR) and Vector Error Correction (VEC) models. The result shows that there exist a bi-directional causality between internal debt and economic growth. This implies that internal debt and economic growth affect each other. However, the result of the causality between external debt and economic growth showed a unidirectional causality from economic growth to external debt and not vice versa. This implies that it is economic growth that leads to external debt and not external debt leading to economic growth. The author concluded that external debt has not contributed to the growth of the Nigerian economy rather domestic debt has contributed significantly to economic growth in Nigeria. In the same vein, economic growth can be a very significant factor or determinant of domestic debt.

The above literature review shows that most of the findings indicate mixed effect of domestic debt on economic growth. Some of the studies are of the opinion that domestic debt impedes economic growth while some are of the view that domestic debt contribute positively to economic growth. In Nigeria, there are scanty studies on the relationship between domestic debt and economic growth. This study will contribute to literature by examining the impact of domestic debt on economic growth and also finding out if domestic debt crowds-out private lending in the Nigerian economy.

### **3. Structure and Trend of Public Domestic Debt in Nigeria**

The structure of domestic debt is now considered by examining the total domestic debt and its composition. This is the basis for monetary policy implementation because the size, structure and composition of public domestic debt instruments may influence financial stability in an economy (Asogwa, 2005). However, in order to maintain fiscal stability, it is therefore essential to monitor the structure, characteristics and level of risk inherent in the debt portfolio. In this section, we shall analyse the composition and trend (size) of domestic debt in Nigeria for the study period.

Asoqwa and Ezema (2005) established that domestic debt in Nigeria is debt instruments issued by the Federal Government and denominated in local currency. They noted further that domestic debt can also be issued by State and Local Governments but the capacity for them to issue it is limited. The composition of domestic debt according to Ayauwu



(1993) includes Treasury Bills, Treasury Certificate, Treasury Bonds, Development Stock and Federal Government Bonds and ways and means advances and trade debt.

As shown in Appendix A, the instrument used by the government for domestic borrowing between 1980 and 2009 are Treasury Bills, Treasury Certificate, Development Stock and FGN Bonds.

### *3.1. Treasury Bills (TB)*

Treasury Bills are component of domestic debt which is marketable, negotiable and it is the only domestic debt instrument traded in the money market since treasury certificate was discounted in 1996. The composition of domestic debt portfolio by instrument changed significantly in favour of Treasury bills over the period under review. The proportions of TB in the overall domestic debt fluctuate between 2.0% and 75.4% as revealed in Appendix A. The average TB between 1980 and 1985 was 54.1% which increased to 55.8% between 1986 and 1991. This shows that there was an increase in the share of TB during the SAP era. It decreased to an average of 54.2% in the period 1992-1997. It increased to 57.9% and declined to 35.7% between 1998-2003 and 2004-2009 respectively. Anyanwu (1995) noted that the continued increase in government debt instruments in favour of the short term instruments (that is Treasury Bills) is as a result of the rapid increase in debt service obligation and pronounced deterioration in the maturity of the profile of loans.

### *3.2. Treasury Certificates (TC)*

This is another short debt instrument which was first issued in Nigeria in 1968 in order to deepen the domestic money market. As at 1980 the percentage of TC in the total domestic debt was 36.9%. 1985 and 1990 recorded percentage share of 23.8% and 40.7% respectively. However the debt instrument was abrogated in 1996.

### *3.3. Treasury Bonds (TB)*

In 1989, the monetary authority at the inception of the auction bid system for flotation of treasury bills and certificates, introduced treasury bonds as another instrument in the portfolio of domestic debt. The objective was of minimize the service obligation on domestic debt arising from the liberation policies. The average percentage share of Treasury Bond of total domestic debt as at 1989 was 24.1% while 1996, 2004 and 2008 recorded a percentage share of domestic debt are 56.5%, 31.0% and 12.1% respectively.

### 3.4. Development Stock (DS)

This is a long-term domestic debt instrument which is traded in the secondary market of the Nigerian. Development stocks were apparently the first government instruments to be issued in the country. Asoqwa (2005) asserted that it floated largely to provide development finance either directly to meet the needs of the federal government or as a loan to the state governments. The stock as at 1980 was 37.6% and declined continuously to 9.8% in 1989. The stock declined astronomically to 2.2% in 1992. However, it reduced to less than a unit between 1995 and 2007. In 2008 it increased to 15.4% and later came back to less than a unit in 2009 as shown in Appendix A.

### 3.5. FGN Bonds

In 2003, the Federal Government through the Debt Management Office (DMO) raised fund through the capital market to meet the revenue need of the Federal Government. In 2003, FGN Bond represented about 5.5% of the total domestic stock. This increased to 54.6% and 61.0% in 2007 and 2009 respectively. The astronomical increase in this bond was attributed to the needs of Federal Government to settle outstanding pension arrears and other contractual obligations (CBN, 2009).

The stock of government debt in relation to national output increased during the period. The size of domestic debt as a ratio of gross domestic product in Nigeria has been volatile. Between 1980 and 1989 the ratio of domestic debt to GDP averaged 32.8%. Between 1990 and 1999, the ratio oscillated between 15.5% and 54.3% with 1994 recording the peak and the trough in 1996. The average percentage ratio of domestic debt between 2000 and 2009 was 14.2% , and for the periods 2003 and 2009, it was 19.2% and 13.1% respectively. Figure 1 in the appendix, shows a graphical presentation of the above scenario. The incessant fluctuation in the size of the debt is as a result of the volatile nature of Nigerian fiscal policy expansion.

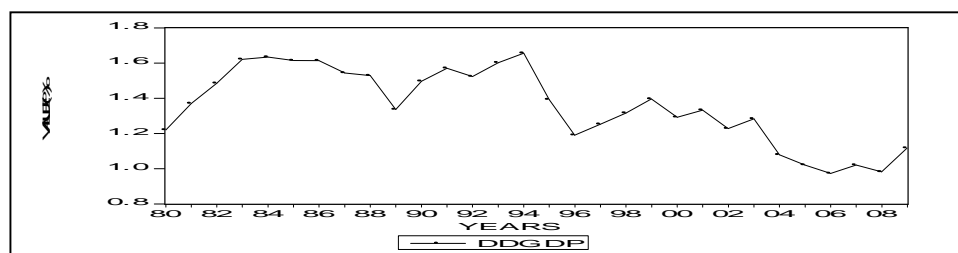


Figure 1: The Trends in Nigeria's Size of Public Domestic Debt (1980 - 2009)

#### 4. Methodology of the study

##### 4.1. Sources of Data

The annual time series data from 1980 to 2009 used in this study were obtained from Statistical Bulletin and Annual Report and Statement of Accounts of the Central Bank of Nigeria as well as the Annual Abstracts of statistics (various issues) published by the National Bureau of Statistics (NBS).

##### 4.2. Method of Data Analysis

The method of data analysis employed in this study is both descriptive and analytical. The descriptive tools include the use of graphs, tables and percentages. The analytical tool used is the Ordinary Least Square (OLS) regression technique.

##### 4.3. Model Specification

The objectives of this study are basically to examine the effectiveness of domestic debt on Nigeria's economic growth, and to determine if domestic debt crowds out private sector lending in the economy. To achieve the above objectives, two models were specified. These are the model showing the impact of domestic debt on economic growth and the model showing the impact of domestic debt on private sector lending.

##### 4.4. Impact of Domestic Debt on Economic Growth

The impact of domestic debt on the economy was examined using King and Levine's (1993) and Maana, Owino, and Mutai (2008) version of the Barro growth regression model which is specified thus:

$$Y_t = \alpha_0 + \alpha_1 L_t + \alpha_2 Z_t + U_t \quad \text{-----} \quad (1)$$

where  $t$  is for year,  $Y_t$  is the growth rate of real GDP,  $L_t$  is the domestic debt to nominal GDP ratio  $Z_t$  is a set of explanatory variables that have been shown empirically to be significant determinants of real growth and  $U_t$  is the error term. The  $Z_t$  variable includes the ratio of government expenditure to GDP, financial deepening, secondary school enrolment and openness.

∴ The model is specified as follows.

$$Y_t = \beta_0 + \beta_1 DDGD + \beta_2 EPS \text{ GDP} + \beta_3 M_2 \text{ GDP} + \beta_4 OP + \beta_5 -GVT + GDP + \beta_6 SSS + U_t$$

-----2

The apriori expectation:  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6 > 0$ .

#### 4.4. Impact of Domestic Debt on Credit to Private Sector

Domestic borrowing can crowd out private sector credit with adverse consequence for private investment. In order to determine this effect, a simple model was estimated as in Christensen (2005) and Manaa, Owino, and Mutai (2008). They regressed the ratio of private sector lending to broad money ( $M_2$ ) on the ratio of domestic debt to broad money.

The model is specified thus

$$P_t = \alpha_0 + \alpha_1 D_t + U_t \text{ -----(3)}$$

where  $P_t$  and  $D_t$  are the ratio of private sector lending to broad money and the ratio of domestic debt to Broad money respectively.

### 5. Discussion of Empirical Results

In this section, we undertake the empirical analysis of the impact of domestic debt and other cooperating variables on Nigeria's economic growth, and also determine the extent to which domestic debt crowds-out private sector investment in Nigeria for the period 1980 to 2009. The ordinary least square (OLS) regression technique was used to determine the nature of relationship between the dependent and independent variables.

#### 5.1. Impact of Domestic Debt on Nigeria's Economic Growth

The results of the estimated model are presented in Table 1 below:

Dependent Variable: LGDP				
Include Observations: 30				
Variable	Coefficient	Std. Error	T-Statistic	Probability
C	-22.62021	3.104318	-7.28669	0.0000
LCPS GDP	-0.630867	0.860391	-0.733233	0.4708
LDD GDP	-1.290969	0.318886	-4.048376	0.0005
L.ENR	4.041359	0.401057	10.07678	0.0000
LGEX GDP	-.0372793	0.502559	-0.741789	0.4657
LM <sub>2</sub> GDP	1.553812	1.103843	1.407638	0.1726
LOPEN	1.509799	0.489914	3.081578	0.005

Table 1: Regression Result of the Impact of Domestic Debt on the Economy's GDP.

R Squared = 0.959345

Adjusted R-Squared = 0.948739

F-Statistic = 90.45535

Prob (F-Statistic) = 0.0000

D.W = 2.299679

Source: Extracted from Regression Output Using E-View 3.1 for windows

The regression result above shows that the ratio of private sector credit to GDP - Financial Widening- (CPS GDP) is inversely related to gross domestic product. The coefficient of this variable is given as -0.6309, indicating that a 10 percent increase CPS GDP leads to 6.3 percent decrease in gross domestic product. The variable is not statistically significant as the p value estimate of 0.476 has shown. The inverse and non significance of this variable points to the fact that credit to the private sector is not properly channeled to the productive sector of the economy which grows the economy.

Domestic debt was also found to be inversely related to gross domestic product. This means that domestic debt in Nigeria supports the traditional hypothesis that in the long run, increase in domestic debt will crowd-out private sector investment and retard economic growth.

The coefficient of DD GDP is - 1.29097. This implies that a 1 percent increase in domestic debt will result in a 1.3 percent decrease in gross domestic product. This variable was found to be statistically significant at 1 and 5 percent levels of significance judging from the p value estimate of 0.0005. This inverse and significant impact of domestic debt on economic growth supports the finding from previous studies such as El-Malady and Torayeh (2010), and Adofu and Abula (2010).

The estimated coefficient of secondary school enrollment (LENR) which was used as a proxy for human capital development was found to be 4.041359. Thus, a direct relationship with gross domestic product was established. This is consistent with the a priori expectation. The variable is also significant at 1 and 5 percent levels of significance. This result indicates that Nigeria's human capital is growth inducing.

The negative sign of government expenditure (LGEX GDP) indicates that an inverse relationship exist between government expenditure and gross domestic product. This is not consistent with the a priori expectation. The variable is also not statistically significant. This inverse and non significant impact of the variable can be attributed to many factors including higher government expenditure which may slow down the overall performance of the economy. For example, in an attempt to finance rising expenditure

government may increase tax and/ or borrowing. Higher income tax reduces income and aggregate demand. Even highest profit tax tends to increase costs and reduce investment as well as profitability of firms. Moreover, if government increase borrowing especially from the banks, it will compete and crowd-out the private sector, thus reducing private sector investment and economic growth. This finding is in line with Komain (2007). Conclusively, we can say that the expansion of Nigeria fiscal policy on non productive projects is the reason of the inverse relationship of government expenditure and gross domestic product in the country.

The relationship between financial deepening and gross domestic product is a direct one. This is consistent with the apriori expectation and it indicates that the variable has a tendency to grow the Nigerian economy. However it is not statistically significant at 5 percent level of significance. This may be attributed to high interest rate in the country. Conventionally, with lower rate of interest, people plan to buy more durables goods for production and firm plan to increase their investment which will lead to economic growth.

The openness of the economy (LOPEN) conforms to the aprior expectation as it is positive and significant at 1 and 5 percent level of significance. This finding is consistent with Ayanwale's (2007), and Obadan and Okojie's (2010) finding, that openness is growth inducing in the Nigerian economy.

The overall goodness of the model as shown by the adjusted coefficient of determination is 0.948739, which shows that about 95 percent of the variation experienced in the gross domestic product of Nigeria for the period being investigated may be explained by the independent variables included in our model, particularly domestic debt, human capital development and openness of the economy.

The F-statistic which measures the joint statistical influence of the explanatory variables in explaining the dependent variable was found to be statistically significant at 5 percent level. The F-statistic figure of 90.45535 shows that the explanatory variables are important determinant of economic growth.

The value of Durbin Watson statistic is 2.299679 for the model. This implies that there is absence of autocorrelation among the explanatory variables in the model.

### *5.2. Impact of Domestic Debt on Private Sector Lending*

The result of the estimated model in equation three are presented in Table 2

Dependent Variable: CPSM <sub>2</sub>				
Include Observations: 30				
Variable	Coefficient	Std. Error	T-Statistic	Probability
C	2.222435	0.101174	21.96650	0.0000
DDM <sub>2</sub>	-0.218624	0.052194	-4.188673	0.0003

*Table 2: Regression Result of the Impact of Domestic Debt on Private Lending.*

R Squared = 0.38223

Adjusted R-Squared = 0.363267

F-Statistic = 17.54498

Prob (F-Statistic) = 0.000253

Durbin – Watson stat = 2.105982

Source: Extracted from Regression Output Using E-View 3.1 for windows

The regression result above shows that the ratio of domestic debt to broad money has inverse relationship with the ratio of private sector lending to broad money supply. The coefficient of domestic debt (LDDM<sub>2</sub>) is -0.218624 which implies that 10 percent increase in the ratio of domestic debt to broad money will lead to a 2.2 percent decrease in the ratio of private sector lending to broad money. The variable is statistically significant at 1 and 5 percent levels of significance. This finding reveals the crowding-out hypothesis of domestic debt on private sector lending in Nigeria. The result also suggests that the proportion of private sector lending decreases as domestic debt increases. This can be attributed to low participation by non-bank investors in the long term government debt instrument, which may have resulted in the increase in commercial banks holding of domestic debt. This development however leads to a negative impact of domestic debt on Nigeria's economic growth. This result is in line with the previous findings of the impact of domestic debt on the Nigerian economy.

The overall goodness of fit of the model as shown by the adjusted coefficient of determination is 0.363267, which shows that about 36 percent of the total variation in private sector lending is explained by changes in domestic debt. The low value of the adjusted coefficient of determination indicate that there are other factors which may crowd-out private leading in the economy. However, the F-statistic value of 17.54498 was statistically significant at 5 percent level of significance. The significance of this

variable indicates that domestic debt is a major determinant of the crowding-out of private sector lending in the economy.

The value of Durbin Watson statistics of 2.299679 is indicative of absence of autocorrelation in the model.

### **6.Summary, Conclusion and Policy Recommendation**

This study has investigated the impact of public domestic debt on the Nigerian economy for the period which spanned between 1980 and 2009. The objectives of the study were twofold: To examine the impact of domestic debt on Nigeria's economic growth and to ascertain if public domestic debt crowds out private sector lending in Nigeria. Using Maana, Owino and Mutai (2008) version of the Berror growth model and relying on Ordinary Least Square techniques, the study found that government domestic debt has inverse and significant impact on Nigeria's economic growth. This finding confirms the traditional hypothesis of long run effect of domestic debt on economic growth. This was attributed to mismanagement of government fund and inappropriate channeling of government fund to unproductive venture.

Openness and human capital were also found to have direct and significant impact on Nigeria's economic performance while financial deepening was found to have direct but insignificant impact on the country economic growth. The study also revealed that credit to private sector and government expenditure have inverse and insignificant effect on economic growth which is not consistent with apriori expectation. The regression result has shown that domestic debt crowds-out private sector lending such that a 10 percent increase in domestic debt will crowd-out private sector lending by 2.2 percent. This supports the crowd-out hypothesis rising profile of domestic debt on the Nigerian economy.

Conclusively, the general lesson that emerges from this study is that continuous rise in the domestic debt profile in the Nigeria has the tendency to crowd-out private sector lending and this has adverse effect on economic growth.

To reduce the adverse effect of domestic debt on the economy, the study makes the following policy recommendations.

An analysis of the economic and social profitability of all domestic debt financial projects must be carried out to ensure that the returns would be in excess of the interest and capital repayment. The aim will be to prevent the deadweight effect of domestic debt on the economy.



The use of domestically borrowed fund for government project must be closely monitored in order to ensure that they are applied efficiently and effectively on productive venture which are self liquidating.

The monetary authority should make Nigeria domestic debt instrument marketable, because market base domestic debt increase macroeconomic growth and reduces exposure to external real shocks.

Government should restructure its revenue base to finance fiscal policy expansion rather than embarking on domestic borrowing. This can be achieved by improving its revenue sources and efficient pursuit of tax reforms which will help to minimized tax avoidance and invasion.

The monetary authority should adopt policies that would encourage further financial deepening in terms of mobilizing private savings on long term government domestic debt instrument and channeling of private credit facilities to productive ventures. This will help to reduce the crowd-out effect of domestic debt and leads to economic performance in the country.

Government should ensure that adequate macroeconomic policies that will open up the economy are put in place to encourage foreign access to holding of longer maturing domestic debt. Since openness has direct and significant impact on economic growth.

Finally, adequate machinery should be put in place by all sectors of government to arrest corruption and penalize those who divert and embezzle public funds. This will help to reduce the rising profile of domestic debt in Nigeria.

Dependent Variable: GDP				
Method: Least Squares				
Date: 04/17/12 Time: 13:55				
Sample: 1980 2009				
Included observations: 30				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-22.62021	3.104318	-7.286690	0.0000
CPSGDP	-0.630867	0.860391	-0.733233	0.4708
DDGDP	-1.290969	0.318886	-4.048376	0.0005
ENR	4.041359	0.401057	10.07678	0.0000
GEXGDP	-0.372793	0.502559	-0.741789	0.4657
M2GDP	1.553812	1.103843	1.407638	0.1726
OPEN	1.509799	0.489944	3.081574	0.0053
R-squared	0.959345	Mean dependent var		5.996836
Adjusted R-squared	0.948739	S.D. dependent var		0.965801
S.E. of regression	0.218666	Akaike info criterion		- 0.001580
Sum squared resid	1.099740	Schwarz criterion		0.325366
Log likelihood	7.023699	F-statistic		90.45535
Durbin-Watson stat	2.299679	Prob(F-statistic)		0.000000

Table 3

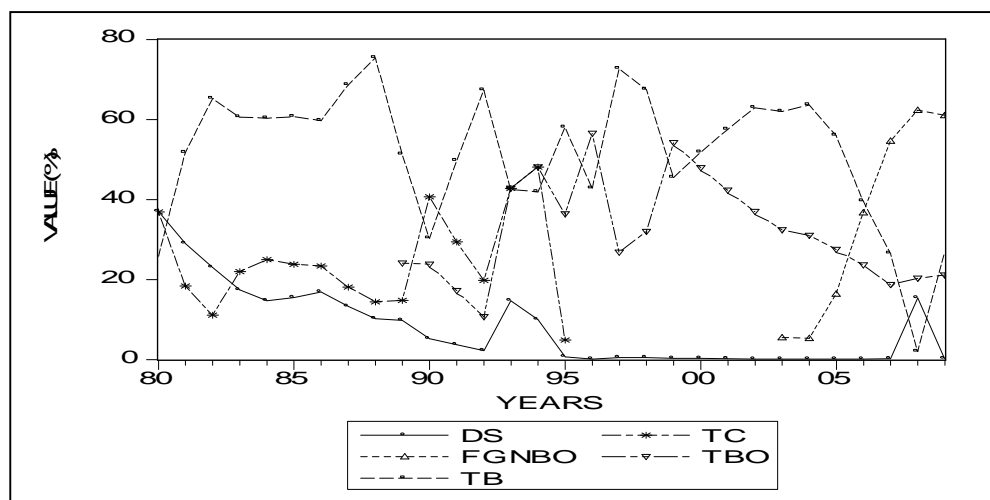


Figure 2: The Trend in Nigeria's Composition of Public Domestic Debt (1980 - 2009)

Dependent Variable: CPSM2				
Method: Least Squares				
Date: 04/17/12 Time: 13:59				
Sample: 1980 2009				
Included observations: 30				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.222435	0.101174	21.96650	0.0000
DDM2	-0.218624	0.052194	-4.188673	0.0003
R-squared	0.385223	Mean dependent var		1.800944
Adjusted R-squared	0.363267	S.D. dependent var		0.072146
S.E. of regression	0.057569	Akaike info criterion		-2.807323
Sum squared resid	0.092797	Schwarz criterion		-2.713910
Log likelihood	44.10985	F-statistic		17.54498
Durbin-Watson stat	2.105982	Prob(F-statistic)		0.000253

Table 4

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