

# **IMPACT OF PUBLIC DEBT ON ECONOMIC GROWTH IN NIGERIA FROM 1987 TO 2020**

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DOI: 10.5281/zenodo.14925288

## **Abstract:**

This study investigated the impact of public debt on the Nigerian economy from 1987 to 2020. The specific objectives were to determine the impact of external debt on economic growth and to examine the impact of domestic debt on economic growth in Nigeria. The ex-post facto research design was adopted to enable the researcher make use of secondary data to determine the cause effect relationship of public debt on economic growth in Nigeria. The dependent and independent variables were observed over the period, 1987 to 2020. Empirical investigation was carried out on the basis of time series data collected from the Central Bank of Nigeria Statistical Bulletin. The unit root test performed on each of the variables in the model using the Augmented Dickey-Fuller (ADF) unit root tests showed that the variables were stationarity at level and data analyzed with Ordinary Least Square. (OLS). Findings from this study revealed that external debt impacted negatively on economic growth of Nigeria while domestic debt impacted positively on economic growth of Nigeria. Following these findings, this study recommended that policy makers should discourage external borrowing by all means and encourage domestic borrowing, while integrating appropriate measures to ensure efficient management of domestic debts

**Keywords:** Public: Debt: Economy: Nigeria

## **1. INTRODUCTION**

Economic theory suggests that reasonable levels of borrowing by a developing country are likely to enhance its economic growth (Pattillo, Ricci, and Poirson, 2002). In order to encourage growth, countries at early stages of development borrow to augment what they have because of dominance of small stocks of capital hence they are likely to have investment opportunities with rates of return higher than that of their counterparts in developed economies. According to Essien, Agboegbulem, Mba&Onumonu (2016): "Countries borrow when they are unable to generate enough domestic savings to carry out their productive activities. The funds borrowed are meant to boost economic growth and development of the country thereby improves the standard of living of the citizenry. Governments usually borrow by issuing securities, government bonds, and bills. Countries could also borrow directly from supranational organization such as the World Bank and international financial institutions".

Public debt increases as experienced by many developing countries of the world had become a global concern, following the fall in oil prices, variation on exchange rate etc. which has brought adverse effect to some developing nations of the world such as Nigeria. Also, in reflecting on the economic implication of the country's growing debt record, it is a very important policy issue which needs broad public debate. The rate of country's indebtedness is a problem that is facing many growing nations since the beginning of the 21st Century. Therefore, increasing levels of public debt of a country can be harmful to the growth of the economy of any country if not well utilized.

Elom-Obed, Odo, Elom&Anoke (2017) posited that:

"Public debt therefore refers to amount of money that federal government, state government and local government owe at any time. Public debt accrues when the government is experiencing budget deficit. In other word, all the money that government owes at all levels is defined as public debts. It can be in the form of services like pension payment owing to his employee both domestically or externally, or any contract entered by government and could not pay. If government is having budget deficit difficulties and the government had gained the trust in the world and her economies are strong, such government can raise money through issuing their bonds for other nations, individuals and groups to come and buy. This is accompanied with government promises to pay them back at a certain time with fairly interest rate. Any government who lacks trust in the world to issue bond for people to purchase will be left with no option than borrowing from either external institutions or domestic institution with unfavorable or favorable interest rate. Public debt can be classified into different types such as long-term debt when the debt is expected to last for a longer period of time and short-term debt if debt is designed to last for one or two years only".

One of the problems facing contemporary developing nations of the world including Nigeria is arguably the issue of rising public debt and the unpleasant implications to the economy. Economic theory suggests that reasonable levels of borrowing by a developing country are likely to enhance its economic growth (Patillo, Poirson& Ricci, 2002). Stieglitz (2000) stated that government borrowing can crowd out investment, which will reduce future output and wages. When output and wages are affected the welfare of the citizens will be made vulnerable. These claims deserve serious attention in the context of the country's crying need to generate faster employment growth, meet the Millennium Development Goals and attain the Vision 2030 goals (Achieng, 2010).

According to Kehinde (2014):

"The rationale for raising loan has always been to bridge the domestic resource gap in order to accelerate economic development. This is because nations just like individuals need loans to augment their resources. Consequently, Nigeria decides to borrow in order to finance specific projects. However, some pertinent questions arise from the borrowing, namely: Are the funds borrowed used to finance economically viable projects? Why is it that Nigeria

cannot generate enough foreign exchange with which to repay the externally borrowed funds? How efficient and effective is the Nigerian debt management?"

The debt problem has, for decades, remained a recurrent and discordant note in the discourse on the crisis and contradictions of Nigerian development. This is, however, not entirely surprising given its magnitude and the consequences for Nigeria. The collective debt burden of the country may be seen as a betrayal of Nigerian huge resource base, both human and material, and the failure of policy measures targeted at the management of those resources. (Omotola&Saliu, 2009)

Since the early 1960's, the ratio of public debt to Gross Domestic Product (GDP) has been on the increase. Nigerian public debt accounted for 16.1% of the country's nominal GDP in December 2018, compared to the ratio of 16.2% in the previous year. The nation's debt to GDP ratio data reached an all-time high of 80.5% in December 1992 and a record low of 7.2% in December 2008. Nigerian national debt reached 63.3USD Billion in March 2018 (NBS, 2018). Though Nigeria has not been alone in experiencing escalating government indebtedness but in comparison with other Sub-Sahara Africa, Nigerian debt to GDP has been on the high side (Asogwa, 2005). An escalating debt profile may present serious obstacle to a nation's path to economic growth and development. The cost of servicing the debt may expand beyond the capacity of the economy to cope thereby impacting negatively on the ability to achieve the desired fiscal and monetary policy objectives. Furthermore, a rising debt burden may constrain the ability of government to undertake more productive investment programs in infrastructure, education and public health (Soludo, 2003). The recent movement of attention from external borrowing to domestic borrowing due to limited access to external finance, indicates that Nigerian domestic debt is bound to increase continuously and may grow beyond limits. It is against these background that the study seeks to investigate the impact of public debt on economic growth in Nigeria

### **Objectives of the Study**

The main objective of the study is to investigate the impact of public debt on economic growth in Nigeria. However, the specific objectives shall be to:

1. Determine the impact of external debt on economic growth in Nigeria.
2. Examine the impact of domestic debt on economic growth in Nigeria.

### **Research Questions**

In line with the objectives of the study, the research questions shall be:

1. To what extent does external debt affect economic growth in Nigeria.
2. To what extent does domestic debt affect economic growth in Nigeria.

### **Hypotheses of the Study**

Based on the objectives of the study and the research questions, the hypotheses of the study shall be:

1. External debt has no positive and significant impact on economic growth in Nigeria.
2. Domestic debt has no positive and significant impact on economic growth in Nigeria.

### **Scope of the Study**

The study shall include the economic and financial data collected from the Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics. Data relating to external debt, domestic debt, total debt, debt service, exchange rate and real GDP figure will be collected on annual basis. The study will be limited to the period 1987 to 2020 since the financial liberalization, as part of the Structural Adjustment Program (SAP) began in 1987.

## **2. REVIEW OF RELATED LITERATURE**

### **The Concept of Public Debt**

Public debt is defined as the accumulated total of government borrowing from either the private sector of the country or from abroad (Mayo, 1996). It can be used to regulate the economy through variations in the volume, composition and yield rates of such debt (Bhatia, 2009). A long-term maturity composition of public debt will reduce total liquidity in the economy while in opposite direction, a short-term maturity will increase liquidity. Public debt is used as a vital tool by the government to control exchange rate inflation, etc. Since, it forms a major part of the total credit supply of the economy, public debt is a vital alternative source of borrowing. The appropriateness of public borrowing depends on the purposes of government borrowing as highlighted by Okoduwa (1997) include:

- To meet emergencies like war and depression,
- To finance capital expenditures, so as to perform certain public services,
- To finance recurrent expenditures,
- To finance public capital assets for self-liquidating public services,

Over the years, many governments have left with large outstanding debt making the national debt for all her citizens. Interest has to be paid on all the debt and when bonds expire, they are either repaid or refinanced through new borrowing. Public debt could be divided into external and domestic.

### **External Debt**

This involves a, for an example, Nigeria borrowing money from foreign countries or issuing a Euro bond to finance capital projects. Due to the scarcity of resources and the law of comparative advantage, countries depend on each other to foster economic growth and achieve sustainable economic development (Adepoju, Salau&Obayelu, 2007).

The funds can be borrowed either from the foreign government or businessmen and private citizens of the foreign country. External debt is widely believed to enhance economic growth and development (Osinubi, Dauda&Olaleru, 2006). That is the basic reason why the debt is usually borrowed in the first place. The necessity for government to borrow in order to finance a deficit budget has led to the development of external debt (Osinubi, Dauda&Olaleru, 2006).

### **Internal or Domestic Debt**

This consists of government borrowing from within her domestic economy. This type of debt, unlike the external borrowing does not increase the total resources available to that country. There is simply a transfer of resources from one end to the other for public services purpose (Nurudeen&Usman, 2010). Also, the interest payment only transfers resources from the taxpayers to the bondholders. Internal debt only effects a transfer of purchasing power among the citizens of the country, thus there is no giving up of real output to another country. Instruments used for internal debt include treasury bills, treasury certificate, treasury bonds, development stock and Federal Government of Nigeria bonds. The oppressive burden of internal debt has service fostered the initiative to borrow externally at cheaper rates of interest. According to the Debt Management Office, internal debt burden in Nigeria presently, exceeds ₦6tn.

### **Empirical Framework**

Ekperiware and Oladeji (2012) examined the effect of external debt relief on economic growth in Nigeria using regression technique on quarterly time series of external debt, external debt service and real gross domestic product. Applying Chow- test to the regression result they found that there was a structural break in the relationship between economic growth and external debt in Nigeria during the period 1975 to 2005. The study concluded that the external debt relief made more resources available for economic growth in Nigeria and recommended a shift towards discretionary concessional borrowing. It also identified external debt relief as a good option for poor unsustainable indebted countries as a way of making resources available for economic growth with the real sector being the focal point where value is created rather than impeding it with mismanagement and servicing debt.

Obademi (2012) used the ordinary least squares (OLS) technique in an augmented Cobb Douglas model in analyzing the impact of public debt on economic growth in Nigeria. The variables used were the external debt, domestic debt, total debt and budget deficit. He found that the impact of debt on economic growth was negative and quite significant in the long-run though in the short run the impact was useful. He concluded that though the impact of borrowed funds on the Nigerian economy was positive in the short-run, its impact in the long-run depressed the economy as a result of inefficient debt management.

In another attempt to study the impact of external debt management on macro-economic performance in Nigeria, Ezike and Mojekwu (2011) applied the OLS technique on real GDP, total external debt stock and debt service ratio. Their results revealed that foreign capital inflow was positive as expected while debt service/export ratio was negative as expected. This was because debt capital adds to capital formation and positively impacted on economic growth. On the other hand, debt-service ratio reflects capital outflow and consequently deteriorates the performance of a country and thus reduces real GDP. It also confirms the theoretical expectations that debt service/export ratio diverts resources away from the debtor country. Since total debt stock depicts a positive relationship in the results instead of a negative relationship and statistically significant at all the levels, they therefore concluded that total debt stock, less debt service, still leaves a robust positive balance, to enhance capital accumulation that positively impacts economic growth.

Udoka and Ogege (2012) examined the extent of public debt crisis and its consequences on economic development using data on the Nigerian economy for the period 1970 to 2010. They employed the error correction modeling framework with co-integration techniques to test the relationship between per-capita GDP and other macroeconomic variables (foreign reserve, debt stock, investment, debt service payment). The test revealed that political instability may reduce the rate of development and other independent variables were responsible for the underdevelopment of the country. Hence, they recommended that, to avoid the crisis of economic development in Nigeria, public debt should be reduced to minimal level.

Tajudeen (2012) examined the causal nexus between public debt and economic growth in Nigeria between 1970 and 2010 using a Vector Autoregressive (VAR). The variables used in the study were tested for stationarity using the Augmented Dickey Fuller and Philip Perron test. The result showed that the variables were stationary at first differencing. Co-integration test was also performed and the result revealed the presence of co-integration between public debt and economic growth. The co-integration results showed that public debt and economic growth have long run relationship. The findings of the VAR model revealed that there is a bi-directional causality between public debt and economic growth in Nigeria. The paper concluded that public debt and economic growth have long run relationship, and they are positively related if the government is sincere with the loan obtained and use it for the development of the economy rather than channel the funds to their personal benefit.

Mba, Yuni&Oburota (2013) analyzed the importance of domestic debt on economic growth of Nigeria. The objective of the study was to investigate the relationship between government domestic debt and economic growth and policy that is likely to improve private sector investment and break growth resistance problem and empirically determine the relationship between domestic debt and some macroeconomic variables. The study employed the error correction model procedures following an examination of properties of the time series using unit root and co-integration test. Findings showed that domestic debt and credit have a significant and direct relationship with



GDP and that debt servicing had inverse relationship with GDP and also government expenditure had a direct but not significant relationship with GDP. The implication of the findings was that domestic debt should be invested in productive sector of the economy and more specifically in the real sector and further productivity gain will be achieved in the improvement on capital project expenditure.

Essien, Agboegbulem, Mba&Onumonu (2016) examined the impact of public sector borrowings on prices, interest rates, and output in Nigeria. It utilized a Vector Autoregressive framework, the Granger causality test, impulse response, and variance decomposition of the various innovations to study the impact. It found that shock to external debt stock increases prime lending rate, but with a lag. However, the level of external and domestic debt over the period of this study had no significant impact on the general price level and output.

Elom-Obed, Odo, Elom&Anoke (2017) analyzed the relationship between public debt and economic growth in Nigeria from 1980-2015. The study adopted Vector Error Correction Model (VECM) approach of econometric data analysis. The variables used in the study included real gross domestic product (RGDP), foreign debt, domestic debt and domestic private savings. The results of the study indicated that: (i) External debt had significant negative impact on economic growth within the period under study. (ii) Domestic debt (DMD) had significant negative relationship with economic growth within the period under consideration. (iii) External debt and domestic debt granger cause GDP in Nigeria with causality running from external debt and domestic debt to RGDP. The implication of this result is that the negative correlation between debt stocks (external debt and domestic debt) and economic growth which is contrary to a prior expectation may be highlighting the misappropriation and wrong application (corrupt practices) of the borrowed funds. Based on the findings, the study recommends therefore that (i) Government should reduce external debt and the ones obtained should be strictly used for purposes intended to ensure positive effect. (ii) Government should cut down on domestic borrowing and ensure that the already borrowed funds are applied for purposes intended to ensure positive effect and through growth. (iii) With the evidence of negative causality running from both external and domestic debt stock to economic growth (RGDP) suggests that government should cut down in both borrowings to ensure economic stability and sustainable growth.

Akhanolu, Babajide, Akinjare, Oladeji&Osuma (2018) focused on the Nigerian government's debt and its impact on economic growth from 1982-2017 using the two-stage least square regression. For the first equation, both internal and external debt and their lags were regressed against GDP, the result showed that external debt negatively impacts the economy while internal debt positively does the same. For the second equation, GDP, total savings deposits in the Nigerian deposit money banks and capital expenditure were regressed against internal debt, the result showed that all the variables have significant relationship with internal debt. The study thus,

recommended that first; Corruption of borrowed funds should be tackled at all cost and also, government should minimize external borrowing, since, it impacts the economy negatively.

Irina & Iulian (2015) looked at the relationship between public debt and economic growth for a panel of 33 European countries (28 European Union Member States and 5 candidate countries to European accession) over the period 1990-2011. More specifically, it investigated if there is evidence of a non-linear (quadratic) relationship, both for the entire European countries group and for the developed and developing countries subgroups. The main sources of data were World Bank's World Development Indicators and International Monetary Fund's World Economic Outlook and Historical Public Debt dataset. The results confirmed the existence of a "U inverted" relationship, with a maximum debt threshold of about 94% of GDP. After this threshold public debt was expected to negatively affect the economic growth rate, due to higher interest rates, fear of public debt unsustainability and severe budgetary consolidation measures. However, this threshold was found to be more than twice lower in developing European countries compared to the developed ones, as the former enjoy lower credibility, higher vulnerability to shocks and depend more on external capital transfers.

Barik (2013) examined the potential indirect influence of public debt on economic growth through its impact on investment. The issue was empirically examined using an augmented Solow (1956) neoclassical model of economic growth that allows for both the direct and indirect effects of public debt on economic growth. The econometric investigation, using annual data series for the period of 1981-2011, offered strong evidence that there was an indirect connection between public debt and economic growth in India. Public debt appeared to be positively related to both investment and output growth and thus had an indirect positive effect on economic growth through its positive influence on investment.

Saifuddin (2016) examined how public debt in Bangladesh may influence its economic growth. For this purpose, two models, Investment model and Growth model, were used in the study. The investment model was used to investigate the potential indirect effect of public debt on economic growth through its impact on investment. The growth model examined the direct relationship between public debt and economic growth. The study period is 1974 to 2014. Augmented Dickey-Fuller test was used to diagnose whether time series data are non-stationary. A TSLS regression was ran to estimate those models. The estimated results showed that public debt is positively related to both investment and economic growth. The empirical findings also suggested that public debt has an indirect positive effect on growth through its positive influence on investment.



### 3. METHODOLOGY

The *ex-post facto* research design was adopted in this study to enable the researcher make use of secondary data to determine the cause-effect relationship of public debt and economic growth in Nigeria. The dependent and independent variables were observed over the period, 1987 to 2020.

The variables used were estimated in order to obtain the description/ summary statistics. The essence of this was to observe the characteristics of the data employed.

The study used time series secondary. Empirical investigation was carried out on the basis of the sample covering the period 1987 to 2020. Gross Domestic Product (RGDP) was used as an indicator of economic growth. External debt, domestic debt was used as an indicator of public debt. Data on these variables were sourced from the Central Bank of Nigeria Statistical Bulletin.

The study adopted and modified the Keynesian national income model used by Igeri, Odo, Anoke&Nwachukwu (2016). The model was stated as follows:

$$Y = C + I + G + NX \quad (1)$$

Where Y stands for income (proxied with RGDP), C stands for private consumption, I stand for private investment, G stands for government expenditure and NX stands for net export. Thus, in order to investigate the impact of public debt on the economic growth in Nigeria, income is proxied with gross domestic product (GDP), and public debt (disaggregated into external debt and domestic debt), therefore equation (1) is transformed to obtain equation (2) which is stated functionally as:

$$GDP = f(DD, EXD) \quad (2)$$

This was linearly specified as:

$$GDP_t = \beta_0 + \beta_1 DD_t + \beta_2 EXD_t + \mu_t \quad (3)$$

Where GDP = Gross Domestic Product, a proxy for economic activity,

EXD = external debt, DD= domestic debt,

$\beta_1$ -  $\beta_2$  = Coefficients of the parameters,  $\beta_0$  = Constant and  $\mu_t$  = error correction term.

The unit root test was performed on each of the variables in the model using the Augmented Dickey-Fuller (ADF) unit root tests to determine the stationarity of the data used. A time series data is said to be stationary if it does not change overtime, which implies that its values have constant variability. This enables us to avoid the problems of spurious regressions that are associated with non-stationary time series models.

### 4. ANALYSIS OF DATA

Stating the hypothesis into null and alternate forms we have:

### Hypothesis One

$H_0$ : Domestic debt has no positive and significant impact on economic growth in Nigeria.  $H_a$ : Domestic debt has positive and significant impact on economic growth in Nigeria.

### Hypothesis Two

$H_0$ : External debt has no positive and significant impact on economic growth in Nigeria.  $H_a$ : External debt has positive and significant impact on economic growth in Nigeria.

### Analysis of the Regression Results of impact of Public Debt on the Economy

Dependent Variable: GDP

Method: Least Squares

Date: 09/29/22 Time: 13:54

Sample: 1987 2020

Included observations: 34

| Variable           | Coefficient |                       | Std. Error | t -Statistic | Prob.    |           |
|--------------------|-------------|-----------------------|------------|--------------|----------|-----------|
| DD                 | 10.72227    |                       | 0.353763   | 30.30915     | 0.0000   |           |
| EXD                | -1.041819   | 0.579218              | -1.798666  | 0.0815       |          |           |
| R-squared          | 0.981454    | Mean dependent var    |            | 40073.91     | Adjusted | R-squared |
|                    | 0.980875    | S.D. dependent var    | 47340.15   |              |          |           |
| S.E. of regression | 6546.841    | Akaike info criterion |            | 20.46838     |          |           |
| Sum squared resid  | 1.37E+09    | Schwarz criterion     |            | 20.55816     |          |           |
| Log likelihood     | -345.9624   | Hannan-Quinn citer.   |            | 20.49899     |          |           |
| Durbin-Watson stat | 0.443282    |                       |            |              |          |           |

**Source:** Researchers' E -view result

Model Equation:  $GDP = C + 10.72DD - 1.04EXD + \mu$

As revealed from above regression table, domestic debt (DD) has positive and significant impact on GDP in Nigeria (coefficient of DD = 10.72227, t-value = 30.30915) using 1987-2020 data. The probability value of 0.00 < 0.05 further indicates that, this is significant.

Again, the same table shows that external debt (EXD) has negative but insignificant impact on GDP in Nigeria (coefficient of EXD = -1.041819,  $t = -1.798666$ ) using 1987-2020 data. The probability value of 0.0815 > further indicates that, this is not significant.

On the whole the coefficient of determination which measures the goodness of fit as revealed by R-square ( $R^2$ ) indicates that 98.14% of the variations observed in the dependent variable were explained by variations in the independent variable. The test of goodness of fit of the model as indicated by  $R^2$  was properly adjusted by the Adjusted R-Squared of 98.09%. Hence, an increase in domestic debt, all things being equal has the tendency of increasing the GDP significantly. Also, an increase in external debt, all things being equal has the tendency of reducing the GDP insignificantly.

Consequently, we reject the null hypothesis and accept the alternate hypothesis that states that domestic debt has positive and significant impact on economic growth in Nigeria. Secondly, we reject the alternate hypothesis and accept the null hypothesis that states that external debt does not have positive and significant impact on economic growth in Nigeria.

## **5. CONCLUSION AND RECOMMENDATION**

One of the problems facing contemporary developing nations of the world including Nigeria is arguably the issue of rising public debt and the unpleasant implications to the economy. Economic theory suggests that reasonable levels of borrowing by a developing country are likely to enhance its economic growth. However, findings from this study revealed that external debt impacted negatively on economic growth of Nigeria while domestic debt impacted positively on economic growth of Nigeria. Following these findings, this study recommends that policy makers should discourage external borrowing by all means and encourage domestic borrowing, while integrating appropriate measures to ensure efficient management of domestic debts.

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