Estimated Effect of Public Debt on Economic Performance in Nigeria

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Abstract
This study examined the relationship between public debt and Nigerian economic performance. The objective was to establish the relationship that exists between public debt and Nigerian economic growth. Annual time series data was sourced from Central Bank of Nigeria Statistical Bulletin various issues. Economic performance was measured by real gross domestic product while public debt was measured by Nigerian external debt, domestic debt and debt servicing. The ordinary least square method of cointegration, Augmented Dickey Fuller Unit Root Test, Vector Error Correction Model and Granger Causality test was used to estimate the dynamic relationship between the dependent and the independent variable. The study found that external debt and domestic debt have positive and significant relationship with Nigerian Real Gross Domestic Product while Debt Servicing has negative and insignificant relationship with Real Gross Domestic Products. The unit root test found that the variables are stationary at first difference; the cointegration test revealed that the variables have long run relationship with the dependent variable. The study concludes that public debt have significant relationship with Nigerian economic performance. It therefore recommends that public debt in Nigeria should be judiciously used and accounted for to achieve set macroeconomic objectives.

Keywords: Public Debt, Economic Performance, External Debt, Domestic Debt, Debt Servicing

INTRODUCTION

The macroeconomic goals of Nigerian government in the past four decades have been to achieve sustainable economic growth, increase in aggregate supply and demand, price stability and full employment. To achieve this, government intervenes in the market economy as justified by the Keynesian's economist to bridge supply-demand gap in the market by providing public goods for the citizen. This led to government deficit budget and a means of financing it. Public debt is a government receipt aimed at bridging the savings investment gap in the government. Economic theory suggests that reasonable level of borrowing by a developing country is likely to enhance its economic growth (Abdelmawla & Mohammed, 2005; Ndoricimpa, 2020). Public debt comprises the domestic and the external debt.

Public debt is an important means of bridging Government financing gap especially for low income Countries like Nigeria. Notwithstanding this fact, public debt can however be viewed as a doubled-edged sword. For instance, effective and efficient utilization of public debt can increase economic growth and help a Government to achieve its social and economic objectives. Theoretically, financing developmental related projects through debt can help a country to build its production capacity and facilitate economic growth (Cohen, 1993; Babalola & Onikosi-Alliyu, 2020). A further argument is that borrowing from external sources enables a Country to finance capital formation not only by mobilizing domestic savings but also by tapping into foreign capital surplus. Based on this argument, an analysis carried out by Siddiqui (2002) found that foreign borrowing increased resource availability and contributed to economic growth in South Asia. On the other hand, excessive reliance on public debt and inappropriate public debt management and strategies can increase macroeconomic risks and hamper economic growth. Even with concessional flows of loans, high public debt calls for increased revenues to service debt and this certainly has social, economic and political implication in the absence of a broad tax revenue base. As a result, the Government is left with no other alternative but to cut allocations for other public spending that can have positive externalities on economic growth (Isa, 2004; Ndoricimpa, 2020, Malachy et al., 2022).

Links between economic performance and public debt can be observed through the effect that a fiscal deficit has on investments. And this can be explained through the 'debt overhang' and 'crowding out' effects. According to theoretical arguments, huge fiscal deficit results in increased borrowing by the Government which then constrains capital resources and pushes up the cost of capital through high interest rates.

Economic theory suggests that reasonable levels of borrowing by a developing country are likely to enhance its economic growth. When economic growth is enhanced (at least more than 5% growth rate) the economy's poverty situation is likely to be affected positively. In order to encourage growth, countries at early stages of development like Nigeria 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. This becomes effective as long as borrowed funds and some internally ploughed back funds are properly utilized for productive investment, and do not suffer from macroeconomic instability, policies that distort economic incentives, or sizable adverse shocks. Growth therefore is likely to increase and allow for timely debt repayments. When this cycle is maintained for a period of time growth will affect per capita income positively which is a prerequisite for poverty reduction. These predictions are known to hold even in theories based on the more realistic assumption that countries may not be able to borrow freely because of the risk of debt denial.

Theoretically and empirically, there are two opposite effect of public debt. Public debt when properly accounted for and invested in the domestic economy have the capacity of increasing the productive capacity of the economy by putting idle resource to work, increase production beyond national consumption. However, the debt structure of the country affects individual's citizens, government aid corporate organizations such as the banking institutions. For instance, findings

indicate that government borrowing crowd out investment; this means discouraging savings as a result of debt servicing. This is one of the negative effects of public debt (Adesola, 2009; Festus et al. 2022). One of the valid critics of the present administration is the rising stock of Nigerian public debt. According to Debt Management Office, Nigerian debt was ₦8.32trillion in 2013 and ₦15.56 trillion in the last quarter of 2017 this means that public debt in Nigeria is above two times greater than fiscal budget. Nigeria has long-been known as the most indebted African country, but not the most developed African country, this is because the growth of public debt does not correspond with the performance of the economy.

A critical examination of the Nigerian macroeconomic indicators revealed that, the country is characterized with abundant idle human and material resources which would have been exploited with the public debt borrowed by the government. For instance Nigerian is rated one of the poorest country in the world and 148th out 177 countries in Human Development index (HDI) despite the significant growth in public debt and black gold exploitation (Ajayi and Khan, 2000). There is high rate of infrastructural decay that threatens the existence and survival of entrepreneurial development. The World Bank estimate that over 70% of Nigerians are living in an object poverty of less than $2 a day. The country is known to be the highest importer of generator as a result of ill power supply (Lucky and Nwosi, 2016). The country's economy is seen to be suffering from the so-called Dutch disease, Resource Curse and held the classical example of the paradox of plenty. The problem is that significant proportion of Nigerian external debt cannot be accounted for while others are embezzled and invested in personal use in the country.

A number of empirical studies undertaken in this area show that in the long run and beyond a certain threshold, public debt would exert negatively on economic growth and such conclusion are consistent with the debt overhang theories advanced by the neoclassical economists. In the case of Nigeria, public debt over the period of analysis depicts a rising trend and in some periods has been recorded to be above Gross Domestic Products. The rise has been attributed by continuous borrowing by Government, both external and internal to finance its budget deficit as it aspires to achieve its development agenda defined in the National Development Plans. Empirical studies on the effect of public debt on the economic growth of the developing countries have been a point of controversy among scholars. Some of the scholars reported positive relationship between public debt and economic growth Adams (2004), Adesola (2009), Ayadi and Ayadi (2008) while other scholars such as Allen (2003), Ogunmiyiwa (2011) reported positive relationship. However, in Nigeria, the effect of public debt has been studied differently. Some scholars examined domestic debts and others examined external debt. Therefore, the Country is not precluded from the implication of a rising public debt stock and this has necessitated the need for an empirical analysis of the above phenomenon in Nigeria.

LITERATURE REVIEW
Concept of Public Debt
According to Rosen and Gayer, public debt is the sum of all budget deficits in the previous period. This definition indicates that in a year with a deficit the debt will increase, and in a year with a surplus the debt will decrease. In economic terms, debt is a stock variable measured at a given

time, while the deficit and the surplus are flow variables measured over a period of time (Rosen, Gayer, 2010). In Nigeria, the Federal, State budget deficit seems to be a predetermined and constant result. Table 1 shows the plan and future realization of the state budget, proving previously mentioned arguments. In the case of extreme need, as in the case of the budget deficit, the state can provide funding in three ways: by increasing taxes and other charges, by sale of assets or by public borrowing (Rosen, Gayer). Since the increase of taxes and the sale of state property are extremely unpopular measures and often insufficiently efficient and effective, public borrowing and public debt management is becoming one of the primary and highly complex tasks. The level of seriousness in the approach to public debt management, in addition to being extremely high in the current period, is increasing more and more in each reporting period. Public debt occurs when a government borrows to offset its deficits or for the development of its economy. Public debt may be either internal or external. That is, debt s may be incurred by the government through borrowing from the domestic or international markets so as to finance a nation's domestic investment.

The classical economists view debt as a form of state-imposed future taxation. They believe that public debt prevents present and future generations from accumulating wealth and from enjoying life to the fullest. They suggest keeping government borrowing as minimum as possible due to crowding-out of private investment. Where public spending is necessary, it should be restricted to investment in critical infrastructure that increases productive efficiency of the economy (Komlan & Essosinam, 2022). In situations where governments use heavy borrowing to fund spending, the resulting pressures in the credit market may result in higher interest rates, which in turn slow down overall private investment. In this way, the classical economists argue that government spending through heavy borrowing from the domestic financial markets crowds out private sector investment thereby impeding a country's natural growth process because the government diverts scarce resources that could be used effectively in the private sector to pay for systemic mismanagement (Malachy et al.2022). This claim made a strong case that governmental debt is bad for the economy, especially if it weakens both the fiscal restraint of the budgeting process and the financial inclusion of the private sector (Àkos & Istvàn, 2019). According to the classical economists, government debt-financed spending cannot fully compensate for the detrimental effects of private investment competition, which results in economic stagnation. According to this school of thought, domestic public borrowing results in liquidity crises and higher interest rates, which deter private investment.

The neoclassical school of thought contends that fiscal deficits increase interest rates, discourage the issuance of private bonds, private investments, and private spending, raise the level of inflation, cause an equal increase in current account deficits, and ultimately slow economic growth by crowding-out resources (Festus et al. 2022). This school's supporters make the case for a strong fiscal strategy to support stable macroeconomic conditions that would encourage sustained economic activity. They claim that by scaring away private investment, a liberalization of fiscal policy is harmful to production growth. Since the government typically concentrates on ineffective spending with limited potential for ongoing development of macroeconomic conditions

commensurate with long-term economic expectations, the liberalization of fiscal policy not only raises interest rates but also inhibits business activity (Bongumusa et al. 2022).

Because of the investments it produces, debt does not place a burden on either present or future generations, according to Keynesians. According to this strategy, debt accelerates a more proportionate increase in investment, which in turn stimulates a rise in production because debt increases demand. On the other hand, a typical Keynesian perspective holds that public sector spending financed by debt has a crowding-in effect, which has a positive multiplier effect on national output (Mhlaba & Phiri, 2019). The Keynesians use the expansionary impacts of budget deficits as a counter argument to the crowding-out effect. They assert that budget deficits increase domestic production, aggregate demand, savings, and private investment at any given level of interest rates, increasing private investors' confidence in the direction of the economy and leading to increased investment (Eze et al. 2019). According to the Mundell-Fleming framework, a rise in the budget deficit would push interest rates higher, bringing in capital and increasing the value of the currency, which would increase the current account balance.

ccording to Bongumusa et al. (2022), increasing aggregate demand boosts the profitability of private investments and encourages more investment at any given interest rate. Therefore, even if they boost interest rates, deficits may encourage overall savings and investment. Along these lines, they draw the conclusion that "crowding in" has occurred rather than investment being "pushed out" by deficit financing. Higher government spending has the potential to slow development by crowding out private sector spending, according to opponents of the Keynesian hypothesis. This is especially true if the public spending is financed by borrowing. Therefore, the crowding-out effect reduces the government's ability to affect the economy through fiscal policy (Babalola and Onikosi-Alliyu, 2020). According to the monetarist theory, after a brief time of adjustment, the growth in government spending crowds out or displaces private spending of a comparable size. In order to finance budget shortfalls, governments may issue more currency than is typically necessary. This practice is known as "monetary financing (Chinanuife et al. 2018). Although given a constant demand function for base money, inflation will occur when the rate of increase in money supply exceeds the rate of growth of economic activity (Ndoricimpa, 2020).

Malachy et al. (2022) contended that it is improbable that rapid money supply growth occurs in situations when governments generate money to cover budget deficits without fiscal imbalances given a fixed supply of money, rising transaction costs and an increase in the amount of debt available on the market cause interest rates to rise. Business and possibly even government spending are decreased by the rise in interest rates. The crowding-out hypothesis' overall conclusion is that, barring an increase in the money supply, economic growth in the government sector will always be at the expense of the economy's private sector (Festus et al. 2022). According to Barro's (2013) Ricardian equivalence hypothesis, attempts at fiscal stabilization have no effect on economic growth. This theory states that future taxes with a present value equal to the debt's worth will be required in the event that the government's debt increases as a result of deficit financing. The debt should, therefore, have no impact on economic activity because rational agents

should notice this equivalence and operate as if it did not even exist. According to adherents of the Ricardian Equivalence Hypothesis, rational economic agents modify their savings in anticipation of future taxes that would be used to pay off the debt, and this has no effect on consumption, output, or employment (Saungweme & Odhiambo, 2019).

Causes of External Debt Problems in Nigeria
Sanusi classifies the causes of Nigeria's external debt into two areas namely, exogenous factors and endogenous factors. The exogenous factors are factors over which the country has no control. These factors contributed to the inherent weaknesses in both the structure and management of the Nigerian economy and imposed a severe debt problem on the country (Sanusi, 1988). These exogenous factors are:

1. Nigeria's economy is a mono-cultural economy that depends heavily on oil   for its external revenue. The oil sector provides 80% of Federal Revenue and   96% of export earnings and accounted for 22% of the GNP in 1980.   Unfortunately, the glut in the international market in 1981 affected the   country's foreign exchange earnings. There is no doubt that the rising debt   profile was escalated by declining production and export performances. The   poor performance of the export sector as a result of low productive capacity   and other factors, gave rise to inadequate export earnings.
2. Deregulation of the dollar against other currencies. Since Nigeria's external debt is denominated in dollars, the conversion of debt were in French France, Japanese Yen, Deutsche Mark, Swiss Franc, Pound Sterling etc.,   into the Dollar, which increased the dollar amount of the debt stock as a result of the depreciation of dollar against most of these currencies.
3. Capitalization of unpaid interest; when there is a default in the interest payment, the interest accrued and due is added to the principal thereby   increasing the debt stock. This was the case when Nigeria reduced payment of interest due to the London club in May 1990, from the contractual rate of 9% to 30%.
4. Fluctuating Interest Rate; the increase in variable interest rates in response to the market situation problem.
5. Accumulation of Trade Arrears; the First Bank Monthly Business and Economic Reports (1991 and 1992) indicated that debt increases principally   from the country's inability to settle the trade arrears which accumulated about Ni .98b in 1982 and steadily increased to N6. lb in 1984. This increase was as a result of over dependence on industrialized countries for supply of both domestic and industrial raw materials.
    Endogenous factors include inappropriate policy measures taken by government such as the Pre-SAP Policy of maintaining over valued rate of exchanges for governments import substitution and industrialization strategies, such as:

Low Saving Habit: Nigeria developed exotic and expensive ways of wasting resources during the oil boom era. Expenditures on both public and private sectors were adjusted in agreement with accumulation of short-term debts.
Unrealistic Foreign Exchange: Both the monetary and exchange rate policy of Nigeria did not respond quickly enough to reflect the external value of the Naira, when there was drastic decline

in the inflow of resources as a result of depressed oil market. The Naira consequently became overvalued. This created severe pressure on the external sector.

Diversion of Loans: Sometimes there may be diversion of proceeds of loan into uses other than which they were meant for.

Financing of Long-Term Project with Short and Medium-Term Loans: As earlier observed in this study, the structure of Nigeria's external debt showed that it constituted mainly of short and medium-term loans,for instance, in 1986 short and medium term loans accounted for about 85% of the total debt outstanding. Most of these loans were used to finance long-term project, thus making it impossible to repay them.

Inconsistent Monetary and Fiscal Policies: The fiscal and monetary policies pursued were generally inconsistent with the state of the economy and the growth objective of the government such as the domestic economic situation deterioration and capital flight. Resources almost got exhausted with output and export declining. On expenditure issues, the government is involved in the importation of foodstuffs and other non-essential items, inflationary and deficit financing was rampant. This also led to high accumulation of arrears and other obligations, which led to delay in payment.

Domestic Debt

Domestic debt is defined as debt denominated in local currency. The management of domestic debt in Nigeria has hitherto been conducted by the Central Bank of Nigeria (CBN).

It is important to note that the above given position does not include contractor debts and supplier credit owed by the government, which are estimated at about N650 billion. Neither does it include contingent liabilities, which are loans guaranteed by the Federal Government, nor inter-agency debt.

Domestic debt has always been fundamental part of a government's borrowing strategy. Government borrowing through domestic sources is vital in stimulating investment and private savings, as well as strengthening domestic financial markets, since it provides depth and liquidity to the markets. On the downside, though, a broad expansion in domestic debt poses significant negative connotations for private investment, fiscal sustainability and ultimately economic growth and poverty reduction in case of thin financial markets and poor debt management capacity.

Pakistan's domestic debt comprises permanent debt (medium and long-term), floating debt (short-term) and unfunded debt (made up of the various instruments available under the National Savings Scheme).The composition of major components having the domestic debt portfolio has undergone a transformation from a high dominance of unfunded debt to an increasing dependence on floating component of the domestic debt. The unfunded category comprising about 45 percent of the aggregate domestic debt stock in 2001-02 has declined to 23 percent by end-March, 2013. Contrary to this, the share of floating debt to total domestic debt has reached 54 percent by end-March, 2013 as compared with 31 percent in 2001-02 indicating an over reliance on shorter duration instruments. The growing share of floating debt in total domestic debt in recent years has meant an inordinate reliance on the shorter end of the sovereign yield curve. Debt structures that rely heavily on short-term instruments are sources of vulnerability, because short average maturities entail high rollover and refinancing risk. In such cases, an increase in interest rates has an adverse fiscal impact.

Domestic Debt as component of Public debt in Nigeria

In Nigeria, domestic government debt is defined as debt instruments issued by the Federal government and denominated in local currency. In principle, State and Local governments can also issue debt, but they are still limited in their ability to issue debt instruments. Therefore government domestic debt refers to debt instruments issued by the federal government, and does not include contractor debts and supplier credit by the government. It therefore consists of:

  i.Nigerian Treasury Bills
 ii.Nigerian Treasury Certificates
iii.Federal Government Development Stocks
iv.Treasury Bonds
 v.Ways and Means Advances

Out of these, treasury bills, treasury certificates and development stocks are marketable and negotiable, while treasury bonds, ways and means advances are not marketable, but held solely by the CBN. Of the three marketable government debt instruments, only treasury bills are currently traded in the money market, since treasury certificates was discontinued in 1996. Development stocks are traded in the capital market, but since1987, the federal government has not issued any new development stock.

The beginning of the existing market for domestic government debt in Nigeria is the financial reforms introduced by the colonial government in 1958. These reforms saw to the creation of the Central Bank of Nigeria (CBN) and the creation of marketable public securities to finance fiscal deficits. According to paragraph 35 of the CBN ordinance 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.

The Central Bank in the course of discharging its functions with respect to debt management plays an important role in both the primary and secondary markets for government securities. In the primary market, the Central Bank readily guarantees the issue of these securities and absorbs any amount not subscribed by the banks and the non-bank public. Thus even if the non-Central Bank subscriptions were zero, 'mandatory take-up' guarantees the government the full amount of any issues of treasury bills, treasury certificates or development stocks required to finance its budget. The CBN also provides a secondary market for government securities whereby those securities held by the Bank are offered to the public for sale.

Structure of Domestic Debt in Nigeria

Domestic government debt instruments play an important role in any economy, as they provide economic agents with alternative options to banking for allocating their savings accordingly. It is a key part of the collateral used in financial markets and as such plays an important role in monetary policy implementation. Significant changes in the size, structure and composition of government debt instruments may influence financial stability. In order to maintain financial stability, it is therefore important to monitor the structure, characteristics and the level of risk inherent in the debt portfolio. Reliable statistics on the composition, investor's base and maturity

structure is necessary to assess these risks. In this section, we shall analyse the structure and characteristics of domestic government debt portfolio in Nigeria.

Composition

Treasury Bills constitute the main component of the outstanding stock of government debt accounting for 77.4 percent of total domestic debt in 1960, declining to 51 percent by 1970 but climbing up to 62 percent in 2003. The decline in the percentage share of treasury bills in the mid 1970's was as a result of the decision not to issue new treasury bills because of the boost in government revenue in the mid 1970's as revenue from the oil sector improved substantially (Okunrounmu, 1992). As soon as there was a decline in revenue from this source, government reliance on credit from the CBN through the issue of treasury bills resumed as from 1981.

The growth in the level of treasury bills also reflected the practice of rollover of maturing securities and continuous recourse to conversion of ways and mean advances outstanding at the end of the year to treasury bills as a way of funding the fiscal deficit. Treasury certificates, which were first issued in 1968, constituted one of the largest securities between 1983 and 1988. It even surpassed treasury bills between the period 1976-1980. It was first issued to further deepen the domestic money market by increasing short-term investment options available. In 1995, the federal government decided to convert treasury certificates outstanding to non- tradable treasury bonds in an attempt to further reduce its debt service obligations on domestic debt. Treasury certificates were therefore abolished in 1996.

In 1989, the monetary authorities 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 to minimize debt service obligations on domestic debt arising from the liberalization policies. Thus in 1989, 20 million Naira worth of treasury bills, representing 58.6% of treasury bills outstanding were converted to treasury bonds of fixed interest rates. The bonds styled as "5% Federal Republic of Nigeria treasury bonds 2004-2015" are to carry a fixed interest rate of 5% and are wholly held by the CBN. As a result of the flotation of new issues of treasury bonds and conversion of part of the treasury certificates outstanding, treasury bonds accounted for up to 69% of total domestic debt as at end 1996.

Development stocks were apparently the first government instrument to be issued. It was floated largely to provide development finance either directly to meet the needs of the federal government or as loan on lent to the state governments. The colonial administrators floated the first registered debt stocks 1956/61 in 1956. Development stocks outstanding increased between 1960 and 1987. It started to decline as from 1988, as no new stocks were made. The Development Stocks were traded in the secondary market of the Nigerian Stock Exchange.

In line with government's policy of reducing reliance on monetary financing of deficits, the federal government through the Debt Management Office (DMO) in 2003 raised funds through the capital market to meet its financing needs by issuing the 1st FGN Bonds. The government was able to raise N72.6 billion, out of the N150 billion worth of bonds issued representing about 5.4% of total domestic debt stock.

Implications of Domestic Debt for Monetary Policy

The structural characteristics of government domestic debt discussed- including, composition, investor base and maturity structure (2.1- 2.3) have important implications for the conduct of monetary policy and for the development of the financial sector in general. Here we highlight some of the key structural characteristics and then discuss its wide implications.

First, the composition of the market has been mainly in favour of short-term treasury bills. A key question has been what are the implications of the higher ratio of short term to long term debt instruments for monetary and macroeconomic policy in Nigeria? Currently, the CBN could finance any deficit and refinance maturing debt easily with the frequent sales of large quantities of short-term treasury bills. But this simply concentrates government indebtedness to the most liquid sector of the market; short maturing treasury bills. Issuing securities at longer maturities reduces to some extent the liquidity of the securities market. Large maturing debt is inherently less liquid than short-term debt.

At several times, the Central Bank of Nigeria has tried to control excess liquidity in the banking system either using stabilization securities to mop up the excess, or by changing liquidity ratio requirements. However this policy is always frustrated by the regular issuance of more short term treasury bills which immediately restores high liquidity in the system thereby impeding monetary policy conduct. Generally regular liquidity mop up exercises by the Central Bank are hampered by the frequent sales of short term treasury bills.

Reason for Rising Domestic Debt Profile in Nigeria

Theoretically, there are three reason often advanced for government domestic debt (Alison et al 2003). The first, is for budget deficit financing, the second is for implementing monetary policy and the third, is to develop the financial sector (supplying tradable financial instrument so as to deepen the financial markets) In Nigeria, several factors have been advanced to explain the changing domestic debt profile between the 1960s and now (see Odozi 1996, Rapu, 2003). The major factor include: high budget deficits, low output growth, large expenditure growth, high inflation rate and narrow revenue base witnessed since the 1980s .The fiscal operation of the federal government resulted in large deficit averaging 1.93 percent of GDP between 1994 and 2008. From an average deficit of 1.56 percent of GDP for the period 1994-1979, it increased on average to 3.35 percent in 1999-2003 and then reduced to 0.86 percent of GDP in 2004-2008. A very remarkable feature of the government fiscal expansion was the financing of the excess expenditure from domestic debt averaging 114.98 percent of bank deposit between 1994 and 2008.

Cross country relationship between fiscal deficits (as a percentage of GDP) and the size of government debt markets confirm that countries with large fiscal deficits have issued more government securities in domestic markets (Mihaljek et al 2002). Generally declines in government revenue were met by borrowing from the central bank through the instrument of ways and means advances. These advances were never defrayed by the federal government but refinanced by the flotation of new treasury bills and treasury bonds to pay holders of maturing debt instruments thereby contributing to the continued growth of the debt stock,(Adofu et al 2010)

Macroeconomic Effect of Domestic Debt

1.   **Large internal domestic debt tends to crowd out private investment**
     The process of crowding out arises from the fact that once the government borrows heavily from the domestic market, a shortage of loan able fund arise forcing interest rate up which is the situation. Between 1994 and 2003, a period of large deficit financing, interest rate was an average of 23.05 percent but between 2004 and 2008, a period of low deficit financing and lower debt ratio, interest on the average reduced to 19.23 percent.

2.   **High rate of poverty**
     The welfare implication of domestic debt is the unemployment rate increase due to the closure of industries and decline in government finance on social service, infrastructure service since most part of government revenue are used to service the debt. The resultant effect of all these is the rate of poverty continue to rise in the country, (Olukole R.A 1991),. For instance in 1996 a period of high debt ratio, the poverty line was 65.6 percent whereas in 2004, a period of reducing debt ratio, the poverty line reduced to 54.4 percent, though it further increased to 63 percent in 2009(NBOS, 2009)

3.   Internal debt may aid government development program if the government sells bonds and development stocks to members of the public to finance its capital expenditure thereby pulling out funds out of personal and corporate income which is effectively utilize in infrastructural projects which by a multiplier effect facilitate generation of a multiple of that income leading to economic growth. It is this situation that commends the switch from overtly preponderance of short term debt instruments in the 1990s to long term debt instruments from 2006.

 Investor Base
An important component of debt management is to stimulate a diverse investor base and develop instruments, trading facilitation and distribution network that best suits the needs of the invertors (IMF, 2001),. In fact, it is crucial to have a diversified investor base in term of time horizon, risk preference and trading motives, especially for fixed income securities (Sidaou 2003). This will help ensure high liquidity and a satisfactory demand.

Non-bank holders comprise a wide range of both private and public institutions as well as individual investors, including insurance companies, saving type institution, state and local government etc. Between I994 and 2003, CBN holding of domestic debt averaged 67.92%, while Deposit Bank holding averaged 19.11% and non-bank holding averaged 12.03%. This situation changed between 2003 and 2009 as CBN holding plummeted to an average of 18.56% and that of Deposit Money Bank skyrocketed to an average of 52.52% and that of non-bank public holdings of debt instrument averaged 27.45%. The situation where CBN holds more than 50 percent of debt instruments is a reflection of a shallow market with elements of financial repression and therefore a more active participation of the banks and non-banks from 2003 is indicative of increase in depth, breath and liberalization which should improve the effectiveness of monetary policy. However, policies should be initiated to make the market more attractive for non-bank public as the large pool of fund with the pension managers could find a safe haven in the domestic debt market.

Servicing of Public Debt
Increase in the outstanding stock of total public debt have implications for the economy as it forced the government to adjust its expenditure and direct additional resources towards the repayment of

debt and associated interest payments. Total public debt servicing below 30 percent of government revenue are generally believed to be within the bounds of sustainability. The government is required to make concentrated efforts to increase the revenues and rationalize current expenditure to reduce the debt burden and improve the debt carrying capacity of the country to finance the growth and development needs.

Theoretical Review

There are three theories which support the research objectives which discuss the effect of public debt on the economic growth in Nigeria

Debt Overhang Hypothesis

The theory holds that both the stock of public debt and its service affect growth by discouraging private investment or altering the composition of public spending. Higher external interest payments can increase a country's budget deficit, thereby reducing public savings if private savings do not increase to offset the difference. This in turn, may either drive up interest rates or crowd out the credit available for private investment, depressing the economic growth. Debt service may discourage growth by squeezing the public resources available for investment in infrastructure and human capital (Clements et al., 2005).

The theory further suggests that public debt may have non-linear effects on growth, either through capital accumulation or productivity growth. According to the debt overhang hypothesis thesis there is likelihood that in the future debt will be larger than the country's repayment ability; expected debt service costs will discourage further domestic and foreign investment. Potential investors will fear that the more there is production, the more they will be taxed by creditors to service the public debt and thus they will be less willing to incur investment costs today for the sake of increased output in the future (Krugman, 1988).The above theory instigates the first research hypothesis and total debt service variable that increased borrowing may cause debt overhang effect causing the government unable to pay debt when it falls due.

The Crowding out effect neo-classicalists theory

It considers individuals to be planning their consumption decision over the entire life cycle. By shifting tax burden to the future generations, borrowing increases present consumption. This school of thought assumes full employment implying that increase in consumption decreases savings, causing interest rates to increase in the capital markets to restore the equilibrium. The higher interest rates in turn results in a decline in private investment, higher inflation and increased real exchange rate. This crowding out effect impedes the effectiveness of the government to influence the economy through fiscal policies (Bailey, 1971; Buiter, 1977). The theory supports the second and third objective

Endogenous Growth Models

Models hold that fiscal policy has significant effects on long run economic growth and investment. Other things held constant, a larger budget deficit crowds out private sector because of lower access to bank credit, higher real rates of interest, inflation and a more appreciated real exchange rate (Barro, 1989 and 1990).

Endogenous growth Model

It also guided in the development of empirical model. It provides a linkage between public policies and long run growth by assuming aggregate production functions exhibiting non decreasing returns to scale (Renelt, 1991). It states that economic growth and investment primarily depends on endogenous or within factors and not on external factors. Here investment in human capital and labour are significant contributors to economic growth. Long run economic growth rate of a country is assumed to depend on government policy measures. This study borrowed the initial model from Akram (2010) which assumes a Cobb-Douglas production function with non-decreasing returns to scale.

METHODOLOGY

This study used quasi experimental research design approach for the data analysis. This approach combines theoretical consideration (a prior criterion) with the empirical observation and extract maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables. The source of data for this study is secondary obtained from the Central Bank of Nigeria statistical bulletins and annual reports, the Debt Management Office (DMO), the National Bureau of Statistics (NBS), and other cognate publications.

Model Specification
The model specified below is based on theories of domestic debt and economic growth, empirical findings, principle and the objective of domestic debt. The model is specified in the functional form as;
RGDP= F(DD, EXTD, DS)   ………………….…… (1)
The regression model is specified as follows;

$$RGDP = \alpha_0 + \beta 1 DD + \beta 2 EXTD + \beta 3 + DS\ \varepsilon\text{í} \dots\dots\dots\dots (2)$$

Where
RGDP	=	Real Gross Domestic product (proxy for dependent Variable)
DD	=	Domestic debt
EXTD	=	External debt
DS	=	Debt Servicing
εí	=	Error term
β_0	=	Regression intercept
$\beta_1 - \beta_4$ =		Coefficient of the independent variables to the Dependent variables

A-priori Expectation of Variables Used
From the study parameter it is expected that the independent variables have positive effect on the dependent variables. Therefore $\beta_1, \beta_2, \beta_3, \beta_{4_4} > 0$.

Data Analysis Method
Empirical research has always been built on the econometric analysis techniques which will be employed using E-View version 7.0 from the Ordinary Least Square regression statistical

techniques. The method of data analysis to be used in this study is the multiple linear regressions using ordinary least square method. This approach, which is a quantitative technique, includes tables and the test for the hypotheses formulated by using ordinary least square with Econometric View regression analysis at 5% level of significance.

Moreover, in order to undertake a statistical evaluation of our analytical model, so as to determine the reliability of the result obtained and the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test where employe

Estimation Procedure

Stationarity (Unit Root) Tests

The study investigates the stationarity properties of the time series data using the Augmented Dickey Fuller (ADF) test. According to Nelson and Plosser (1982), Chowdhury (1994) there exist a unit root in most macroeconomic time series. While dealing with time series, it is necessary to analyze whether the series are stationary or not. Since regression of non-stationary series on other non-stationary series leads to what is known as spurious or   nonsense regression causing inconsistency of parameter estimate. The Null hypothesis of a unit root is rejected against the one sided alternative if the t-statistic is less than the critical value. Otherwise, the test fails to reject the null hypothesis as a unit root at 5% significance level. However, the statistical analysis of time series data differs in some respect from that of cross-sectional data, especially due to the effect of time and other variables on the data. Specifically in analyzing time series data, it is assumed that the time series is stationary (Gujarati, 2003). Test for stationarity would therefore have to be carried out on our data first to determine whether or not these time series data are stationary. We shall therefore subject all the variables to unit root test using the augmented Dickey Fuller (ADF) test specified in Gujarati (2004) as follows.

$$\Delta y_t = \beta_1 + \beta_2 + \delta y_{t-1} + \alpha i \sum_{i-1}^{m} \Delta y_{t-1} + Et \qquad\qquad 3$$

Where:

Δy_t = change time t

Δy_{t-1} = the lagged value of the dependent variables

Σ_t = White noise error term

If in the above δ =0, then we conclude that there is a unit root. Otherwise there is no unit root, meaning that it is stationary. The choice of lag will be determined by Akaike information criteria.

Decision Rule

t-ADF (absolute value) > t-ADF (critical value) : Reject H_o (otherwise accept H_1)

Note that each variable will have its own ADF test value. If the variables are stationary at level, then they are integrated of order zero i.e 1(0). Note that the appropriate degree of freedom is used. If the variables are stationary at level, it means that even in the short run they move together. The unit root problem earlier mentioned can be explained using the model:

$$Y = Y_{t-1} + \mu_I \qquad\qquad 4$$

Where; Yt is the variable in question; μ_i is stochastic error term. Equation (a) is termed first order regression because we regress the value Y at time "t" on its value at time (t- 1). If the coefficient of Y_{t-i} is equal to 1, then we have a unit root problem (non-stationary situation). This means that if the regression.

$$Y = Y_{t-1} + \mu_I \qquad\qquad 5$$

Where Y and I are found to be equal to 1 then the variable Yt has a unit root (random work in time series econometrics).

If a time series has a unit root, the first difference of such time series are usually stationary. Therefore to salve the problem, take the first difference of the time series. The first difference operation is shown in the following model:

$$\Delta Y = (L-1)\, Y_{t-1} + \mu_I \qquad\qquad 6$$

$$\delta Y_{t-1} + \mu_I \qquad\qquad 7$$

(Note: $\delta = 1-1 = 0$; where L = 1; $\Delta Yt = Yt - Y_{t-i}$)

Integrated Of Order 1 Or I (I)

Given that the original (random walk) series is differenced once and the differenced series becomes stationary, then the original series is said to be integrated of order I or I (1).

Integrated of Order 2 Or I (2)

Given that the original series is differenced twice before it becomes stationary (the first difference of the first difference), then the original series is integrated of order 2 or 1(2).

Therefore, given a time series has to be differenced Q times before becoming stationary it said to be integrated of order Q or I (q). Hence, non-stationary time series are those that are integrated of order 1 or greater.

The null hypothesis for the unit root is: Ho: a = 1;

The alternative hypothesis is Hi: a < 1.

We shall test the stationarity of our data using the ADF test.
Co-integration Test (The Johansen Test)

It has already been warned that the regression of a non-stationary time series on another non-stationary time series may lead to a spurious regression. The important contribution of the concept of unit root and co-integration is to find out if the regression residual are stationary. Thus, a test for co-integration enables us to avoid spurious regression situation. This study employed Johansen Multivariate Co-integration Test to ascertain if there is the existence of a long run equilibrium relationship among time series variables. Johansen (1988, 1991) pointed out that a linear combination of two or more non-stationary time series may be stationary, if such a stationary linear combination of two or more non-stationary time series exists, the non-stationary time series are said to be co-integrated and may be interpreted as long-run relationship among the variables. The lag length is one and is based on the Akaike (1969) information criterion (AIC). The lag is taken into account at Mckinnon critical values at 5% level. If the residuals from the regression are 1(1) or 2(2), i.e. stationary, then variables are said to be co-integrated and hence interrelated with each other in the long run. This approach is based on conducting unit root test on residual obtained from the estimated regression equation. If the residual is found to be stationary at level, we conclude that the variables are co-integrated and as such as long-run relationship exists among them.

$$RGDP_t = w_O + \sum_{i=1}^{i} \vartheta_t DD_{t-i} + \sum_{i=1}^{j} \varpi_i DS_{jt-i} + \sum_{i=1}^{j} \varpi_i EXD_{jt-i} + \mu_{1t} \qquad 7$$

Granger Causality Test

One of the objectives of this study is to investigate the causality between the independent and the dependent variables. Granger causality test according Granger (1969) is used to examine direction of causality between two variables. Causality means the impact of one variable on another, in other-words; causality is when an independent variable causes changes in a dependent variable. The rationale for conducting this test is that it enables the researcher to know whether the independent variables can actually cause the variations in the dependent variable. Thus, Granger causality test helps in adequate specification of model. In Granger causality test, the null hypothesis is: no causality between two variables. The null hypotheses is rejected if the probability of F* statistic given in the Granger causality result is less than 0.05. Therefore, in this study, we will carry out granger causality between an independent variables monetary policy transmission mechanism and the dependent variable profitability and capital structure measures. The pair-wise granger causality test is mathematically expressed as:

$$Y_t \pi_o + \sum_{i=1}^{n} x_1{}^y Y_{t-1} \sum_{i=1}^{n} \pi_1{}^x x_{t-1} + u_1 \qquad 8$$

and

$$x_t dp_o + \sum_{i=1}^{n} dp_1^y Yt-1 \sum_{i=1}^{n} dp1^x x_{y-1} + V_1 \qquad 9$$

Where x_t and y_t are the variables to be tested white u_t and v_t are the white noise disturbance terms. The null hypothesis $\pi_1{}^y = dp_1{}^y = 0$, for all I's is tested against the alternative hypothesis $\pi_1{}^x \neq 0$ and $dp_1{}^y \neq 0$. if the co-efficient of $\pi_1{}^x$ are statistically significant but that of $dp1y$ are not, then x

causes y. If the reverse is true then y causes x. however, where both co-efficient of π_1^x and dp_1^y are significant then causality is bi – directional.

RESULTS AND DISCUSSION

Table 1: Ordinary Least Square Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DD_GDP	0.621613	0.022287	0.969733	0.0402
DS	0.427637	0.043569	0.634328	0.5308
EXTD_GDP	1.513695	1.232997	1.227655	0.0002
C	3.106697	1.650885	1.881837	0.0699
R-squared	0.641800	Mean dependent var		4.815000
Adjusted R-squared	0.424283	S.D. dependent var		3.241057
S.E. of regression	3.280172	Akaike info criterion		5.302729
Sum squared resid	312.0263	Schwarz criterion		5.440141
Log likelihood	-81.84366	Hannan-Quinn criter.		5.348277
F-statistic	6.632542	Durbin-Watson stat		1.332065
Prob(F-statistic)	0.000411			

Source: E-VIEW 9.0

Analysis of Regression Results

The multiple regression results for the growth model. The results indicate that the coefficient of external debt and the constant are both statistically insignificant, while the coefficient of domestic debt is found to be statistically significant. Precisely, the coefficient of external debt is found to be statistically insignificant at 5 percent level as indicated by its probability value 0.0000 and rightly signed while the coefficient of domestic debt is found to be statistically significant at 5 percent level as indicated by its probability value 0.0000. The coefficient of debt servicing is statistically not significant at 5 percent. The high probability value implies that the presence of that effect that can validate the parameter is low. This therefore, implies that a unit change in external debt would increase the economic growth (GDP) by 15 percent units and a unit change in domestic debt would raise the performance of the economy by 0.62 units while debt servicing will increase economic growth by 0.42 percent. The coefficient of external debt is statistically significant and is consistent with the theoretical expectation and the coefficient of domestic debt is found to be statistically significant and consistent with the theoretical expectation.

The F-statistics 6.63254, which is a measure of the joint significance of the explanatory variables, is found to be statistically significant at 1 percent level as indicated by the corresponding probability value 0.000411. The R^2 0.641 (64.1%) implies that 64.1 percent total variation in economic growth (GDP) is explained by the regression equation. Coincidentally, the goodness of fit of the regression remained too high after adjusting for the degree of freedom as indicated by the adjusted R^2 (R^2= 42.4%). The Durbin-Watson statistic 1.33 in the table is observed to be higher than R^2 0.64 indicating that the and implies that there is presence of serial correlation. This therefore justified the need for unit root test. Coefficient external debt and domestic debt are both

found to be statistically significant at 5 percent level as indicated by probability value of 0.0000 and 0.0005, but coefficient of external debt is consistent with the theoretical expectation while the coefficient of domestic debt is rightly signed and consistent with the theoretical expectation. However, the coefficient debt servicing is not significant.

Table 2: Presentation of Unit Root Test: level

Null Hypothesis: D(RGDP) has a unit root

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.463626	0.0000
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	

Null Hypothesis: EXTD_TD has a unit root

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.950322	0.7581
Test critical values:	1% level	-3.661661	
	5% level	-2.960411	
	10% level	-2.619160	

Null Hypothesis: DS has a unit root

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.606300	0.0114
Test critical values:	1% level	-3.661661	
	5% level	-2.960411	
	10% level	-2.619160	

Null Hypothesis: DD_GDP has a unit root

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.950322	0.7581
Test critical values:	1% level	-3.661661	
	5% level	-2.960411	
	10% level	-2.619160	

Source: E-view 9.0

Table 3: Unit Root Test First Difference

Null Hypothesis: D(RGDP,2) has a unit root

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.216834	0.0000
Test critical values:	1% level	-3.689194	
	5% level	-2.971853	
	10% level	-2.625121	

Null Hypothesis: D(EXTD_TD) has a unit root

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.184348	0.0028
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.784745	0.0000
Test critical values:	1% level	-3.679322	
	5% level	-2.967767	
	10% level	-2.622989	

Null Hypothesis: D(DD_GDP,2) has a unit root

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.294403	0.0000
Test critical values:	1% level	-3.689194	
	5% level	-2.971853	
	10% level	-2.625121	

Source: E-view 9.0

Table 2 and 3presents results of the unit root test, it is necessary to examine the unit root properties of time series data before estimation so as to preclude the problem of spurious regression. Ordinary least squares (OLS) estimation of regressions in the presence of non-stationary variables gives rise to spurious regressions if the variables are not co-integrated (Granger and Newbold, 1974). The results of the ADF unit root tests are presented in Table 2. The results in the Table show that all the variables are stationary in their first differences. This result is particularly important in that it confirms the use of ECM approach as the most appropriate procedure in the context of this study

Table 4: Cointegration Test: trace

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.460078	30.44913	29.79707	0.0420
At most 1*	0.273231	11.95921	10.49471	0.0089
At most 2	0.076416	2.384817	3.841466	0.1225

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None*	0.460078	18.48992	11.13162	0.0026*
At most 1	0.273231	9.574396	4.26460	0.2414
At most 2	0.076416	2.384817	3.841466	0.1225

Source: E-view 9.0

This study uses the reduced rank procedure developed by Johansen (1988) and Johansen and Joselius (1990) one tests to determine the number of co-integration vectors: the Maximum Eigenvalue test and the Trace test. The Maximum Eigenvalue statistic tests the null hypothesis of r co-integrating relations against the alternative of r+1 co-integrating relations for r = 0, 1, 2…n-1. Whenever the results of Trace statistics are different results, the result of trace test is always preferred. As shown in Table, the dependent variable RGDP is co-integrated. The trace test statistics strongly rejects the null hypothesis of no co-integration in favour of one co-integrating equation between the variables. Hence, the results show that the dependent and independent variables are both co-integrated and have long run relationship with one another.

Table 6: Error Correction Estimate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.220367	0.589221	-0.373997	0.7130
D(RGDP(-1))	0.070654	0.359709	0.196419	0.8466
D(RGDP(-2))	0.240716	0.302593	0.795510	0.4373
D(RGDP(-3))	-0.117793	0.206560	-0.570261	0.5760
D(EXTD_TD(-1))	0.048481	0.060738	0.798201	0.4358
D(EXTD_TD(-2))	-0.048107	0.063175	-0.761487	0.4568
D(EXTD_TD(-3))	0.011256	0.057783	0.194792	0.8479
D(DS(-1))	-0.026482	0.051344	-0.515768	0.6127
D(DS(-2))	0.020522	0.040777	0.503286	0.6212
D(DS(-3))	-0.029414	0.046401	-0.633908	0.5346
ECM(-1)	-0.523082	0.406074	-1.288144	0.2150
R-squared	0.378307	Mean dependent var		-0.324643
Adjusted R-squared	0.012605	S.D. dependent var		3.012934
S.E. of regression	2.993885	Akaike info criterion		5.317744
Sum squared resid	152.3769	Schwarz criterion		5.841110
Log likelihood	-63.44842	Hannan-Quinn criter.		5.477742
F-statistic	4.034468	Durbin-Watson stat		1.919523
Prob(F-statistic)	0.006883			

Source: E-view 9.0

The coefficient of the error-correction term is correctly negatively signed and statistically significant. Thus, the ECM is able to correct any deviations in the relationship between RGDP and the explanatory variables. The adjusted R^2 is 37 percent, showing that over 63 per cent of the variations in RGDP can be explained by the explanatory variables. The remaining 55 per cent variation is attributable to other variables not captured by our model, the Durbin-Watson statistics of 1.919 rules out auto-correlation, the F-statistics of 4.03 shows that the explanatory variables are important determinants of PE in Nigeria.

Table 7: Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
EXTD_TD does not Granger Cause RGDP	30	0.08671	0.9172
RGDP does not Granger Cause EXTD_TD		0.68435	0.5136
DS does not Granger Cause RGDP	30	0.83239	0.4467

RGDP does not Granger Cause DS		0.97741	0.3902
DD_GDP does not Granger Cause RGDP	30	0.08671	0.9172
RGDP does not Granger Cause DD_GDP		0.68435	0.5136

Source: E-view 9.0

The result of the causality test found no causal relationship between the independent variables and the dependent variables; therefore we accept the null hypotheses of no causality.

Discussion of findings

One of the characteristics of Nigerian fiscal policy is the constant deficit budget which is used to finance public projects. The source of feeling the deficit budget is either borrowed domestically or externally. The objective of this study is to examine the effect of Nigerian public debt on the economic growth. The study used domestic and external debt as independent variables. From the findings of the study external debt and domestic debt have positive and significant relationship with Nigerian economic growth proxy by Real Gross Domestic Product. This finding confirm the apirori expectation of the result and the theory of resource gap which states that with available resources when judiciously use will enhance economic growth.

The finding is also in line with economic theories such as the endogenous growth theory according to the neo classical economist. It is in line with empirical findings such as Ekpo (2006) who found that public expenditure through the external debt granger cause economic growth in developing countries like Nigeria.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The F-statistics 6.63254, which is a measure of the joint significance of the explanatory variables, is found to be statistically significant at 1 percent level as indicated by the corresponding probability value 0.000411. The R^2 0.641 (64.1%) implies that 64.1 percent total variation in economic growth (GDP) is explained by the regression equation. Coincidentally, the goodness of fit of the regression remained too high after adjusting for the degree of freedom as indicated by the adjusted R^2 (R^2= 42.4%). The Durbin-Watson statistic 1.33 in the table is observed to be higher than R^2 0.64 indicating that and implies that there is presence of serial correlation. This therefore justified the need for unit root test. The dependent variable RGDP is co-integrated. The trace test statistics strongly rejects the null hypothesis of no co-integration in favour of one co-integrating equation between the variables. Hence, the results show that the dependent and independent variables are both co-integrated and have long run relationship with one another. The coefficient of the error-correction term is correctly negatively signed and statistically significant. The coefficient of the error-correction term is correctly negatively signed and statistically significant. The results of the ADF unit root tests show that all the variables are stationary in their first differences. This result is particularly important in that it confirms the use of ECM approach as the most appropriate procedure.

Public debt is component of fiscal policy but expansionary monetary policy used to bridge the savings investment gap in the government. This study examines public debt and Nigerian economic growth from 1985 – 2016. The objective is to establish the relationship between the dependent and the independent variables in model. The secondary data collected from Central Bank of Nigeria statistical bulletin, the findings of the study reveal positive relationship between

the independent variables and the dependent variables examined in the study. It therefore concludes that there is significant relationship between public debt and Nigerian economic growth.

Recommendations

(1) The regression results indicate that domestic debt have greater impact on the Nigeria's economy, the study therefore recommend that government should focus on domestic debt than external debt.

(2) There should be fiscal discipline in the utilization of public debt in Nigeria to enhance positive impact of public debt on economic growth.

(3) The fiscal Responsibility Act 2007 should be implemented to ensure accountability in public debt to achieve its goals.

(4) The impact of public debt on the economy is the function of macroeconomic policies, it therefore recommend that macroeconomic policies be well structured to enhance the positive impact of public in the economy.

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