

# Impact of Fiscal Deficit financing on Macroeconomic Growth in Nigeria

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## Abstract

*Fiscal deficit refers to the excess of public sector's spending over its revenue. The work examines the relationship between fiscal deficit and the Nigerian economy; the overall objective being to assess and investigate the impact fiscal deficit has on the economy given some variables. The result showed that fiscal deficit has made a significant contribution to GDP and economic growth of the country Nigeria.*

**Key words:** *Fiscal Deficit, Deficit Financing, Crowding Out.*

## INTRODUCTION

Nigeria is a less developed country characterized by low per capita income. Until the advent of oil, the Nigerian economy was essentially agriculture based. The discovery of oil changed the situation to the extent that the oil sector has become a very important sector of the economy.

Since the 1980s, Nigeria's fiscal policy has lacked the desirable characteristics required for its effectiveness as a tool of macroeconomic management. Fiscal policy has not always been consistent with macroeconomic policies. Government expenditure has been highly elastic with respect to revenue developments and further more fiscal deficits have been rising absolutely and relatively (Adeoye, 2006).

Rapid and sustained output growth of the domestic economy of Nigeria has since the political independence in 1960 been of paramount importance to successive governments in the country. Consequently, governments have since implemented several national development plans and programs aimed at boosting productivity, as well as, diversifying the domestic economic base. The goal of this has been the attainment of high levels of economic development that would translate into an improvement in the living standards of the populace, and hence a reduction in

poverty through an increase in the domestic output and the creation of employment, and thereby, the maintenance of a favorable balance of payments position (Ariyo, 1997 and Ojo et al, 1998).

The infrastructural and capital resources required for the attainment of these objectives have however been scarce. This has necessitated the interventions of the governments in the economy through the provision of the required huge capital outlay necessary for large scale production in heavy industries and for the provision of other infrastructure. Government interventions were made possible by the oil boom of the early 1970s when Nigeria earned unprecedented amounts of foreign exchange from the export of crude oil (Sikkam, 1998). Government expenditures thus grew rapidly with a similar growth in the bureaucracy. But the oil glut that followed meant that government revenues declined significantly (Akor, 2001). As governments were reluctant in reducing the bloated expenditures that had resulted during the oil boom, they were forced to seek alternative means of financing their expenditures. Governments thus resorted to fiscal deficits.

Fiscal deficits, is a situation where current expenditure exceeds current expected income. This has become a recurring feature of public sector financing in both developed and developing countries. The policy of fiscal deficits has however posed challenges to various economies with regard to its effectiveness and the accumulation of debt, the justification for economic growth notwithstanding.

Fiscal deficits may be caused by inadequate collection of taxes and heavy government expenditures on infrastructure. This position may be aggravated by corruption and uncontrolled spending leading to the widening of the gap between government revenues and government expenditures. Besides, several governments tend to increase external borrowing on the strength of a booming commodity, such as has been the case with oil in Nigeria. Governments may regard positive shocks as permanent and negative shocks as temporary. As a result, they may tend to finance their deficit by borrowing when revenue starts to fall during bursts. A resulting heavy debt service burden, coupled with low government revenues and high expenditures, may subsequently lead to the emergence of recurrent budget deficits (Asfaha, 2007 and Neaime, 2008). Furthermore, Mauro (1997) as cited in Aliyu and Elijah (2008) showed that the size and composition of government expenditure is significantly affected by corruption as corruption tends to inflate public expenditure.

Fiscal deficit has become an institutionalized feature of fiscal policy over the years. It is basically a measure of the extent to which a government is spending beyond its means. It could be used as an instrument of fiscal policy to bring about economic growth and development through the means of capital formation, in both developed and developing countries.

Fiscal deficit have now become a monotonous recurrent expenditure of government budgets in Nigeria for decades. With the exception of the periods 1971, 1973, 1974, 1979, 1995, and 1996, there were overall deficits in the federal government budgets each year since 1970 to date. Even the budget surpluses so claimed by the Federal Ministry of Finance for 1995 and 1996, may actually turn out to be deficits when exposed to more appropriate accounting and budgetary procedures (Adedotun, 1997)

However fiscal deficit is a general phenomenon that has affected nation's socioeconomic growth and development for both developed and developing countries. A certain amount of this deficit is needed for macroeconomic growth of the economy if well utilized.

The aim of this work is to interpret the core ideas of fiscal deficit and its impact on macroeconomic growth, within Nigeria's economic framework between 1981 and 2010

## 2.1 INTRODUCTION

Fiscal deficit is generally defined in terms of loan financing and drawing down on cash balances. One of the most important aspects of fiscal policy is the management of the public sector's fiscal deficit. Such fiscal deficit simply refers to the excess of the public sector's spending over its revenue (The World Bank, 2005). Such fiscal deficits have been at the forefront of macroeconomic adjustment – purposeful and coherent set of measures used to respond to (often severe) imbalances in the economy both in developing and developed nations (John Anyanwu, 1997).

Fiscal deficits, is a situation where current expenditure exceeds current expected income, have become a recurring feature of public sector financing in Nigeria. The Keynesian demand-side economics emphasized the need for expansion in government expenditures even beyond current income, particularly during depressions when the economy suffers from an insufficiency of active demand, such as the Great Depression of 1929 to 1932, and more recently, the 2008 Global Financial and Economic Crisis. This will thereby increase the demand for productive output, resulting in unemployment being overcome (Anyanwu and Oaikhenan, 1995). The policy of fiscal deficits has however posed challenges to the Nigerian economy with regard to its effectiveness and the accumulation of debt, the justification for growth notwithstanding.

In general, economic growth means percentage increase in gross domestic product (GDP) on year-to-year basis. In real sense of the term, economic growth means a sustained increase in per capita national output or net national product over a long period of time (Dwuvedi, 2009).

According to (Black, 2002), an increase in an economic variable, normally persists over successive periods. The variable concerned may be real or nominal, and may be measured in absolute or per capita terms. Economic growth is related to a quantitative sustained increase in the country's per capita income accompanied by expansion in its labour force, consumption, capita and volume of trade (Jhingan, 2008).

Indeed, to achieve a meaningful and appreciable level of economic growth and development in an economy, government expenditure is indispensable. In many countries, whether developed or developing, it has been recognized that public expenditure serves as an impetus for the effective performance of the private sector. Government really plans for budget deficits in order to stimulate economic activities and in particular, to execute projects that will have direct impacts on its citizen.

The growth and persistence of fiscal deficits in both the industrialized and developing countries in recent times have brought the issue of fiscal deficits into sharp focus. The issues surrounding fiscal deficits are certainly not new, but the economic development of the past decade has rekindled the interest in fiscal issues. In the advanced countries, the growth of the United State

Federal deficits provided the impetus for a reassessment of the effect of fiscal deficits on economic activities (Islam and Wetzel, 1991).

In the less developed countries including Nigeria, fiscal deficits have been blamed for much of the economic crisis that beset them in the 1980s: over indebtedness and the debt crisis; high inflation and poor investment performance; and growth. Attempts to regain stability at the macro – level through fiscal adjustment achieved uneven success, raising questions and deterioration or fiscal stabilization (Easterly and Schmidt-Hebbel, 1993). The overall emphasis of this paper is on Fiscal deficit.

Ariyo (1993) emphasized that fiscal deficit has become a recurring feature of public sector financing all over the world. Its widespread use is partly influenced by the desire of various governments to respond positively to the ever increasing demands of the populace and to enhance accelerated growth. Such accelerated growth has been achieved through increased capital formation, increased government and consumption expenditure, increased level of employment and savings.

In Nigeria, the phenomenon of fiscal deficits has existed since the colonial era, into independence till present day. During the colonial era, fiscal deficits were limited to the mere depletion of the marketing boards' external reserves generated in the 1950s. The basic tools for the operation of fiscal deficits was lacking until the establishment of the Central Bank of Nigeria in 1959.

After independence -in 1960, Nigeria embarked on a policy of public sector-led growth and development strategies spurred by the Keynesian revolution and geared towards consolidating the economy. This expanded the role of the government and therefore the level of government activities in the economy (Nwaogwugwu, 2005).

Since the 1980s, Nigeria's fiscal policy has lacked the desirable characteristics required for its effectiveness as a tool of macroeconomic management. Fiscal policy has not always been consistent with macroeconomic policies. Government expenditure has been highly elastic with respect to revenue developments and further more fiscal deficits have been rising absolutely and relatively (Adeoye, 2006).

According to Ariyo (1993), evidence has shown that the government incurs annually an abnormally huge fiscal deficit, which has become unsustainable since 1980. The growth in government fiscal deficit can be traced to the substantial fall in its revenue generating capacity as well as tremendous growth in public sector especially during the Structural Adjustment Program (SAP) era. Consequently, the deficits have been blamed for the various economic problems which include: high inflation and interest rate, poor investment and saving, low economic growth performance, exchange rate fluctuations and over-indebtedness.

### **2.1.2 FISCAL DEFICITS AND THE NIGERIAN ECONOMY**

The poor state of infrastructure including roads and communication infrastructure, power and energy have significantly constituted bottlenecks to productivity as they constitute a large proportion of the costs incurred by firms in production. Similarly, owing to the underdevelopment and limited spread of the capital market, as well as the high rate of poverty, capital formation and accumulation in the economy have accounted for insufficiency of capital necessary for optimal production. Production in the economy has therefore been significantly constrained and unemployment in the economy has therefore appeared to be supply-side determined (Anyanwu and Oaikhenan, 1995; Ogboru, 2006).

The oil boom of the early 1970s brought an immediate expansion in the recurrent and capital expenditure of government. However, by 1975, with the oil glut that followed, fiscal deficits had emerged in the economy. This trend continued unabated, except for the year 1979, until 1994. By the year 1997, the trend of fiscal deficits had resumed. The growth of government bureaucracy, permitted by the oil boom, as well as the establishment of public corporations that had to be maintained even after government revenue (especially from oil) had declined ensured that government expenditures remained high.

Furthermore, the availability of credit, given the strength of crude oil as collateral, seemingly removed the need for government to rationalize its expenditures. Consequently, over the periods when fiscal deficits were sustained, these deficits as a proportion of the GDP went as high as 12.44% in 1982, 11.94% in 1986, 11.45% in 1991 and 15.75% in 1993, which consequently aggravated the economy's debt profile from both domestic and foreign sources, prior to the debt cancellation the country received in 2005 (Kwanashie, Ajilima, and Garba, 1998; Oluba, 2008).

Governments in Nigeria had financed their fiscal deficits largely through monetary expansion. Although there has been issuance by government of debt instruments including treasury bills, treasury certificates and treasury bonds, indicative of debt financing, the debt instruments were largely monetized by the central bank when government defaulted as the instruments matured. Through the ways and means advances, the CBN, for most of the years between 1980 and 1990, and from 1991 consistently up to 2003, absorbed the greater proportion of the Nigerian public debt, followed by commercial banks and the non-bank public (Adedipe, 2004). Additionally, financing of fiscal deficits came from foreign borrowing through bilateral and multilateral agreements between Nigeria and other advanced economies as well as international organizations like the International Monetary Fund and the World Bank.

### **2.1.3 METHOD OF DEFICIT FINANCING**

Gardner Patterson defines deficit financing as the net increase in the amount of money in circulation where such an increase results from a conscious governmental policy designed to encourage economic activities which would otherwise not have taken place. Prudently used, deficit financing could be a very powerful tool of capital formation.

He identifies traditional methods of financing the deficit as including net borrowing from the Central Bank, the commercial banking system, non-banking financial intermediaries, and depletion of cash balances.

Jhingan (2002) also defines deficit financing along similar lines; deficit financing refers to the financing of the deliberately created gap between public revenue and public expenditure or a budgetary deficit, the method of financing being one that results in the net addition to national outlay or aggregate expenditure.

Fischer and Easterly (1990) identify four ways of financing the deficit:

- 1) Printing money (ways and means)
- 2) External borrowing
- 3) The use of foreign reserves
- 4) Domestic borrowing

Two major methods of financing the budget deficit include monetary financing and debt financing. These are discussed under the respective sub-headings below.

### **(1) Monetary Financing**

Monetary financing of a budget deficit has to do with printing of currency by the monetary authority the revenue accruing from which is called “seigniorage” (Begg, Fischer and Dornbusch, 2003). Government offers in the market a stock of money that exceeds the amount objectively justified to be into circulation, taking into account the proportions and the characteristics of the economy (Boariu and Bilan, 2007).

This situation, following Irving Fisher’s equation of exchange which expresses the relationship between the stock of money and its velocity, on the one hand, and the general price level and transactions, on the other, is expressed as:

$$MV = PT$$

Where M = Money stock;

V = Velocity of money;

P = General Price level;

T = The volume of transactions directly reflects in a rising level of prices for a given quantity of output.

In Fisher’s view, the velocity of money is assumed to be constant, as it only depends on the payment habits of the economic entities, which stay unchanged for a certain period of time (Boariu and Bilan, 2007).

This relationship results in a redistribution of a part of the purchasing power of households, as the real value of money whittles down through inflation, in favour of the government, which makes use of the additional stock of money in order to buy goods and services or to make payments for public consumption (Boariu and Bilan, 2007).

The long-run effects of the monetary financing of the budget depend on the use to which the funds so generated by the government are put. According to Boariu and Bilan (2007), if the resources resulting from the additional money issued in order to cover the budget deficit are

employed to finance investment projects, which induce a rising output, the original increase in the money stock available in circulation will have as equivalent a rising quantity of goods and services subject to transactions.

On the other hand, if the additional resources are employed to finance final consumption expenses, which do not determine a subsequent growth of GDP, the increase in the price level will be permanent and the monetary financing of the budget deficit will be inflationary.

Besides, devaluation of the currency is most times intended to boost exports of domestic output given the new exchange rate. However, the inflationary trend creates uncertainty with regard to future business prospects, raising interest rates, which further discourages the expansion of output.

Contrary to expectations therefore, according to Boariu and Bilan (2007), when the national supply of goods and services is insufficient and uncompetitive, the depreciated national currency encourages imports in order to make up for the deficits created by the reduced amount of national output and this leads to the degradation of the balance of payments.

## **(2) Debt Financing**

Debt financing of the budget deficit involves the borrowing of money by the government in order to meet budgetary obligations. Laurens and de la Piedra (1998) pointed to the following three possibilities to secure government borrowing:

- (a) Voluntary private sector purchases of government debt in the domestic market,
- (b) Foreign borrowing, and
- (c) Forced placement of government debt, such as the creation of a “captive” market for government securities by forcing institutions to invest a certain share of their portfolios in such securities.

These securities include the non-negotiable and non-transferable debt instruments of the Central Bank that banks are mandated to purchase at intervals in order to control their excess reserves (Ikhide and Alawode, 2001).

According to Boariu and Bilan (2007), there are two essential characteristics defining this form of raising extraordinary revenues. First of all, the resources collected this way are on contemporary basis, the state giving back the respective amount of money to the right owners (creditors) after a certain period of time.

Secondly, the public loan, as all other loans, is costly; it supposes that states pay interest to their creditors as a price for using the temporary available resources. As a result of its characteristics, public loan can involve several undesired effects. It mainly leads to the accumulation of public debt and to the increase in interest payments, which determines an increase in the budgetary expenses that states have to cover (Boariu and Bilan, 2007).

The public loan, however, does not lead to the unjustified increase of the amount of financial signs which are in circulation and it does not generally have an inflationary character. As a

consequence, it is usually accepted as a source to finance budget deficits in contemporary society (Boariu and Bilan, 2007).

Nevertheless, when the indebtedness of the government to the central bank is accepted as a viable solution to covering deficits in the budget, the government may resort to the central bank, requiring it to lend it money in order to cover the temporary deficit in public treasury, in exchange for issuing treasury bills. If the government does not succeed in cashing in current revenues in order to payback the particular amounts of money anymore, the money stock may unjustifiably increase, as banks which had hitherto acquired government securities, resort to the central bank in order to refinance when faced with shortage in liquidity; thus implying inflationary money issuing (Boariu and Bilan, 2007).

Besides, bond-financed public deficits have the potential effect of crowding-out private investments. As government issues debt instrument on the domestic market, it withdraws from circulation part of the liquidity in the market, leading to short-fall in the demand-supply equilibrium. Interest rates therefore rise just as they would under inflationary pressures. Consequently, private investment is crowded-out. This implication led to the Keynesian recommendation of deficit spending to boost economic activity during depression, at which point in a country's business cycle, interest rates are likely to be unresponsive (Okpanachi and Abimiku, 2007).

Nwaogwugwu (2005) lists the different methods of financing deficits as: foreign loans, domestic loans and other funds (drawing down of cash balances). The domestic loans are further divided into loans from the banking system and loans from the non-banking system.

The different modes of financing have different costs of using them. The Keynesian school however ignores the manner in which the deficit is financed which as the neoclassical school argues will affect the levels of consumption, investment and exports (Adam and Bankole, 2000).

### **Domestic borrowing**

This can be divided into four components:

- 1) Borrowing from the Banking System
- 2) Borrowing from the non-banking public
- 3) Borrowing from the Central Bank through the issuance of new currency
- 4) Drawing from the reserves of the Central bank

#### **• Borrowing from the Banking System**

This is carried out by issuing government bonds and securities directly to the banking institutions. The banks use their excess reserves to purchase such securities. This method is also referred to as bond financing. The implication of this is a reduction in the credit creation capacity of banks through the depletion of external reserves.

- **Borrowing from the Non-banking public**

In this case, government bonds and securities are sold to the public, who in turn transfer a part of their resources to the government. This leads to reduction in the general level of saving, thereby affecting the level of private investments.

- **Issuance of New Currency**

Deficits are financed by the creation of new currency or printing of new money by the Central Bank. This tends to increase the money supply/growth in the economy and has an inflationary impact. The quantity theory of money by the classical economists says that inflation is driven by money growth. Under this theory, changes in money supply are proportional to changes in prices with no impact on output and employment. This will lead to inflation (as too much money chasing too few goods will increase demand and raise prices). This brings a twist to Friedman statement that “inflation is everywhere a monetary phenomenon”. Inflation might be a monetary phenomenon, but money is a reflection of fiscal policy and not of monetary policy.

### **(3) Drawing from Central Bank Reserves**

Deficits are financed from funds generated by the central bank through its banking functions. Funds such as those meant for the purchase of foreign exchange are lent to the government for its expenditure operations (Nwaogwugwu, 2005).

### **(4) Foreign Borrowing**

This is similar to domestic borrowing, the difference being that government bonds are sold to foreigners. There is controversy among the different schools of thought with regards to the financing of the deficit. According to the assets market theory, financing the deficit by increasing the supply of government securities reduces their prices and raises the real interest rate. This crowds out private investment and gives rise to a debt problem. If interest rates are controlled, high fiscal deficits are strongly correlated with negative real interest rates and loss of international creditworthiness (Adam and Bankole, 2000).

When deficits are financed by issuing domestic bonds, there is a danger that private investment will be crowded out. In Keynesian macro models (e.g. IS-LM) this crowding out effect occurs through a rise in the real interest rate.

Adverse effects on private expenditure (investment or net exports) can also occur if an “excessive” deficit is financed by issuing liabilities to foreigners, through a rise in real interest rates and/or an appreciation of the real exchange rate. In the latter case the market could perceive the risk of future debt-servicing difficulties, pushing up the country’s risk premium and its country-specific borrowing interest rate in world markets. This might even lead to rationing or outright denial of external loans to the country by foreign lenders.

Literature reveals that the high growth of and the persistence of government deficits have been observed in a number of countries. The economic effects of fiscal deficits are important issues on the macroeconomic agenda. Undoubtedly, there exist extensive empirical studies on fiscal deficits. Efforts have been centered on testing Wagner’s law, which relates to the rising share of the public sector in the economy which means the process of economic development. Originally,

Buchanan and Wagner (1977) observed that rapid increases in government deficits were caused by large federal spending.

The Buchanan and Wagner's theory was however adapted by Niskanen (1978) for the United States of America. The empirical results equally supported the hypothesis that public spending increases the level of federal deficits.

Using cross country analysis based on a sample of ninety-six (96) countries Landau (1983) , inferred that big governments (leading to fiscal deficits), measured by the share of government consumption expenditure in gross domestic expenditure (GDP), reduced the growth of per capita income. He concludes that fiscal deficits have a negative impact on growth of income and thus economic growth

Using cross country analysis, Ram (1986) reports that though general growth is positively correlated with the rate of change in total public expenditure, it is negatively correlated with the level of such expenditure.

Darrat (1988) has tested the causal relationship between the trade deficit and the budget deficit of the U.S using Granger causality and concluded that there is some evidence that the government budget deficit is a causal determinant of the trade deficit. Continuous deficits will therefore lead to unfavourable balance of payment positions.

Martin and Fardmanesh (1990) investigate the impact of budget deficit on economic growth using a simple regression model. They found that the budget deficit has significantly negative growth effects.

Ariyo and Raheem (1991) made an in-depth investigation of the impact of fiscal deficit on the level and direction of economic growth and development as might be reflected in the behaviour of key macroeconomic indicator such as current account balance, government investment, private investment, inflation, interest rate, external and internal debts profiles, etc. The findings also confirmed a direct relationship between fiscal deficit and inflation.

The determinants of fiscal deficits were examined and it was found that revenue instability (slow growth of revenue), inflation and increased government participation in the economy were the important economic variables driving the chronic fiscal deficits in Nigeria (Egwaikhide, 1991). Similar conclusion was reached when Yekini (2001) examined the structural determinants of fiscal deficits in Nigeria.

Co-integration tests was applied and no evidence was found of a long term relationship between the common aggregate measures of the U.S. fiscal policy and the real long term interest rate, the real dollar exchange rate and the real net exports (Humpage , 1992).

Using cross country regressions of a large sample of developing countries, it was discovered that there is a significant and negative correlation between growth and uncertainty in a number of fiscal variables, such as levels of revenue, public expenditure and budget deficits. (Aizenman and Marion, 1993)

Easterly and Rebelo (1993) examine the impact of fiscal policy on economic growth, using a regression analysis with cross section time series data drawn from some developed and

developing countries. They find that the response by private sector saving to public sector dissavings (deficits) does not completely neutralize the latter.

Ekpo (1994) investigates the impact of government expenditure on economic growth in Nigeria between 1960 and 1992, using ordinary least square technique. The study confirms that government spending on infrastructure as well as investments in agriculture crowd in private investment, while spending on manufacturing crowds out private investment. The study concludes that public sector investments in infrastructure complements the private sector and implicitly enhances growth.

Public expenditures on investment and consumption have different impacts on economic activity. Public investment stimulates output and so increases government revenue and, in turn allows the government to spend more. Expansionary fiscal policy has positive impact on the economy (Jappelli and Meana, 1994).

Running public fiscal deficits typically reduces national savings, and lower national savings, in turn, leads to reduced investment and reduced net exports (Ball and Mankiw, 1995). Investment is curtailed because a drop in national savings restricts the supply of loanable funds, forcing interest rates higher. In the long run, the fall in investment lowers the capital stock, reducing productive capital and output. The crowding out of investment and capital also lowers productivity growth and hence real wages.

Findings suggested that one of the causes of the deficits in Tanzania is rapid growth in public spending (Osoro, 1997). He tested the hypothesis that high deficits lead to increased spending. The study also revealed that income elasticity reported, implied that income growth is a strong factor in successive increase in public spending in Tanzania in the long –run.

Krajewski, P., & Mackiewicz, M. (1998) examined the effect of fiscal policy on growth in Cameroon, using ordinary least square (OLS) technique. The study focuses on the relationship between public spending and growth via private investment. The result shows that expenditure especially on education and health crowd in private investment. The result also shows some evidence of causality running from infrastructure to private investment to growth. Expansionary fiscal policy brings about economic growth through its impact on private investment.

The relationship between government deficit financing and economic growth, by proposing a new framework for New Zealand was examined by Erkin (1998). The empirical results showed that higher government spending does not hurt consumption, but instead raises private investment which in turn accelerates economic growth.

The rate of economic growth seems to be the single most important variable contributing to the reduction of public deficits by increasing revenue. Inflation exerts a rather insignificant influence on public deficit growth. Vavouras (1999) investigates the impact of macroeconomic variables on public deficit growth in Greece, using OLS technique. The results show that the overall effect of economic variables on the relative size of the public deficit was negative. He concludes that higher levels of economic growth bring about a reduction in the need for the deficits.

Adam and Bankole (2000) report the analysis of the effects of fiscal policy on the price level and external balance based on the Mundell-Flemming model. The model employs the Keynesian IS-

LM framework to explain the effect of budget deficit on a small open economy. The model shows that given a flexible exchange, a debt financed increase in government fiscal deficit results in a temporary rise in domestic interest rate. The increase in interest rate will attract capital from abroad, thus the exchange rate appreciates, leading to a loss in competitiveness of exports and deterioration in the current account of the balance of payment.

Adam and Bankole (2000) investigate the relationship between fiscal deficit and major macroeconomic variables in Nigeria using a Two Stage Least Square estimation method. They find that the supply of money is strongly influenced in a positive direction by fiscal deficits and domestic credit. This implies that the level of liquidity in the economy can be strongly associated with such factors as fiscal deficits and domestic credit. They also find a direct relationship between fiscal deficit and fiscal decentralization. This implies that the concentration of fiscal powers in the centre denies other tiers the much needed finance. Therefore, decentralization will reduce federal government deficits.

Lin and Liu (2000), investigate the effect of fiscal decentralization on the growth rate of per capita GDP in China, using a production-function-based regression framework. The results suggest that fiscal decentralization has made a significant contribution to economic growth. The study concludes that the growth rate was raised by improving the efficiency of resource allocation rather than by inducing more investment.

Using OLS technique, investigations on the impact of economic instability on Nigeria's aggregate investment was carried out by Olaniyan (2000). The study finds that economic instability (of which fiscal deficits is one of the indicators) is a major determinant of the performance of investment in Nigeria. He concludes that all instabilities combine to depress investment in the domestic economy.

Yekini (2001) evaluates the structural determinants of fiscal deficits in Nigeria, using a structural quantitative approach to examine the effects of the level of economic development, growth of government revenue, government control over expenditure and extent of government participation in the economy on fiscal deficits in Nigeria. The results show that the level of economic growth, growth of government revenue, instability of government revenue and control of government over expenditure are of budget deficits in Nigeria.

Chete and Adeoye (2002) explore the connection between human capital and economic growth. The methodological approaches employed include Granger causality tests, variance decomposition analysis, impulse response analysis and econometric techniques. The results suggest a positive impact of human capital on economic growth. They conclude that development of skills and knowledge is important for a country's economic growth and development.

A meta-analysis of past empirical studies of fiscal policy and growth was conducted and it was found that in a sample of forty-one (41) studies, 29% indicate a negative relationship between fiscal policy and growth, 17% are positive and 54% give an inconclusive relationship (Nijkamp and Poot, 2002)

Njeru and Randa (2002) investigate the external macroeconomic implications of the fiscal deficits in Kenya, using the Easterly, Rodriguez and Schmidt Hebbel framework. The study finds

that fiscal policy has clearly an important effect on external balance in Kenya, not only because of the size of the deficits but also because of the constraints that the government faces in financing the deficits.

Islam and Rahimian (2005) investigate the relationship between the U.S. government's budget deficits and trade deficit by applying the Johansen co-integration and Granger causality tests. The co-integration tests reveal a long-run relationship between the budget deficit and the trade deficit. Granger causality shows that there is a unidirectional causality between the trade deficit and the budget deficit. They conclude that persistent rise in the deficit will ultimately result in a balance of payment crisis.

M' Amanja and Morrissey (2005) evaluate the relationship between various measures of fiscal policy on growth using time series techniques. They categorized government expenditure into productive and unproductive, and tax into distortionary and non-distortionary. Unproductive expenditure and non-distortionary tax revenue was found to neutral to growth. Productive expenditure has a strong adverse effect on growth whilst there was no evidence of distortionary effects on growth on distortionary taxes. Government investment was found to be beneficial to growth in the long-run using an auto regressive distributed lag (ADL) model.

Nwaogwugwu (2005) examines the structure and trends of relevant fiscal variables (expenditure, fiscal deficit, etc) in Nigeria, using OLS technique. He finds that federal expenditure heads produce significant impacts on the overall fiscal deficit. He therefore points out that the relationship between both variable has serious implications for fiscal management in Nigeria. He concludes that revenue shortfall does not singularly define the budget position in Nigeria, as expenditure management also plays a critical role.

Adeoye (2006) investigates the impact of fiscal policy on economic growth using OLS method. He finds that private investment expenditure in Nigeria is productive and has a positive impact on economic growth, public investment induces a crowding out impact on private investment, thereby negatively affecting output growth. His results also reveal that the impact of fiscal policy, in particular fiscal deficit, on output growth is negative. He concludes that budgetary cuts should be applied to reduce the deficit, and that deficit financing should be discouraged by the CBN.

The long-run relationship between inflation and fiscal indicators in Pakistan, using Johansen co-integration tests suggests that in the long-run, inflation is not only related to fiscal imbalances, but also to the source of financing the fiscal deficit, assuming the impact of real GDP and exchange rate are exogenous (Agha and Khan 2006). In the Vector Error Correction model/mechanism (VECM), inflation has significant error correction coefficients that implicitly conclude that inflation is affected by the government's bank borrowing for budgetary support as well as fiscal deficit. The study establishes that inflation in Pakistan is mainly attributable to unsustainable deficits. Therefore, the fiscal sector is dominant in explaining price movement in Pakistan.

Bhattacharya, A. (2002) explored the effects that domestic fiscal shocks exert on foreign exports in the European Union (EU) countries, using a VAR methodology. They find that such fiscal shocks are non-eligible, and advocate for closer fiscal policy co-ordination.

The study conducted by Olowononi (2006) showed that fiscal deficits had negative impacts on most macroeconomics variables. The results showed that fiscal deficits had increasing caused of inflation in Nigeria. The fiscal deficits were negatively related to unemployment, meaning that the results confirmed the prescription of economic theory that rising fiscal deficits leads to reduced unemployment. It was also discovered that there is negative relationship between fiscal deficits and gross capital formation and private investment in Nigeria.

Monacelli, T. and Perotti, R. (2006) study the effects of exogenous fiscal policy shocks in Spain in a VAR methodology framework. They found that government expenditure expansionary shocks are found to have positive effects on output in the short term at the cost of higher inflation, public deficits and lower output in the medium and long term.

In his study (Keho, 2010), used time series data to investigate the causal relationship between budget deficit and economic growth in the member countries of West African and monetary union. He made use of Granger casualty test and the empirical evidence showed mixed results. In three cases, he did not find any casualty between budget deficit and growth. In the remaining four countries, deficits have adverse effect on economic growth.

A review of past studies finds that fiscal deficits have a negative impact on growth in some studies while others show a positive impact of economic growth that Public expenditure shocks (increase and decrease) have implications for fiscal deficit. The methods of financing the fiscal deficit also have a significant impact on economic variables through its effect on interest rate, exchange rate, inflation and debt. This study goes further than past studies by carrying out error correction and co-integration estimation techniques to take care of spurious regression results lacking in previous studies.

## **2.2 THEORETICAL FRAMEWORK**

Several theoretical frameworks have been used to analyze the impact of fiscal deficits in Nigeria. These are crowding out effect, the Keynesian twin deficit and Ricardian equivalence theory.

### **2.2.1 Crowding out effect**

Crowding out effect occurs when governments borrow funds from other countries to finance government spending usually through expansionary fiscal policies. When the government borrows from another country, interest rate in that country goes up because an increase in demand for loans, hence pushing up the prices. Because the interest rate of the central bank subsequently influences the interest rates of commercial or private banks, this would in turn discourage private borrowing.

Hence, the term crowding out: Increase in government spending crowd outs some private borrowing. Again, the severity of the effect is largely determined by the magnitude of the crowding out effect. The crowding out effects of fiscal policy must be minimized in order to maximize its effectiveness. Crowding out effect is one of the adverse effects of Keynesian policies; the other being chronic budget deficits.

Crowding out is one of the potential consequences of deficit financing. When the government borrows funds to finance the deficit, the availability of funds for private sector spending may be

reduced. Simply put, funds that would have been borrowed by the private sector for investment purposes are transferred to the government. Crowding out basically tells us that there is an opportunity cost to government spending.

According to the literature, two types of crowding out can be identified:

- 1) Government spending crowds out private spending by competing for scarce resources, which can be termed real crowding out.
- 2) Government borrowing crowds out private borrowing by raising interest rates, which can be termed financial crowding out.

However, there are some factors that determined crowding out effect is the extent to which interest rate adjustments dampen the output expansion induced by increased government spending is determined by:

- Income increases more; interest rates increase less, the flatter LM curve.
- Income increases less; interest rates increase less, the flatter IS curve.
- Income and interest rates increase more the larger the multiplier, thus, the larger the horizontal shift in the IS curve.

### **The Classical View of Crowding out Effect**

If the LM curve is vertical, then an increase in government spending has no effect on the equilibrium income and only increases the interest rates. If the demand for money is not related to the interest rate, as the vertical LM curve implies, then there is unique level of income at which the money market is in equilibrium.

Thus, with vertical LM curve, an increase in government spending cannot change the equilibrium income and only raises the equilibrium interest rates. But if government spending is higher and the output is unchanged, there must be an offsetting reduction in private spending. In this case, the increase in interest rates crowds out an amount of private spending equal to increase in government spending. Thus, there is full crowding out if LM is vertical.

When the economy is at full employment, crowding out is inevitable. As the figure above shows, additional government expenditure can only occur at the expense of a reduction in private sector expenditure.

### **2.2.2 Keynesian Twin Deficit Theory**

This theory focuses on the relationship between the budget deficit and the current account deficit. The current account is one of the components of the balance of payment account, which according to Bo Sodersten, is merely a way of listing receipts and payments in international transactions for a country (Jhingan, 2002). The current account also referred to as the balance of trade, shows a country's merchandise of exports and imports. A current account deficit is therefore a situation where imports are greater than export (i.e. payments are more than receipts).

The analytical framework is based on the national income identity. In an open economy, GDP (Y) is the sum of private consumption, C, private investment I, government expenditure, G, and net exports, (X-M), as in equation (1):

$$Y = C + I + G + (X - M) \quad (1)$$

Alternatively,

$$Y = C + S + T \quad (2)$$

Where C is private consumption, S is savings and T is tax. Substituting equation (2) in equation (1) yields:

$$(X - M) = (I - S) + (G - T) \quad (3)$$

(X-M) is the current account balance; (I - S) is the investment and saving balance; (G - T) is the net expenditure or fiscal deficit. Any current account imbalance is attributable to either a savings-investment imbalance and/or fiscal imbalance.

Some identify equation (3) as a mere identity, and its estimation as a trivial exercise. However, others consider equation (3) to be mis-specified to the extent that financial variables such as exchange and interest rates are omitted and their role ignored. They contend that a worsening of the budget deficit causes the domestic interest rate to increase, which results in net capital inflow, in turn leading to an appreciation of the domestic currency, and eventually worsening the current account balance via a decline in net exports (Chowdhury and Salman Saleh, 2007).

A budget deficit or surplus involves stock/flow changes in net claims held by the Central Bank and the private sector on the government. Thus:

$$G - T = \Delta (GC) + \Delta (GB) + \Delta (GP) \quad (1)$$

Where

G = government expenditure on goods and services and transfer of payments

T = tax revenue

$\Delta GC$  = changes in Central Bank claims on the government

$\Delta GB$  = changes in commercial bank holding of government securities

$\Delta GP$  = changes in non-bank public holding of government securities

Thus, equation (1) can be expressed as:

$$G - T = GC + GB + GP \quad (2)$$

But this seems to ignore the role of external financing of government deficit. Thus, within the framework of national income accounting, government fiscal deficit gap (G-T) equals the savings gap (S-I) and external sector gap (M-X):

$$G-T = (I-S) + (M-X) \quad (3)$$

$$\text{But } \Delta GC = \Delta(G-T) - K \quad (4)$$

$$\Delta(G-T) = \Delta GC + K \quad (5)$$

Equation (2) can then be expressed as:

$$G - T = GC + GB + GP + K \quad (6)$$

Where  $K$  = capital inflows through loans, grants, etc., including inflows through sale of government securities.

The different sources of financing government deficits in equation (1) can be consolidated into one by lumping the Central Bank holdings of claims on the government and claims on the private sector and the non-bank public (i.e., the total domestic credit to the government (DCG)). The government must then operate under an effective budget constraint within the above dispensation. Thus any change in government expenditures must be financed by a change in tax revenue, government debt, or the monetary base. The budget deficits, however, cannot be financed by tax changes; hence recourse must be made to creation of money and the creation of public debt.

According to the Keynesian school of thought, budget deficit has a significant impact on the current account deficit.

The Mundell-fleming model suggests that an increase in the budget deficit will exert upward pressure on domestic interest rates, thereby causing capital inflows, and the exchange rate to appreciate, which in turn deteriorates the current account balance. The Keynesian approach argues that a rise in the budget deficit will increase domestic absorption via import expansion, causing a current account deficit.

Barro (1991) finds the Ricardian equivalence hypothesis (REH) argues that shifts between taxes and deficits do not affect the real interest rate, capital flows (investment) or the current account balance. REH does not acknowledge the link between the two deficits. This is because the effect of tax cuts or increased government expenditure does not alter the mix of current consumption and investment as rational agents foresee that the present tax will become a tax burden in the future.

### 2.2.3 Ricardian Equivalence Theory

There are two principal ways for increasing government expenditure, namely to tax current generations or to issue government debt in the form of government bonds, the interest and principal of which has to be paid later. The Ricardian Equivalence Hypothesis claims that there is no difference between these two methods because both result in the same economic consequences. This hypothesis basically says that tax financing and deficit financing are equal, deficit financing just serves as a means of postponing the inevitable tax given the fact that taxes will still be collected in future to repay the principal and interest rate.

Ricardo himself didn't believe in this hypothesis and preferred tax financing. He wrote about how to finance a war with annual expenditure of \$20 million and asked whether it makes a difference to finance the \$20 million via current taxes or to issue government bonds with infinite maturity and finance the annual interest payments of \$1 million in all future years by future taxes (at an assumed interest rate of 5%). His conclusion was that in the point of the economy, there is no real difference in either of the modes; for twenty million dollars in one payment (or) one million dollars per annum forever, are precisely of the same value.

Keynes has argued that if the government increases its outlays through deficit financing, people will have more money on hand, feel wealthier, and therefore begin to spend more on consumption, leading swiftly to increased output and employment. In conventional Keynesian macro-economics, government bonds were commonly treated as net wealth to the private sector. Assuming that government spending is constant, an increase in government debt would therefore increase consumption. He therefore viewed budget deficit as expansionary.

Robert Barro however, using the rational expectations theory did not agree with this. Rational expectations basically talks about how people use information about the future to guide their current behaviour. According to Barro, since the deficits implied higher taxes for the future, therefore rational taxpayers would not feel better off since they would have to pay later for the increased transfers they were receiving now. Therefore, they would be unlikely to change their spending decisions now because of their rational expectations of the future. His argument was based on the Ricardian Equivalence which says that debt financing and tax financing are equal

Barro (1991) argues instead that the way government spending is financed has no effect on private sector behaviour. According to Barro's Ricardian equivalence proposition, a tax cut today implies increased taxes in the future, as long as the stream of government spending is not reduced. The household sector treats the bonds issued to finance such a tax cut is equivalent to the present value of the implied increase in future tax liabilities. A tax cut does not lead to an increase in consumption or interest rates in the Ricardian case. Instead, the tax cut increases in savings in order to pay for the required increase in future taxes. Barro demonstrates that Ricardian equivalence holds for a maximizing household in an overlapping generation model that assumes an operative bequest motive, non-distortionary taxes, and perfect capital markets.

Ricardian Equivalence Hypothesis (REH) basically says that financing the deficit through debt or debt financing has no impact consumption, output, and employment because rational economic agents adjust their saving in expectation of future taxes that will be used to pay off the debt.

### 3.1 STATEMENT OF HYPOTHESIS

The following hypothesis will test the impact of fiscal deficit and its impact on macroeconomic growth.

1)  $H_0$  = Fiscal deficit have no significant impact on the economic growth in Nigeria.

$H_1$  = Fiscal deficit has a significant impact on the economic growth in Nigeria.

2)  $H_0$  = There exist no significant relationship between fiscal deficit and economic growth.

$H_1$  = There exist a significant relationship between fiscal deficit and economic growth.

### 3.3 SOURCES OF DATA AND ESTIMATION TECHNIQUES

The empirical analysis in this study involves the use of Ordinary Least Square (OLS) regression method to estimate the dynamic relationship between fiscal deficits and macroeconomic growth, and the data for analysis is a secondary time series data spanning from 1981-2010. This data is sourced from CBN Statistical Bulletin and Annual Reports 2010 and past empirical studies relating to this study.

### 3.7 THEORETICAL (A PRIORI) EXPECTATIONS

Generally, fiscal deficits are incurred to bring about economic development and industrialization. Fiscal deficits are theoretically expected to have a positive impact on growth. Therefore, the coefficients of (Fdr, Exd,Dlo) which represent fiscal deficits financed by domestic and external means, are expected to have a positive sign.  $\alpha_1 > 0$ ;  $\alpha_2 < 0$ ;  $\alpha_3 > 0$ ;  $U_i = 0$ ;

### 4.1 DATA PRESENTATION

A TABLE SHOWING GROSS DOMESTIC PRODUCT, FISCAL DEFICIT RATIO, EXTERNAL DEBTS, DOMESTIC LOANS BETWEEN THE PERIODS 1981 – 2010

**TABLE 4.1**

YEAR	RGDP (₦ Billion)	FDR (₦ Billion)	EXD (₦ Billion)	DLO (₦ Billion)
1981	205.2000	0.146199	2.300000	11.20000
1982	199.7000	0.951427	8.800000	15.00000
1983	185.6000	0.269397	10.60000	22.20000
1984	183.7000	0.489929	14.80000	25.70000
1985	201.0000	0.646766	17.30000	27.90000
1986	206.0000	0.970874	41.50000	28.40000
1987	205.0000	-1.756098	100.8000	36.80000
1988	220.0000	1.500000	134.0000	47.00000
1989	237.0000	-0.084388	240.4000	47.00000
1990	267.5000	4.785067	299.0000	84.10000
1991	265.4000	14.24265	328.5000	116.2000
1992	271.3000	12.67969	544.3000	178.0000
1993	274.8000	28.27511	633.1000	273.8000
1994	275.4000	0.544662	648.8000	407.6000
1995	281.4000	14.57001	716.7000	477.7000
1996	293.7000	71.91011	617.3000	420.0000

1997	302.0000	61.72185	595.9000	501.8000
1998	310.9000	49.72660	633.1000	560.8000
1999	312.2000	49.51954	2577.400	794.8000
2000	329.2000	-6.98660	3097.400	898.3000
2001	357.0000	0.420168	3176.300	1017.000
2002	433.2000	278.1856	3932.900	1166.000
2003	477.5000	254.1571	4478.300	1257.100
2004	527.6000	135.2729	4890.300	1297.800
2005	561.9000	443.9046	2695.100	1257.100
2006	595.8000	625.2769	451.5000	2082.000
2007	634.3000	634.8889	431.1000	2941.800
2008	672.2000	485.6739	493.2000	2320.300
2009	719.0000	643.3658	590.4000	3228.000
2010	775.5000	179.4455	689.8000	4551.800

**Source:** Central Bank of Nigeria statistical bulletin various issues and Authors calculation.

#### 4.1.1 ANALYSIS OF DATA

The variables in table 4.1 are Real Gross Domestic Product, fiscal deficit ratio, external debts, domestic loans between the periods 1981- 2010, however there were some declines at some points in time. It can be noted that between the years 1981 – 1984 RGDP was decreasing and between the years 1985 &1986 RGDP experienced a slight increase. Then over the years from 1988 – 2010, the pattern of growth for Fdr is inconsistent. The Exd also experienced a stable rate of increase. It has encountered gradually slow increase. There were no fluctuations for a long period until the year 2006 when it dropped to 451.5000. Dlo has also been increasing at a constant rate.

#### 4.2 SPECIFICATION OF MODEL

##### 4.2.1 Model

This model is adapted from Nwaogwugwu (2005) in his analysis of the impact of fiscal deficit on economic growth and it was modified to suite this research work as this.

$$RGDP = f(Fdr, Exd, Dlo)$$

Where,

RGDP = Real GDP

Fdr = Fiscal deficit as a percentage of the GDP

Exd = External debt

Dlo = domestic loans (net)

$\mu$  = Stochastic error term

Expressing the above functional relationship in a linear regression model, we have

$$RGDP = \alpha_0 + \alpha_1 Fdr + \alpha_2 Exd + \alpha_3 Dlo + \mu$$

Where  $\alpha_0$ ,  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  are model parameters and the a priori expectations about the regression coefficient of the model are,

$$\alpha_1 > 0, \alpha_2 < 0, \alpha_3 > 0, U_i = 0$$

#### 4.2.2 MODEL ESTIMATION

The model can be restated below:

$$RGDP = \alpha_0 + \alpha_1 Fdr + \alpha_2 Exd + \alpha_3 Dlo + \mu$$

From the table, the estimated model is

$$RGDP = 212.7016 + 0.253100Fdr + 0.017029Exd + 0.108302Dlo + \mu$$

$$T_{stat}: (24.68186) \quad (5.751281) \quad (3.921276) \quad (12.85410)$$

$$T_{prob}: (0.0000) \quad (0.0000) \quad (0.0006) \quad (0.0000)$$

$$R^2 = 0.967962$$

$$\text{Adjusted } R^2 = 0.964266$$

$$\text{Durbin Watson statistics} = 1.683420$$

$$F_{stat}: 261.8495$$

$$F_{prob}: 0.000000$$

#### 4.2.3 INTERPRETATION OF THE ESTIMATED MODEL

##### ANALYSIS OF STATISTICAL TEST

From the results of the estimated model, a 1% increase in external debt (EXD) will lead to a 0.017029% increase in real gross domestic product (RGDP), which reflects the fact that they are positively related in the regression result. Also, a 1% increase in domestic loan (DLO) will lead to a 0.10832% increase in real gross domestic product (RGDP), which reflects the fact that they are positively related in the regression result. Furthermore, a 1% increase in fiscal deficit ratio (FDR) will lead to a 0.2531% increase in real gross domestic product (RGDP), which reflects the fact that they are positively related in the regression result.

### 4.3 EVALUATION OF ESTIMATED MODEL AND TESTING OF HYPOTHESIS

#### a.) Theoretical Criteria

This criterion is based on the a priori expectations of the model. The a priori expectations of the model are as follows:  $EXD < 0$ ;  $DLO > 0$ ;  $FDR > 0$

From the estimated model external debt (EXD) does not agree with the a priori expectation which states a negative relationship between external debt and economic growth. Domestic loan (DLO) conforms to the a priori expectation, which states a positive relationship between domestic loan and economic growth. Fiscal deficit ratio conforms to the a priori expectation, which states a positive relationship between fiscal deficit ratio and economic growth.

#### b.) Statistical Criteria

##### Coefficient of Determination ( $R^2$ )

The result shows that about 97% of the systematic variation in the Real Gross Domestic Product (RGDP) is explained by the explanatory variables. This shows a good fit for the model, hence the independent variables are statistically significant in explaining variations in the RGDP.

##### Adjusted $R^2$

The adjusted  $R^2$  of 96% supports the above result. It tells us that the model is a very good fit, having removed the influence of the explanatory variables. We therefore say that the value is not k-sensitive, that is, it takes care of the number of the regressors that will be added to the model. We can therefore conclude that the true variation in RGDP is explained by about 96% from all explanatory variables.

##### The F-statistic

The F-statistic gives 261.8495 with a probability distribution of 0.00000%. The F-statistic explains that the regression passed the significance test at the 1% level of significance. It shows that the estimate of the parameters is significant. This is good for forecasting and policy making.

##### T-statistic

The t-test is used to test hypothesis about individual regression slope coefficients. For each parameter, the t-probability is computed and compared at 5% level of significance.

##### Decision Rule:

Where  $H_0 = 0$  (then there is no statistical significance)

$H_1 \neq 0$  (then there is statistical significance)

Hence, if

$0.05 > T_{\text{prob}}$ , reject  $H_0$

$0.05 < T_{\text{prob}}$ , accept  $H_0$

According to the regression results,  $T_{\text{prob}} \text{ FDR} = 0.00000$

$T_{\text{prob}} \text{ EXD} = 0.0006$

$T_{\text{prob}} \text{ DLO} = 0.0000$

using the 5% (0.05) level of significance

From the results obtained above,  $0.05 > 0.0000$  for FDR, reject  $H_0$  and accept  $H_1$ . This means that FDR is statistically significant in determining economic growth in Nigerian economy. Also,  $0.05 > 0.0006$  for EXD, reject  $H_0$  and accept  $H_1$ . This means that EXD is statistically significant in determining economic growth in Nigerian economy. Furthermore,  $0.05 > 0.0000$  for DLO, reject  $H_0$  and accept  $H_1$ . This means that DLO is statistically significant in determining economic growth in Nigerian economy.

#### **Durbin-Watson statistic**

$D_l$  = lower limit of Durbin-Watson statistic = 1.8

$D_u$  = upper limit of Durbin-Watson statistic = 2.22

$D_{cal}$  = Durbin-Watson calculated = 1.683420

Since the Durbin Watson (1.683420) falls below the acceptable range of 1.8 - 2.22, there is evidence of positive first order auto-correlation.

### **4.4 ECONOMIC IMPLICATIONS AND POLICY RELEVANCE OF THE RESULTS**

From the statistical analysis above, it was discovered that Exd, Fdr and Dlo are good indicators for measuring the impact of fiscal deficit on economic growth in Nigeria. It was revealed in the regression analysis that Fdr and Dlo are positively related to RGDP. The Fdr and Dlo coefficients at 0.2531 and 0.10832 will increase GDP at every 1% increase.

The f-statistics shows that the overall parameters in the model are statistically significant at 5% and  $R^2 = 0.967962$  which is 96%, which implies that about 96% variation in the dependent variable has been explained by the independent variables while the remaining 4% represents other variables that were not included in the model. It was revealed that the coefficients are in conformity with the a priori expectations.

The implication of this is that a stop must be put to unproductive foreign loans, wasteful spending and unregulated money supply with government putting into structure strategies designed to achieving increased and sustained productivity in economic sectors.

### **5.1. CONCLUSION**

It was discovered, from the hypothesis drawn, that fiscal deficit has made a significant contribution to the GDP and economic growth of the country. Therefore, external debts and domestic loans are important in driving the chronic deficits in Nigeria which contribute to growth. Loans from the private sectors in the country and the government through the central bank sending treasury bills and bonds is also a way of financing deficit which in turn leads to economic growth gradually. The government working through the CBN on various fiscal activities in galvanizing (getting) funds is also a way of financing deficit.

Also, higher government spending does not hurt consumption, but instead raises private investment which in turn accelerates economic growth.

### 5.3 RECOMMENDATIONS

- Macro-economic policies if effectively implemented and geared towards enhancing overall productivity of the economy will effect potential beneficial results in the country.
- For achievement of sustainable economic growth through fiscal policy in Nigeria, there must be reduction in corruption, wasteful spending, improvement in policy implementation and functional feedback mechanism for the implemented policies.
- A stop must be put to unproductive foreign loans, wasteful spending and unregulated money supply with government putting into structure strategies designed to achieving increased and sustained productivity in economic sectors.
- Government should generate policies that enable spending and execution of projects that would have a direct impact on the people and the society.
- The project suggests an interesting link between deposited monies and fiscal deficits. This relationship suggests that any improvement in fiscal deficits and broad money will enhance economic growth in Nigeria.
- Focus of government expenditure should be on manufacturing industries which include small, medium and large scale, agricultural sectors as well as encouraging indigenous production companies in Nigeria.
- Monetary policies should be analysed to create near perfect equilibrium such that the increase in money supply will not cause inflation rather than cushioning the extent of budget deficit in the economy

### REFERENCES

- Adam J.A, Bankole A.S (2000). The Macroeconomics of Fiscal Deficits in Nigeria. Nigerian J. Econ. Soc. Stud., 42(3): 263-289.
- Adedipe, B. (2004). The impact of oil on Nigeria's economic policy formulation. Being text of a paper presented at the conference on Nigeria: Maximizing Pro-poor Growth: Regenerating the Socio-economic Database, organized by Overseas Development Institute in collaboration with the Nigerian Economic Summit Group Retrieved April 2, 2010.
- Adeoye T. (2006). "Fiscal policy and growth of the Nigerian economy", Nigerian Institute of Social and Economic Research Monograph Series, no. 3.
- Adedotun.P.O. (1997).Nigeria Fiscal Policy, 1998-2010. NISER Monograph Series 17 . Am.Econ.Rev,38(3). 245-264
- Agha, A.I. and Khan, M.S. (2006). "An empirical analysis of fiscal imbalances and inflation in Pakistan", State Bank of Pakistan, vol. 2, no.2, pp. 343-362.
- Aigbokhan B.E. (1999). "Fiscal federalism and economic growth in Nigeria", Selected

Papers for the 1999 Annual Conference of the Nigerian Economic Society.

- Aizenman, J. and N. Marion. (1993). "Policy uncertainty, persistence and growth".
- Akor. M.E.(2001). *The Nigerian Economy (A select study)*. Jos: Aliyu, S.V.R AND ELIJAH.A.O (2008). *Corruption and Economic growth in Nigeria: 1986-2007*, MPRA paper No.12504. Retrieved September 23, 2009 from <http://mpra.vb.uni-muenchen.de/112504/>
- Albu, L. & Pelinescu, E. (2000). Sustainability of the public debt and budget deficit. *RCEP/WP no.4*.
- Anyanwu J.E. (1993). *Monetary Economics: Theory, Policy and Institutions*, Hybrid, Nigeria.
- Anyanwu J.C. (1998). Do Large Fiscal Deficits Produce High Interest Rate?: The Case of Nigeria, Ghana and The Gambia, 1987:3 – 1995:4. *CBN Financial Econ. Rev.*, 36(1): 51-84.
- Anyanwu, J.C. (1997). *Nigerian Public Finance*. Onitsha, Nigeria: Joanee Educational Publishers Ltd.
- Anyanwu, J. C., & Oaikhenan, H. E. (1995). *Modern macroeconomics: Theory and applications in Nigeria*. Onitsha: Joanee Educational Publishers Limited.
- Ariyo A (1993). "An assessment of the sustain ability of Nigeria's fiscal deficit: 1970-1990", *Journal of African Economies*, vol. 2, no. 2, pp. 263-282.
- Ariyo, A. and M. I. Raheem (1991): "Effect of Fiscal Deficit on some Macroeconomic Aggregates in Nigeria" *Report of a Research Study Sponsored by AERC*, Nairobi.
- Asika N. (2001). *Research Methodology*. Longman Nig. Plc, 52, Oba Akran Avenue, Ikeja, Lagos.
- Ashafa. S.G (2007, August) National Revenue Funds their efficiency for fiscal stability and inter-generational equity.
- Ball, L. and Mankiw N. (1995). Relative Price Changes as Aggregate Supply Shocks. *Quarterly Journal of Economics*.
- Begg, D.K.H., Fischer,S.,Dornbusch,R., *Foundations of economics*, London, McGraw-Hill Education, 2003, ISBN: 9780077099473
- Barro,R.J. (1991) "Economic Growth in a Cross Section of Countries", NBER Working Papers 3120, National Bureau of Economic Research,Inc.
- Bhattacharya, A. (2002). The Underpinnings of a stable and equitable global financial system: From old debates to a new paradigm, Annual World Bank Conference on Development Economics 1999. Washington, DC: The World Bank.
- Black, J. (2002). *Dictionary of Economics*. Oxford University Press.
- Buchanon, J. and Wagner R (1977). *Democracy in Deficit: The Political Legacy of Lord Keynes* Academic Press, New York.

- Chete, L.N. and Adeoye, B.W (2002) "Human Capital and Economic Growth: The Nigerian Evidence" Proceedings of Nigerian Economic Society Conference, 2002.
- Darrat AF. (1988). "Have large budget deficits caused rising trade deficits?", Southern Economic Journal vol. 54, no. 4, pp. 879-887 developing countries," The World Bank Research Observer 8(2): 211-37
- Easterly, W. & Schmidt-Hebbel, K. (1993) "Fiscal Deficit and Macroeconomic Performance".
- Easterly, W. and Rebelo, S. (1993). "Fiscal policy and economic growth: An empirical investigation", Journal of Monetary Economics, vol. 32, no. 12, pp. 417-458.
- Egwaikhide F.O. (1991). "Determinants of fiscal deficits in a developing economy: Evidence from Nigeria", Nigerian Journal of Economic and Social Studies, vol. 33, no. 3, pp. 177-189
- Ekpo A. (1994). "Public expenditure and economic growth in Nigeria: 1960-1992", The African Economic Research Consortium.
- Erkin, B. (1988). Government Expenditure and Economic Growth: Reflection on Zealand Time-Series Data. *Kei Economic Studies*.
- Fischer S, Easterly W (1990). The Economics of Government Budget Constraints. World Bank Observer, 5(2): 23-41
- Gujarati, D. (1995). *Basic Econometrics*, 3<sup>rd</sup> Edition, Singapore, McGraw Hill Book co.
- Gadong T. Dalyop "Fiscal Deficits and The Growth Of Domestic Output In Nigeria" .Department of Economics. University of Jos, Nigeria. Vol 4, No1
- Humpage O.F. (1992). "An introduction to the international implication of U.S. fiscal policy", Economic Review, Federal Reserve Bank of Cleveland, vol. 28, no. 3, pp. 27-39.
- Ikhide, S. I. and Alawode, A. A. (2001, November). Financial sector reforms, macroeconomic instability and the order of economic liberalization: The evidence from Nigeria. *AERC Research Paper 112*. Nairobi: African Economic Research Consortium. *International Economics*, 2: 145-63.
- Islam, M.M. and Wetzel, E. (2005). "An empirical analysis of the relationship between the budget deficit and the trade deficit", Journal of Academy of Business and Economics.
- Jacobs, D., Schoeman, N., and Heerden, J. (no date). Alternative Definitions of the

Budget Deficit and its Impact on the Sustainability of Fiscal Policy in South Africa.

Japelli, T. & Ripa di Meana, A. (1994). "Public Investment and Welfare: Theory of Empirical implications".

Jhingan M.L. (2008). *Macroeconomic Theory*, Vrinda, Delhi.

Jhingan M.L. (2002). *Macroeconomic Theory*, Vrinda, Delhi.

Johnson O.A. (1989). "Time and the idea of time", *Hume Studies*, vol. 15, no. 1, pp. 205-219.

Keho (2010). Budget Deficits and Economic Growth: Causality Evidence and Political Implications for WAEMU Countries. *European Journal of Economics, Financial and Administrative Sciences*.

Komolafe, S.O. (1996). Co-integration Theory: Technique and Application. In: *Macroeconomic Policy Analysis, Tools Technique and Application to Nigeria*. Edited by Obadan, M. I. and Iyoha, M.A. NCEMA, Ibadan, Chapter 13

Krajewski, P., & Mackiewicz, M. (1998). *Fiscal deficit, size of the public sector and investment rate – A panel study*. Retrieved May 28, 2009

Kwanashie, M., Ajilima, I., and Garba, A. (1998, March). The Nigerian economy: Response of agriculture to adjustment policies. *AERC Research Paper 78*. Nairobi: African Economic Research Consortium.

Landau D.C. (1983). "Government expenditure and economic growth: A cross-country study", *Southern Economic Journal*, vol. 49, no. 1, pp. 783-792.

Laurens, B. and Piedra, L. "Co-ordination of Monetary and Fiscal Policies", *IMF Working Paper*, WP/98/25, International Monetary Fund, Washington, D. C.

Lin, J.Y. and Liu, Z. (2000). "Fiscal decentralization and economic growth in China", *Economic Development and Cultural Change*, vol. 49, no. 1.

Martin, R. And Fardmanesh, M (1990) "Fiscal Variables and Growth: A cross-section Analysis." *Public Choice* 63 (March) p.3-14.

M' Amanja and Morrisey (2005). "Fiscal policy and economic growth in Kenya", Centre for Research in Economic Development and International trade, No 05/06, pp. 1-36.

Monacelli, T. and Perotti, R. (2006). Fiscal Policy, the Trade Balance, and the Real Exchange Rate: Implications for International Risk Sharing *Monetary Economics*, 32, 417-458.

Neaime.S.(2008). Twin Deficits in Lebanon: A time series analysis. IFE Lecture and working paper Series No.2

- Njeru and Randa (2002). *Twin Deficits in Lebanon: A Time Series Analysis. IFE Lecture and Working Paper Series No. 2*. Beirut: Institute of Financial Economics American University of Beirut.
- Nijkamp P, Poot J, (2002). Meta-analysis of the Effect of Fiscal Policy on Long-Run Growth. *European Journal of Political Economy*, 20: 91-124.
- Niskanen, W. (1978). 'Deficits, government spending , and inflation: what is the evidence'? *Journal of Monetary Economics*, August, pp. 59 1-602.
- Nwaogwugwu, I.C., (2005). *The Impact of Fiscal Deficit in Nigeria*.
- Ogboru, I. (2006). *Macroeconomics*. Kaduna: Liberty Publications Limited.
- Ojo. M.O. et al (1998). Challenges of globalization for macro-economic policy and management in Nigeria CBN Economic and Financial Reviews 36(4)
- Oladeji.S.I. (1998) Poverty Alleviation with Economy Growth Strategy: Prospect and Challenges in Contemporary Nigeria. *Nigeria journal of Economics and Social Studies Vol.40, No.1*
- Olowononi, G. D. (2006). The Effects of Fiscal Deficits on the Nigeria Economy. *Journal of Economic and Social Research*. Destiny ventures, Makurdi, Benue State.
- Oluba, M. N. (2008). How Years of Fiscal Deficits Emasculated the Nigerian Economy. *Economic Reflections, B(5)*. Retrieved April 5, 2010.
- Okpanchi, U.M and Abimiku, C.A (2007) "Fiscal Deficit and Macroeconomic Performance: A Survey of Theory and Empirical Evidence – in Ogiji P.ed. *The Nigerian Economy: Challenge and directors for growth in the next 25 years*, Makudi, Aboki publishers.
- Osoro, N.E. (1992). 'The revenue productivity of the tax system of Tanzania', *Journal of African Economies*, Vol. 1, No. 3, pp. 395-4 15.
- Ram, R. (1986). Government Size and Economic Growth: A New Framework and Some Evidence from Cross-Section and Time-Series Data. *American Economic Review*.
- Schillor.B.R (1999). *The Deconomy Today*, Mc Graw-Hill.London
- Sikkam.S.B (1998) Inflationary Effects of the petroleum industry on the Nigerian economy. *Jos Journal of Economics(1)*
- Vavouras I.S. (1999). "Public sector deficits: Their economic and policy determinants in the case of Greece". *Journal of Policy Modeling*, vol. 21, no. 1, pp. 89-100
- World Bank. (2005). *Reaching the Poor: What Works, What doesn't*. World Bank , Publication
- Yekini T.K. (2001). "The structural determinants of government budget deficits in Nigeria: 1970-1999", *Nigerian Institute of Social and Economic Research Monograph Series*, no. 2.
- CBN Statistical Bulletin
- European Journal of Monetary Economics, Financial and Administrative Sciences

Journal of Policy Modeling

Nigerian Journal of Economics and Social Studies

Southern Economic Journal

Quarterly Journal of Economics

[http://www.odi.org.uk/events/nigeria\\_2004/Adedipe.pdf](http://www.odi.org.uk/events/nigeria_2004/Adedipe.pdf)

[http://congress.utu.fi/epcs2006/docs/C4\\_krajewski.pdf](http://congress.utu.fi/epcs2006/docs/C4_krajewski.pdf)

**APPENDIX**

**Table 4.1 : Static Regression Result**

Dependent Variable: RGDP				
Method: Least Squares				
Date: 07/19/09 Time: 00:02				
Sample: 1981 2010				
Included observations: 30				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLO	0.108302	0.008426	12.85410	0.0000
EXD	0.017029	0.004343	3.921276	0.0006
FDR	0.253100	0.044008	5.751281	0.0000
C	212.7016	8.617731	24.68186	0.0000
R-squared	0.967962	Mean dependent var		359.3667
Adjusted R-squared	0.964266	S.D. dependent var		175.7865
S.E. of regression	33.22976	Akaike info criterion		9.968335
Sum squared resid	28709.64	Schwarz criterion		10.15516
Log likelihood	-145.5250	F-statistic		261.8495
Durbin-Watson stat	1.683420	Prob(F-statistic)		0.000000

SOURCE: Econometric View (E-view) Analytical Package