

DEFICIT FINANCING AND THE GROWTH OF NIGERIA ECONOMY

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ABSTRACT

The general objective of the study is to analyze the effect of Deficit Financing on the economy. In order to understand whether or not Deficit Financing impacts on economic growth. The study utilized data from publications of the Central Bank of Nigeria Statistical Bulletin between 1981- 2012. The paper applied descriptive statistics, OLS, Diagnostic test, ADF unit root, Johansen Co-integration and pairwise Granger causality test and the findings shows that the variables were stationary at first difference data 1(1). The variables were jointly co-integrated at 5% level. Showing that Deficit Financing were seen to be statistically significant and positively related to economic growth in Nigeria. This suggests that both domestic debt and external debt liability contributes effectively to the settlement of Nigeria debt. In Nigeria with respect to the regression result, it is apparent that domestic debt and external debt remains the crucial source of financing Nigeria debt. The study therefore concluded that so far as a long-run equilibrium relationship exists between the dependent and independent variables, and has assumed that the deficit financing assert sufficient influence on the growth in the debt management and services in Nigeria. From these affirmation findings, this research suggests appropriate combination of internal and external debt ratio with a close monitoring situation. We recommended that the Policy makers should control the level of deficits to ensure that it is within this level. Also, a decrease is required in the level of the deficits could strengthen the exchange rate, and control inflationary pressure in Nigeria.

KEYWORDS: Deficit Financing, Domestic debt, External debt, Gross domestic product

INTRODUCTION

Deficit financing in Nigeria dates back to 1961, and appeared justified during the immediate post-independence era, Okoro (2013) stated that deficit financing arises largely because of the need to expand the economy. The culture however became seemingly entrenched overtime. From 1970, the country ran into fiscal deficits and sustained public sector spending boom. The fiscal deficits of the 1970 were justified on the grounds that it was largely for war reconstruction. Backed with huge wealth from oil, Nigeria embarked on wasteful spending, the mismanagement of the oil boom of the early 1970s led to the return to deficits financing in 1980. From 1982, the continuing decline in crude oil export earnings in 1983 once again led to the resumption of fiscal deficits which were financed through heavy borrowing after reducing the nations reserves. Then fiscal deficit according to Edo (2002) arise because public spending rises while revenue remain unchanged, or tax revenue falls while public spending remains unchanged. Thus leading to deficit financing which occurs as a practice in which a government spends more money than it receives as revenue. It may also result from government inefficiency.

Fuso (2007) posits that Government use deficit financing for several purposes. One of the most common use is to increase the money supply and the number of bonds it has in the economic system, thus influencing the

economic activity of investors. Governments may have a choice between using debt and raising taxes. Issuing more bonds is usually more politically attractive than raising taxes. When deficit financing is used correctly, it increases the amount of spending in the debt market and has a favorable effect on economic conditions, making people more willing to spend money on a variety of businesses. In the end, this activity will raise greater amounts of income, from which the government draws greater amounts of taxes to cover the deficit. In the meantime, the government can use the funds it receives to pay for pressing expenses. When deficit finance is used wrongly, it can put governments in a dangerous and unstable position (Audu 2004). Eventually, the bonds that the government uses will come due and the government must be prepared to pay them off when this occurs. Also, increasing the number of government bonds, which raises interest rates. Interest rates across the economy will tend to follow suit, making it difficult for many people to afford loans.

Deficit financing may also apply to business on a smaller scale, in which a nations economy is not affected but the business still needs extra funds to pay off important expenses. Like the government, the business sells bonds to raise funds beyond the capacity of its profits to pay off and the business must make sure it remains successful enough to pay back the bonds in the future.

It's known that nowadays the current public debt growth is larger than the growth rate of the economy for most of the industrial countries like Nigeria. This imposing a very big challenge, Audu (2004) stated that it is expected that the growing public debt will cause problems in perspective related to its gross domestic product in Nigeria. However, in the need to secure better economic conditions, often the government is forced to implement expensive fiscal policy whose aim is to stimulate economic actors on the market and accomplish higher level of economic growth. When aggregate demand is far shorter than required for reaching full GDP potential, deficits are justified. As economy resumes growth, demand for goods and services as well as tax receipts will increase to generate offsetting budgetary surpluses. If a country does incur deficits, how does it affect the economy and which ways to address the issues? (Ajayi et al 2000) Is it by introducing radical fiscal reforms to reduce budgetary expenses and deficits while increasing taxes? By reducing social transfers and government payroll? Or to put to stop on unintended excess government expenditure? Research has shown that some studies have been done on deficit financing in Nigeria. However, the relationship between deficit financing and economic growth empirically seeks to verify if there is a causal relationship between deficit financing and economic growth in Nigeria, and present a framework for the dynamic change and it's impact on the economic growth in Nigeria.

OBJECTIVES OF THE STUDY

The general purpose of this study is to examine the impact of deficit financing on the output of Gross domestic product in Nigeria. Thus the specific purpose include:

1. To ascertain the effect of external debt on gross domestic product (GDP) in Nigeria.
2. To investigate the effect of domestic debt on gross domestic product (GDP) in Nigeria.

RESEARCH QUESTIONS

This study is guided by the following research question.

- (1) How does external debt affect the gross domestic product (GDP) in Nigeria?
- (2) How does domestic debt affect gross domestic product (GDP) in Nigeria?

RESEARCH HYPOTHESIS

The study formulated two hypothesis as a guide to achieve the objectives of the study:-

HO₁ : - There is no significant relationship between external debt and gross domestic products (GDP) in Nigeria.

HO₂ : - There is no significant relationship between Domestic debt and gross domestic products (GDP) in Nigeria.

The findings of the study will be immensely important to the following sectors:

For Government funding expenditures such as new government programs, government construction projects by using debt instead of income.

Governments receive a large amount of income through taxes, but they also get funds by selling debt instruments like bonds.

Typically, Ajayi and Khan (2000) posit that government bonds are very popular in the debt market. If the government is stable and it is easy for the government to raise money in the manner.

Government will also use the knowledge from the study to know when to increase the money supply and the number of bonds they have in the economic system, thus influencing the economic activity of investors and influence on the GDP. It will enhance their ways of increasing the amount of spending in the debt market and has a favorable effect on economic conditions, making people more willing to spend money on a variety of businesses.

- Deficit financing may also be applied to business environment on a smaller scale, in which a nation's economy is not affected but the business still needs extra funds to pay off important expenses.
- The study is also used by policy makers, financial analyst/investors and students at any level who may have invested interest to issues on their country's deficit financing. The study is organized into 5 sections: section 1 introduces the study, section 2 deals with Literature review, section 3 contains the methodology, section 4 presents the empirical analyses and the results, section 5 gives the conclusion remarks.

LITERATURE REVIEW

Many years ago, the country's debt has been growing in spite of the efforts being made by the Government to manage and minimize its crushing effects on the nation's economy. Kola and Liko (2008), states that there is no doubt that the debt deficit finance in normal economic conditions will cause fiscal burden (public debt increase followed with higher taxes in the future) and put pressure on the private sector. Deficit financing according to Muyasa (2003) seems to present a positive inflationary impact on developing economics particularly in Nigeria. When there is a budget deficit, government finds ways of financing the deficit through borrowing from commercial and merchant banks or from the non-banking public and through the issue of short-term bonds and monetary instruments. The use of deficit financing for the pursuit of fiscal policies often leads to increased danger in an economy (Ndekwe 2003). Its impact on the continuous rise in prices of goods and services of the country as a measure of the consequences of extra budgetary spending. It also reviews the effectiveness of the strategic options adopted to eliminate the constant reoccurrence of deficit financing in Nigeria.

Kola et al (2008) stated some precautions in the use of deficit financing by saying that Deficit financing should be used in moderate doses, Constant watch on price index, Prices of consumer goods and essential raw materials should be effectively controlled, Ensure a corresponding increase in the availability of goods, Concentrate on quick yielding projects, Excess money supply should be mapped up through taxation and borrowings. From the perspective of Gyorgy (2009), deficit financing as practiced, advanced and underdeveloped countries use it as an instrument of increasing demand while developing countries are used to increase capital ratios.

In the review of Kola and Liko (2008), the financing of the deficit is said to have practiced, if the government adopt one or all of the methods listed below:

- a. The government relies on cash balances from the past, The government borrows from the central banks against government securities, The government creates money printing paper currency, and thus meet expenditures over receipts, The government borrows externally. Oloba (2008) in spite of this states that the financing of the deficits is considered to be a very dangerous weapon economy.

Deficit financing curbs inflation and increases the wealth of a country.

Furthermore Nwankwo (2004) identified such ways as: Proper disinflationary fiscal policy, Restrictive monetary policy to control non-essential private investment, Proper allocation of resources, Developing import surpluses for increasing the supply of goods.

In the work of Langdana (2009) Crowding out and Crowding in effect was extensively discussed as a conventional practice by the Government on debt financed deficits which raise the real interest rates under given level of savings and crowd out the private investments. The deficits can be financed through decline in money balance in the private sector triggered with the higher interest rates. Therefore, at lower level than full employment, the economic activity can be increased but at expense of declining interest rate sensitive investment demand. Also interest rate pressure especially in little open economy will lead towards crowding out larger international capital inflows, which reduce the effect of deficit consumption on interest rate. However, the domestic currency will potentially appreciate, and may impact the demand for tradable domestic goods and services. Langdana equally presented Portfolio crowding out when the government bonds participate with raising part in the private portfolio, the possession of private assets must be reduced and again puts pressure on interest rates. In other words, wealth effect has a growing influence on the fiscal effectiveness. When the saving raises, the demand for private asset (capital) and/or money balance may increase and bring to recomposition of the portfolio. Which one of these two effects will prevail, depends upon the question: Are the bonds closer portfolio substitute for money or capital? This issue is only matter of financial mix choice (Omoruyi 2005). According to Friedman (1990), government bonds are close substitutes for private assets, and subsequently reduce the demand for those assets. This is equally applied to short or medium term security that has the characteristics of money. This point out that potential portfolio adjustments can have beneficial impact for private investments in the case of crowding in effect thus reflecting the importance of public debt management. These ways of finance, where the borrowing prevails, had created some doubt about the real debt condition of the countries, a lot of countries over borrowed and now are faced with the consequences. IMF has the main role in implementing of desired adjustment through classical measures. The expectations are that there will be active

collaboration between creditors and debtors, as the implementation of real policies of indebted countries will significantly improve their economic condition (Omotoye et al 2006). However, in the need to secure better economic conditions, often the government is forced to implement expansive fiscal policy, which aim is to stimulate economic actors on the market and accomplish higher level of economic growth.

Osiogbu, Onuorah and Nnamdi (2010) stated that the fiscal policy represents strong instrument which through public expenditure and taxes can have an influence on the aggregate demand of goods and services in the economy. The budget deficit policy, excessive public expenditure upon collected public revenues, is initiated because of economic growth impact. Through the household and firm decisions that change the money supply or level of taxes, there is indirect impact on the aggregate demand curve. But with public expenditure intervention from the government, there is direct effect on the aggregate demand curve. If we assume that the government made a purchase of some public good, for example plains, it will increase the aggregate demand. But is the amount of change the same as the initial public expenditure? However, increased demand contributes with larger engagement of work force and higher profits of the company. That kind of progressive influence is transferred to the employee wages and other firm profits, which results with increase of consumption of different goods and services. State demand for planes increases the demand for other firm's products in the economy. Because the increase in the aggregate demand is larger than the initial government expenditure, we say that the government spending has multiplied the aggregate demand. This implies that there is a feedback between the higher aggregate demand and the income which continuously leads towards higher demand, and again to higher income etc. All these effects imply that the total impact on demanded goods and services will increase government expenditure resulting to multiplier effect.

Multiplier effect is derived from two sources: the consumer spending which contained the marginal propensity to consume element (MPC) and the part of the extra income that the household consumes rather than saving. Onafowora and Owoye (2006)

Taxes is not the only instrument of Fiscal Policy, also can have impact on national income. That can be seen through the personal income tax. Reduction in this tax

will increase the household income and when it increase, we save some and consume some which will increase the demand of goods and services while Tax increase will reduce spending.

THEORIES UNDERPINNING DEFICIT FINANCING

Darrat (1989) provides a brief summary of the three paradigms on deficit financing as follows.

The Neoclassical school considers individuals planning and their consumption over their entire life cycle by shifting taxes to future generations. The believes that budget deficits increase current consumption. The Neoclassical school argues that increased consumption implies a decrease in saving. Interest rates must rise to bring equilibrium in the capital markets. Higher interest rates, in turn, result in a decline in private investment. In addition, Keynesian schools provides argument to the crowding in effect by making reference to the expansionary effects of budget deficits. They argue that usually budget deficits results in an increase in domestic production, which makes private investors more optimistic about the future course of the economy resulting them in investing more. It is worth noting that the traditional Keynesian view differs from the standard Neo-classical paradigm in two fundamental ways. First, it permits the possibility that some economic resources are unemployed. Second, it presupposes the existence of a large number of liquidity constrained individuals. The second assumption guarantees that aggregate consumption is very sensitive to changes in disposable income. Many traditional Keynesians argue that deficits need not crowd-out private investment. Webb (1998) is an example of this group, who suggests that increased aggregate demand enhance the profitability of private investments and leads to a higher level of investment at any given rate of interest. Hence, deficits may stimulate aggregate saving and investment, despite the fact that they raise interest rates. He concludes that "The evidence is thus that deficits have not crowded-out investment. There has rather been crowding-in". Keynes also argued that public capital crowds-out or crowds-in private capital, depending on the relative strength of two opposing forces: (1) as a substitute in production for private capital, public capital tends to crowd-out private capital; and (2) by rising the return to private capital, public capital tends to crowd-in private capital. Therefore, on balance, public capital will crowd-out or crowd-in private capital, depending on whether public and private capital are gross substitutes or gross

complements, Furthermore, Webb argues, on the hand, that higher public investment raises the national rate of capital accumulation above the level chosen (in a presumed national fashion) by private sector agents; therefore, public capital spending may crowd-out private expenditures on capital goods.

Others are Sargent and Wallace's (1985) "monetarist arithmetic" answers this question affirmatively, nevertheless, the relationship is blurred because government finances deficits by borrowing as well as by printing money. The relationship is further distorted by other influences such as unstable money demand, inflationary exchange rate depreciations, widespread indexation, and inflationary expectations (Ariyo et al, 1991; Dornbusch and Fisher, 1991). However, whether or not deficit financing is inflationary depends on source of borrowing and the impact on money supply. For instance, when central banks buy government securities, they pay for them by issuing high powered money, thus increasing money supply. Equally, when the government borrows from the public, it does not only receive but also spends leaving high-powered money in the hands of the public unchanged, except for a brief transitory period between the sale of securities and expenditures by government (Klindo, 1993).

Government's resort to money creation to finance its expenditure, increases the nominal stock of money and consequently increases demand for goods and services. If output does not grow in tandem to meet this increase in demand, an upward pressure on prices will result. In synopsis, inflation would result from increased government deficit which is financed by money creation. In most developing countries, including Nigeria, poor and inadequate tax programmes make government unable to generate enough funds for expenditures, hence, the pursuance of the policy of financing government expenditures by creation of money becomes inevitable. With full employment of resources achieved, Claessens et al 1998, showed that inflation tax can be used as instruments to finance investment in developing countries. However, full employment situation rarely holds in most developing countries. It has been argued by some economists that inflation has no feedback effect. The unidirectional cause of inflation has been questioned by several other studies which supported the causation of inflation as running both ways.

Empirical Review on Financial deficit

In Nigeria there have been several studies on Deficit Financing. Darat (1988) applied Granger causality to test

the hypothesis that large budget deficits cause rising trade, using data from U.S. covering the period 1960-1984. The empirical results only partially support the conventional view that a rising budget deficit caused the 1980s escalation in the U.S. trade deficit". "he found evidence of a budget-to-trade deficit causality and also find, perhaps stronger, evidence of trade-to-budget deficit causality". Hussain and Makwe (2009) used a VAR model, derived from a consumer optimization model of the economy consistent with the Richardian Equivalence Hypothesis (REH). The result indicates that variance decompositions show a small but significant effect of both government spending shocks and debt shocks on the net exports. Plots of impulse response functions show a sustained decrease in net exports in response to both a government spending shock and a government debt shock. Their results were contradictory to the Richardian Equivalence Hypothesis (REH). But when they imposed theoretical restrictions drawn from the Richardian theory on the model of study and tested their validity, they were unable to reject Richardian Equivalence (Piersanti, 2000).

Tallman and Rosensweig (1999) applied a multi-equation, structural, open economy model of the U.S. economy over the period 1972 – 1987. Using model equation which includes equations for short-term interest rates; the real trade-weighted exchange rate; domestic absorption; exports; imports; the domestic inflation rate; and trend absorption. They derived two-stage least squares estimates for each equation. Stimulation of the model indicate a strong effect of budget policy on net exports, primarily through the effect of domestic absorption on imports. Despite the sizable effects of fiscal policy on net exports, they concluded that less than half of the trade deficits of the 1980s could be explained by government policy. They added that the budget deficit affects the trade deficit mainly through its impacts on domestic absorption and income rather than through higher interest and exchange rates.

Abell (1990) estimates a seven-variable VAR model using monthly data for the period 1979:02 – 1985:02, the variables included in the system are the federal government budget deficit, the U.S. Merchandise trade balance, the M1 money supply, Moody's AAA bond yield, the Dallas Federal Reserve Bank's 101 Country trade-weighted dollar exchange rate, real disposable personal income, and the Consumer price index (CPI) (Abell 1990). This study concluded that budget deficits influence trade deficits indirectly rather than directly. The study contended that indirect causation running

from the budget deficit through the interest rate and the exchange to the trade deficit exists. His reported impulse response functions showed a positive response of the trade deficit to a one-standard-deviation shock to the budget deficit.

Eisner (1991) estimates an OLS equation using the ratio of net exports to GNP as the dependent variable and including the price-adjusted high-employment deficit as a percentage of GNP as an explanatory variable. Using U.S. data over the period 1957-1988, he finds a positive effect of the budget deficit on the trade deficit, although the estimated coefficient is only marginally statistically significant. However Eisner's model avoids the non-stationarity problem inherent in using data in levels. Onufowara and Owoye (2006) tests the deficits hypothesis in the U.S. using quarterly data for the period 1974-1988. He also tested the relationship between the trade deficit and three other "causal variables", gross domestic investment, relative productivity, and the exchange rate risk premium. All of his analysis is bivariate, finding no evidence of co integration between the current account and the budget deficit. Tallman and Rosensweig, (1991) investigates the relationship between deficits and trade deficits in the U.S. over the period 1971-1989, they found that government deficit (as a ratio to GNP) Granger causes the trade deficit (as a ratio of GNP) but not vice versa. Egwaikhide, (1999) and Zakharova et al (2009) using a macroeconomic model to examine the effects of budget deficits on the trade balance in Nigeria over the period 1973-93 by using the OLS method. The result indicates that budget deficits arising from increased government spending adversely affects the balance of trade irrespective of whether it is money financed or by external borrowing.

Piersanti, (2000) obtains evidence that strongly supports the view that current account deficits associated with large budget deficits during the 1970-1997 periods in

$$GDP = F(TDD, TED) \text{ ----- (1)}$$

Where

GDP = Gross Domestic Product

TDD = Total Domestic Debt

TED = Total External Debt

The Equation 1 was transformed into econometric model, thus it becomes

$$GDP = X_0 + X_1TDD + X_2TED + u_t \text{ ----- (2)}$$

most industrial countries, after studying seventeen OECD countries over the period, while using the Granger- Sims causality technique for the investigation. Onafowora and Owoye, (2006) uses Cointegration and vector error-correction techniques, Granger- Causality tests and generalized impulse response analysis to examine the "twin deficits" phenomenon in Nigeria. They found evidence of positive relationship between trade and budget deficits proposition and refutes the Richardian Equivalence Hypothesis. Their result also indicates a unidirectional causality from trade deficits to budget deficits for Nigeria, contrary to the conventional proposition that budget deficits cause trade deficits. In contrast, studies such as Oluba (2008), Onafowora, (2006) and others found evidence of no link between budget deficits and trade deficits. An implicit policy implication arising from their result is that attempts to reduce budget deficits in Nigeria must begin with reductions in trade deficits, which could be achieved through indirect monetary channels.

3) METHODOLOGY

The empirical analysis covers the period 1981-2012. The data was sourced from the World bank data base, CBN Statistical bulletin and Banks Financial Statements of Nigeria.

The endogenous variable Gross Domestic Product (GDP) and proxied by deficit finance components as exogenous variables such as Domestic debt and external debt borrowings. The empirical result was done using Descriptive Statistics , OLS Diagonostic test, Unit root test, Co-integration, Granger causality test through econometric model on E-View 4.0.

Given the above, considerations, we specify a two predictor model for deficit financing and economic growth in functional behavior.

Converting equation (2) into the Log – linear form, the equation changes to

$$\text{Ln GDP} = \text{LX}_0 + \text{X}_1\text{LnTDD} + \text{X}_2\text{LnTED} + \text{u}_t \text{-----} (3)$$

Where

u_t is the error term

$X_1 - X_2$ are the proxies of GDP

Ln is the Log Linearity

The a-priori of the result of the above equationalized variables are expected as follows: $X_1, X_2, > 0$ -----
----- (4)

$X > 0$ reveals that Total Domestic debt and Total external relationship with the GDP.

4) Empirical Analysis and Result

Table 4.1 DESCRIPTIVE STATISTICS

	Mean	Media n	Maximu m	Minimu m	Std. Dev.	Skewnes s	Kurtosi s	Jarqu e Bera	Prob. V	Obs
GDP	1995.500	1995.500	2010.000	1981.000	8.803408	0.00000	1.797330	1.808078	0.40	30
TDD	1103016	567352.6	4890270	2331.200	1450790	1.452645	3.685544	11.13835	0.0038	30
TED	518.4667	342.000	1432.000	207.0000	3556414	1.337846	3.561127	9.342738	0.0093	30

Table 4.1 revealed the nature of the independent variables on the model. It shows that all the independent variables have high minimum and maximum values of the series. The table shows that the Total Domestic Debt (TDD) maintains the highest value 4890.270 against the Total External Debt (TED) 1432.000. Furthermore, Total Domestic Debt (TDD) exhibits the lowest standard deviation which shows that the deviations from the mean value is small or compared to that of the Total External Debt (TED). Given that the median of Total Domestic Debt (TDD) and Total External Debt (TED) have greater median values than the mean values this shows that the data series were normally distributed are and positively skewed in nature and could be use to predict the Nigeria deficit condition.

Table 4.2 ORDINARY LEAST SQUARE

Dependent Variable: GDP

Method: Least Squares

Date: 11/23/13 Time: 07:20

Sample(adjusted): 1980 2012

Included observations: 30 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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TDD	0.717520	7.00E-07	4.415200	0.0001
TED	0.81515	0.002857	5.303977	0.0000
C	19.84023	1.940323	1022.631	0.0000
R-squared	0.640469	Mean dependent var		1995.500
Adjusted R-squared	0.613837	S.D. dependent var		8.803408
S.E. of regression	5.470617	Akaike info criterion		6.331299
Sum squared resid	808.0466	Schwarz criterion		6.471419
Log likelihood	-91.96949	F-statistic		24.04889
Durbin-Watson stat	2.054524	Prob(F-statistic)		0.000001

REPRESENTATION OF OUTPUT

Estimation Command:

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LS GDP TDD TED C

Estimation Equation:

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GDP = C(1)*TDD + C(2)*TED + C(3)

Substituted Coefficients:

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GDP = 0.717520*TDD + 0.815151*TED + 19.840234

Table 4.1 Contained the Relative Statistics and Global Utility results

The relative t-statistics of the estimated Log-linear model show that both TDD and TED have positive and statistical significant impact on economic growth in Nigeria. This is evidenced by the coefficient values of the independent variables. TDD is 0.717520 = (71%) and TED is 0.815151 (81%).

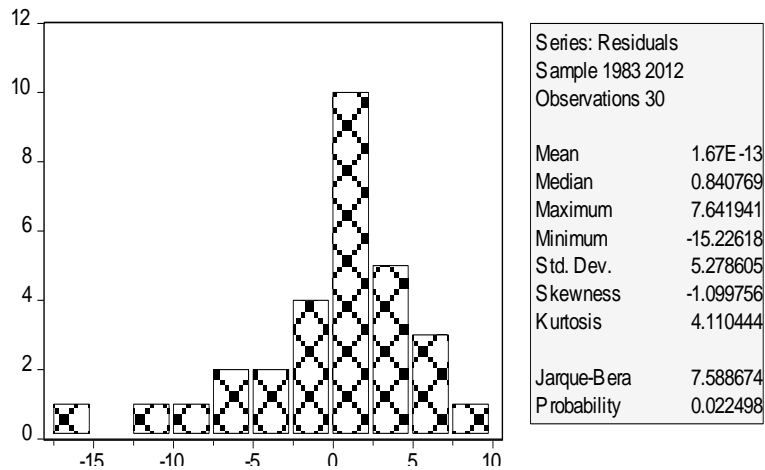
The Prob-val of TDD is 0.01 < 0.05 and TED is 0.00 < 0.05 critical values. These reveals a strong direct relationship and significant usefulness of the model.

The global utility of the overall estimated model shows that R² is 0.640469 (64%). It shows that fairly positive relationship exist between the dependent variable and the overall independent variables, this indicates that a unit change in the overall independent variables will result in 64% increase in the dependent variable. The prob - of F-stat is 0.001 < 0.05 critical value which show that the overall model is statistically significant. Also adjusted R² is 0.613837 (61%). This implies that only 61% of the total variations of the Nigeria debt is explained by the independent variables (explanatory) TDD and TED while 39% could not be explained may be due to some financial and policy factors.

Durbin Watson statistics value tolls within 2.0 which is standard scale by rule of thumb and the benchmark for decision, showing that there is no serial auto correlation found in the series. This indicate that there is presence of positive result on auto correlation in the level series regression which means that our regression model result should be accepted and that provides the researchers justification for ADF unit root test that were carried out and reported below.

Table 3. DIAGNOSTIC TEST

NORMALITY TEST



SERIAL CORRELATION TEST

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	9.826661	Probability	0.000206
Obs*R-squared	16.53702	Probability	0.000880

HETEROSKEDASTICITY TEST CROSS TERMS

White Heteroskedasticity Test:

F-statistic	6.231466	Probability	0.000774
Obs*R-squared	16.94643	Probability	0.004603

Ramsey Reset Test:

F-statistic	6.231466	Probability	0.002613
Log Likelihood Ratio	16.94643	Probability	0.00426

The JB statistics value shows that the series are well distributed and normally behaved. This is revealed by the P-value of JB stat $0.022 < 0.05$ critical value. The Lm test show that the P-value of the F-stat $0.002 < 0.05$ critical value which revealed that there is serial correlation among the variables, therefore we reject H_0 and conclude that the model is not significant, not fit and not good for further prediction. Also the White Heteroskedasticity revealed that the P-value of the F-Stat is $0.0074 < 0.05$ thereby we fail to accept H_0 and conclude that the model is not significant and cannot be used for further prediction. Furthermore, the stability test shows that the Prob-value of F-stat $0.0026 < 0.05$ critical value, thereby meet the significant decision and we conclude that the model is Fit for predictions.

Table 4.4 ADF UNIT ROOT TEST-

GDP at 1st Difference 1(1)

ADF Test Statistic	-4.164146	1%	Critical Value*	-3.6852
		5%	Critical Value	-2.9705
		10%	Critical Value	-2.6242

*MacKinnon critical values for rejection of hypothesis of a unit root.

TDD at 1st Difference 1(1)

ADF Test Statistic	-5.52138	1%	Critical Value*	-3.6852
		5%	Critical Value	-2.9705
		10%	Critical Value	-2.6242

TED at 1st difference 1(1)

ADF Test Statistic	3.27616	1%	Critical Value*	-3.6852
		5%	Critical Value	-2.9705
		10%	Critical Value	-2.6242

*MacKinnon critical values for rejection of hypothesis of a unit root.

From the ADF test statistics, the results in table 4.4 show that GDP, TDD and TED were integrated at order one, that is 1(1) or they were stationary at first difference, comparing the variable levels with their first difference of the ADF unit root test statistics and various probabilities, the test statistics show that the variables are integrated at order of one. All the variables were statistically significant at 1%, 5%, and 10% critical values in the first difference. This implies that all the series are stationary at order one 1(1). We proceed to co-integration test.

Given that the data series are of the order 1(1), we now apply the Johansen and Juselius Co-integration technique (1990) to determine the long run integration properties of the model.

Table 4.5 JOHANSON COINTEGRATION TEST

Date: 11/23/13 Time: 07:50

Sample: 1981 2012

Included observations: 29
 Test assumption: Linear deterministic trend in the data
 Series: GDP TDD TED
 Lags interval: No lags

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.237126	8.385724	29.68	35.65	None **
0.018331	0.536517	15.41	20.04	At most 1**
0.384225	21.62491	3.76	6.65	At most 2**

*(**) denotes rejection of the hypothesis at 5%(1%) significance level

L.R. rejects any cointegration at 5% significance level

Source: E-View 4.0

From Table 4.5, the trace statistic and likelihood function p-values, revealed that there is co-integration at most 2 with at least 3 co-integrating equation among the variables making H0 to be in favour of the alternative hypotheses at 5 per cent. This is because their values exceed the critical values at the 0.05 level which implies that a long-run relationship exists among the variables (GDP, TDD and TED), and it is very significant. It can equally be seen from Table 4.5 that there are at least two co-integrating equations in the series. Thus, we report the non normalized co-integrating equation, which was at TDD. The results from the co-integrating equations in table above suggest that all the variables in the two equations are significant at the 0.05 level.

PAIRWISE GRANGER CAUSALITY TEST-Granger Causality Test is used to examine the casual effect between the variables.

Pairwise Granger Causality Tests

Date: 11/23/13 Time: 07:58

Sample: 1981 2012

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
TDD does not Granger Cause GDP	27	1.65012	0.01264
GDP does not Granger Cause TDD		2.30057	0.02156
TED does not Granger Cause GDP	27	3.28752	0.01267
GDP does not Granger Cause TED		0.16912	0.02105
TED does not Granger Cause TDD	27	0.37424	0.77250
TDD does not Granger Cause TED		5.99452	0.00437

The result of the pairwise Granger cause test conducted shows that the causality effect of exogenous variables on Nigeria economic growth shows that TDD Granger cause GDP and GDP Granger cause TDD. Also that TED Granger cause GDP and GDP granger cause TED. Therefore the exogenous variable TDD and TED are statistically significant in explaining the causal effect of the probability value of F-statistics being greater than 5% critical value on the econometric growth effect.

CONCLUSION AND RECOMMENDATION

This study examines the long-run relationship between budget deficit and other Gross Domestic Variables in Nigeria. The results confirm to the above theory but rejects the claim that budget deficits increase interest rate, which is a popular opinion held by both the Keynesian and the Neo-classical schools. In the empirical study, we have used the Augmented Dickey-Fuller (ADF) methods for finding out the order of Co-integration in all the variables GDP, TDD and TED used in the study and have found that they are all stationary at first differencing 1 (1). We applied Johansen's Co-integration Test to check the number of co-integrating equations of these variables. We found that the variables co-integrated at most 2 with at least 3 co-integrating equations. This shows there is presence of long run relationship between Budget Deficit and Gross Domestic Product (GDP). The Granger Causality results reveal that there is dual directional Granger-causality between Budget deficits and Gross Domestic Product.

As posits by Keynesian that deficits crowd-in investment through its influence on domestic production. Taking the view from the empirical study budget deficits crowd-in investment by way of its reducing effects in interest rate which could lead to enhancing economic growth. We recommended that the Policy makers should control the level of deficits to ensure that it is within this level. Also, a decrease is required in the level of the deficits could strengthen the exchange rate, and control inflationary pressure in Nigeria.

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