

DEFICIT FINANCE AND THE NIGERIA ECONOMIC PERFORMANCE (EMPIRICAL INVESTIGATION)

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Abstract

This paper empirically examine how the government manage her deficit through borrowing from external sources, domestic debt or increase in the total money supply and how it affect economic performance in the Nigeria context. Secondary data from the CBN and bureau statistical bulletin were used during the process of the research work from 1981 – 2014. Econometrics model were used to carry out the following statistical test. Descriptive statistic, OLS, series of diagnostics test, granger causality test, ECM, finally, impulse Response. Findings reveals that deficit financing through borrowing from foreign country has a contagious implicating effect but significant association to economic performance in the Nigeria context. This is evident by the result of the F statistic of the granger causality test and the ECM which established the fact that external debt does not granger cause economic growth. However, the result of the OLS reveals that increase in total money supply will influence economic growth; this is to the tune of 1% increase in total money supply to the economy will lead to about 18.4% increase the real gross domestic product all thing been equal. This will in turn reduce interest rate and trigger investments Opportunities.

This paper hereby recommended that government should monetize her debt as much as possible when faced with deficit i.e putting in place monetary policy tools which will Stimulate total money supply in the economy and thereby reduce interest rate, influence investment opportunities, provide easy accessibility to loans by infant industries and as such trigger economic growth and stability such that high governmental demand for loanable fund will be offset.

Keywords: M2, external debt, Parsimonious ECM, Normality test, Variance decomposition, Impose Response.

INTRODUCTION

Deficit financing emanated considering the fact that there is a need for economic expansion. Since independent, over 85% of Nigerian budget are on deficit. Inadequacy of fund on the side of the government to execute capital project is what constitutes deficit. This projected that government needed to source for fund in financing its deficit either through domestic debt, external debt or implementation of monetary instrument to increase the flow of fund in the economy. However, financing the state of an economic through prolong borrowing from foreign country has a repel effect on the performance of such economy by scraping out sole investors due to high interest rate.

The idea of borrowing abroad generate its source from fiscal policy. To understand the root of borrowing as a means of financing deficit, one must understand the relevant macro-economic variable which is fiscal policy.

Classical and Keynesian school of thought attempt to explain the impact of fiscal policy on macro-economic management as the classical school of thought suggest that there is no need for government intervention in the market suggesting that the market will adjust to the economic via its internal mechanism while the latter recognizes the need for government intervention to correct the potential instability in the economy which the market system is incapable of adjusting. The belief in this philosophy especially in the post-depression years sprouted the use of fiscal policy measures to achieve full employment, which is the ultimate goal of macroeconomic policy. The transformed turn in economic events establishes a new face in economic reasoning and policies. Debt crisis is a repels effect of exessesively accumulation of large quantum of debt which becomes a difficult task if not impossible to pay back and in turn degenerated into imbalances in the local and internal political economic,(Adejuwon *et al*).

Mimiko, (1997) defined debt crisis as a situation whereby a nation is severely indebted to external sources and is unable to repay. With minute consequential effect on both the real sector, manufacturing, production, mining and all other arms of the economy, the reason therefore arise for the need to empirically investigate deficit financing in the performance potentials of the Nigerian economy. This is of course the focus of this study.

Study Objective

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

- i. To empirically examine the impact of Federal Government External Debt on Gross Domestic Product (GDP) in Nigeria.
- ii. To investigate the impact of Federal Government Domestic Debt on Gross Domestic Product (GDP) in Nigeria
- iii. To investigate the impact of total money supply on gross domestic product (GDP) in Nigeria.

Research Hypotheses

The study formulated three hypotheses in their null form as a guide to achieve the objectives of the study:-

Ho1: There is no significant relationship between Federal Government External Debt and Gross Domestic Products (GDP) in Nigeria.

Ho2: There is no significant relationship between Federal Government Domestic Debt and Gross Domestic Products (GDP) in Nigeria.

Ho3: There is no significant relationship between total money supply and economic performance

2. LITERATURE REVIEW

Review of Concepts And Theories

Government runs into deficit whenever its revenue falls short of its expenditures. In order to obtain the funds necessary to cover the deficit, the treasury or finance ministry must borrow either from internal source or external. Deficit finance is an economic state in which government spending is more than her earnings and hence ventures into borrowing either from domestic or external source in order to finance her obligations while the repayment of such fund is to be made at an agreed period of time with some conditions. Monogbe,(2015). Inefficiency and mismanagement between government expenditure and public revenue was responsible for deficit financing to bridge the gap.

Budget deficit simply put Occurs when the government of a country spend more than they earn. In other word, when the overall expenditure of the government is much more than their total revenue, he is running deficit budget. It is a financial state that occurs when a country spend more funds than they earn. This term is mostly used in explaining government funding rather than individual or business expenses.

The objective in seeking deficit financing is to finance the shortfall between government expenditures and tax receipts. Tax increases are not politically palatable. Governments often resort to deficit financing when other components of GDP such as private consumption decline during recessionary periods. Such deficits, if undertaken for a short period with an action plan to create equivalent surplus in near future, could bring about downsizing the real GDP and skyrocket growth in real GDP for the benefit of the national of a state. The indicative of inability to reduce entrenched government expenses are Structural deficits. Deficit increases level of outstanding amount of government debt, otherwise known as domestic debt. Central bank purchase government bonds via the open market either directly from the government treasury in private financial markets. 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, (Ndekwa 2003).

Deficit financing is a policy where the government finances expenditures (large spending) via borrowing money instead of increasing taxes. When the government is faced with a budget deficit because there is a gap between public revenue and public expenditure, deficit financing begins.

In simpler terms, when the government spends more money than it gets back, they look for options to make up the difference. The three major ways through which government can finance her deficit includes

Firstly, the government can borrow funds from the other sectors of the economy. This involves the selling of new federal Government Securities (FGS) such as treasury bonds through a tender system. This is the preferred government method of raising funds, as it does not add to net foreign debt, because the government is not borrowing from overseas. However, there is a disadvantage to this form of debt financing. When the Federal Government sells FGS it competes with the private sector for domestic savings, creating what is referred to as a “crowding out effect. The second possible method of financing a deficit is for the Government to sell FGS to the Reserve Bank. This form of borrowing from the Reserve Bank basically means that the government prints money to finance the deficit. This means of financing is highly inflationary: when the government spends the money, there is an increase in the money supply; if the economy is near full employment, demand inflation occurs rapidly, as there is too much money chasing a limited supply of goods.

The third possible method used to finance a budget deficit is for the government to borrow funds from international financial markets. When using this method, the Reserve Bank sells new GS to overseas buyers, and receives foreign funds. This method of financing the deficit adds to foreign debt when interest is paid on the securities (net income component of the balance of payments). The government may decide to borrow funds from overseas to reduce the crowding out effect. Under a floating exchange rate such borrowing has no effect on the domestic money supply. However, exchange rates and domestic interest rates can be affected; further, it adds directly to foreign debt, Monogbe,(2015).

THEORITICAL REVIEW

OVERVIEW OF PRE – KEYNESIAN DEBT THEORY AND NEOCLASSICAL ECONOMIC GROWTH THEORY

An offshoot of new classical theory formulated by Harvard’s Robert Barro is the idea of debt. Barro argues that inflation, unemployment, real GNP, and real national saving should not be affected by whether the government finances its spending with high taxes and low deficits or with low taxes and high deficits. Because people are rational, he argues, they will correctly perceive that low taxes and high deficits today must mean higher future taxes for them and their heirs. Barro argues that, cut consumption and increase their saving by one dollar for each dollar increase in future tax liabilities. Thus, a rise in private saving should offset any increase in the government’s deficit. Naïve Keynesian analysis, by contrast, sees an increased deficit, with government spending held constant, as an increase in aggregate demand, the stimulus to demand is nullified by contractionary monetary policy, real interest rates should rise strongly. There is no reason, in the Keynesian view, to expect the private saving rate to rise.

David Richardo argues that a related issue is the desirability of deliberately using deficits to influence the path of the economy. Under full equivalence of deficit and tax finance, no such thing

can be done, of course, because deficits do not affect anything important. Under incomplete equivalence, though, deficits do have effects, as we have just seen. Therefore, it might seem desirable to run up deficits in recessions to encourage people to spend more and to run up surpluses in booms to restrain spending. One problem is that these seemingly desirable effects arise only because people fail to perceive the future taxes implied by deficits; that is, deficits have effects only when they fool people thinks they suddenly have become wealthier (and conversely for surpluses). Is it desirable to influence the path of the economy by using a policy that is effective only because it deliberately misleads the public? Such a proposition seems difficult to justify.

DEFICIT FINANCE IN OPEN ECONOMY

Nigeria is a small open economy, into and out of which capital easily flows, the return of capital in a small open economy is determined by the global demand and supply for capital. Thus, an increase in the demand for capital in a small open economy due to government deficit has a little effect on global demand and little or no effect on interest rate.

Any upward pressure on interest rate causes fund to flow in from abroad and crowding out of private investment in such a case is minimal. But the inflow of funds from abroad does have an effect. An increase in the demand for the naira causes Nigeria naira to appreciate and increase the relative price of Nigeria export hence, net export are crowd out rather than domestic investment. In Nigeria, export are likely to absorb a significant part of the crowding out. Nevertheless, there is a short run increase in resources available to Nigerians because foreigner willingly lend to Nigeria at the global interest rate. This is however accompanied with an expectation of payment. In addition to crowding out export, deficit has other effect on an open economy situation. Firstly, increasing debt servicing cost is likely to necessitate high tax rate in the future if the debt has not contributed to increase productive capacity. Second government deficit have been financed, in part by an increase in foreign purchases of Nigerian asset, including government securities. Although cost to future generation due to crowding out of private investment may be minimal, the burden may still be substantial because of consumption that must be forgone in the future in order to make interest payment to foreigners. Mine while, no advance economy is either totally closed or totally opened. As a small open economy with a significant share of government and private debt held by non-resident, Nigerian must attend to the view of international investors. if non - resident loss confidence in Nigerian ability to service and repay its debt and to protect the value of Nigerian naira, future borrowing may be possible only at much higher interest rate.

Empirical Review

Large number of scholar have carried out series of studies on the effect of deficit on the growth of the Nigerian economic, hence, the need to highlight some of these study is essential. Suliman et al,(2012) study the effect of external debt on the economic growth of Nigeria. Annual time series data spanning from 1970-2010 was used. The empirical analysis was carried out using econometric techniques of Ordinary least squares (OLS), Augmented Dickey-Fuller unit root test, Johansen Co-integration test and error correction method. The co-integration test shows long-run relationship amongst the variables and findings from the error correction model revealed that external debt has contribute positively to the growth of the Nigerian economy. He therefore recommended that the Nigerian should ensure political and economic stability so as to ensure effective debt management. Ogunmuyiwa,(2011) examined whether external debt promotes economic growth in Nigeria using time-series data from 1970-2007. The regression equation was estimated using econometric techniques such as Augmented Dickey-Fuller test, Granger causality test, Johansen co-integration

test and Vector Error Correction Method (VECM). The results revealed that causality does not exist between external debt and economic growth in Nigeria.

Ayadi and Ayadi,(2008) examined the impact of the huge external debt, with its servicing requirements on economic growth of the Nigerian and South African economies. The Neoclassical growth model which incorporates using both Ordinary Least Square (OLS) and Generalized Least Square (GLS) techniques of estimation. Their findings revealed that debt and its servicing requirement has a negative impact on the economic growth of Nigeria and South Africa equation was estimated using econometric techniques such as Augmented Dickey-Fuller test, Granger causality test, Johansen co-integration test and Vector Error Correction Method (VECM). The results revealed that causality does not exist between external debt and economic growth in Nigeria.

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Faraji and Makame,(2013) investigated the impact of external debt on the economic growth of Tanzania using time series data on external debt and economic performance covering the period 1990-2010. It was observed through the Johansen co-integration test that no long-run relationship between external debt and GDP. However the findings show that external debt and debt service both have significant impact on GDP growth with the total external debt stock having a positive effect of about 0.36939 and debt service payment having a negative effect of about 28.517.

(Safdari and Mehrizi, 2011) analyzed external debt and economic growth in Iran by observing the balance and long term relation of five variables (GDP, private investment, public investment, external debt and imports). Time series data covering the period 1974-2007 was used and the vector autoregressive model (VAR) technique of estimation was employed. Their findings revealed that external that has a negative effect on GDP and private investment and public investment has a positive relationship with private investment. 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.

Onufowara and Owoye,(2006) using quarterly data tested for deficit hypothesis in the U.S spanning from 1974-1998 they also investigated the nexus between trade deficit using three other independent variables. The result of the findings shows no co-integration link between budget deficit and current account. According to Tallman and Rosensweig,(1991)they investigate the link between deficits and trade deficits in the U.Sspanning over the period of 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. Another prominent scroller Komain,(2007) investigate the trend between governmental spending and economic performance in Thailand by adopting the Granger causality test, the result shows that government spending and economic performance do not have long run equilibrium. Consequently, the result unveils a unidirectional association, as causality runs from government spending to performance. The World Bank,(1993) is of the opinion that a country whose financial market is not

comprehensively regulated, more deficit finance through local or national or national debt will stimulate prime interest rate and as such foreign borrowing became difficult if not impossible. Mine while, when financial market is fairly integrated with the world capital market, higher domestic borrowing will stimulate foreign direct investment and hence promote huge capital inflows.

3 METHODOLOGY.

Model Specification

This model is adapted from the work of Nwaogwugwu (2005) using it as a measure in analysing influence of fiscal deficit on the performance of the Nigeria economic and it was modified to suite the purpose of this research work. He specified that GDP is an indicator of economic performance and its significantly influenced by the fiscal policy indicator (Federal Government domestic debt and Federal Government external debt).

We hereby formulate the research model which reveals the nexus between deficit financing and economic performance.

The model is stated in its null form below

$$RGDP = f(FDD, FEXD, TMS) \text{-----} (1)$$

In econometrics, equ (1) above is insufficient resulting from absence of error term. hence, we express the above equation in a functional relationship using linear regression model by introducing constant and error term, hence we have;

$$GDP_t = \beta_0 + \beta_1 FDD_i + \beta_2 FEXD_i + \beta_3 TMS \mu_i \text{-----} (2)$$

The variable used under research were later normalize which will lead us to log form due to positive skewness of the employed data.

$$LOG(RGDP) = \beta_0 + \beta_1 LOG(FDD)_i + \beta_2 LOG(FEXD)_i + \beta_3 LOG(TMS) \mu_i \text{-----}(3)$$

On apriori $\beta_1 > 0$ $\beta_2 > 0$ β_3

Where:

RGDP = Gross Domestic Product

FDD = Federal Government Domestic debt

FEXD = Federal Government External debt

TMS = Total money supply to the economy

β_0 = Constant

β_i ' s = Estimation parameters

μ = Error term

Apriori Expectation : $\beta_1, \beta_2, \beta_3 > 0$ judging by the literature underpinning, we expect a direct and positive flow among the employed variables and its dependent counterpart.

Operational measures of the Variables

i. Gross Domestic Product (Dependent Variable)

Gross Domestic Product (RGDP) is employed as dependent variable in this study to capture economic growth. By this, we mean, the monetary worth of all production output and service outlet produced in a geographical confine over a particular time frame adjusted for inflation. It is measured in millions of Naira.

ii. Federal Government Domestic Debt (Independent Variable)

Federal Government Domestic/ national Debt (FDD) this is the quantum of fund raised locally or domestically by the government of a country from her indigenes. Holistically, local borrowing comprises of dual stages that is banking borrowing which include sales of government financial instrument like bonds, Treasury bill commercial papers e.t.c and non banking borrowing. On apriori, we expect domestic debt to show a positive sign with Gross Domestic Product, since higher domestic debts pave way for high economic activities.

iii Federal Government External Debt (Independent Variable)

Federal Government External Debt (FEXD) is that part of total debt in a country that is owned to creditors outside the country.

IV Total Money Supply In The Economy

This is a measure of money supply that includes cash and checking deposits (1) as well as near money. Hence, it is a broader money classification than M1 because it include asset that are highly liquid.

Sources of Data

The data employed for this investigation are mainly secondary time series data spanning from 1981-2014. This data is sourced from CBN Statistical Bulletin and Annual Reports 2013 and past empirical studies relating to this study.

TABLE 4.1

Year	FDD	FEXD	TMS	RGDP
1981	11.19	2.33	14.47	251.05
1982	15.01	8.82	15.79	246.73
1983	22.22	10.58	17.69	230.38
1984	25.67	14.81	20.11	227.25
1985	27.95	17.30	22.30	253.01
1986	28.44	41.45	23.81	257.78
1987	36.79	100.79	27.57	256.00
1988	47.03	133.96	38.36	275.41
1989	47.05	240.39	45.90	295.09
1990	84.09	298.61	52.86	328.61
1991	116.20	328.45	75.40	328.64
1992	177.96	544.26	111.11	337.29
1993	273.84	633.14	165.34	342.54
1994	407.58	648.81	230.29	345.23
1995	477.73	716.87	289.09	352.23
1996	419.98	617.32	345.85	367.22
1997	501.75	595.93	413.28	377.83
1998	560.83	633.02	488.15	388.47
1999	794.81	2577.37	628.95	393.11
2000	898.25	3097.38	878.46	412.33
2001	1016.98	3176.29	1,269.32	431.78
2002	1166.00	3932.88	1,505.96	451.79
2003	1329.68	4478.33	1,952.92	495.01
2004	1370.33	4890.27	2,131.82	527.58
2005	1525.91	2695.07	2,637.91	561.93
2006	1753.26	451.46	3,797.91	595.82
2007	2169.63	438.89	5,127.40	634.25
2008	2320.31	523.25	8,008.20	672.2
2009	3228.03	590.44	9,411.11	718.98
2010	4551.82	689.84	11,034.94	776.33
2011	5622.80	896.85	12,172.49	834.11
2012	6537.53	1026.90	13,895.39	888.89
2013	7118.98	1373.58	15,160.29	950.11
2014	7904.02	1631.52	17,680.52	1019.9

SOURCE; CBN Statistical Bulletin (2015)

4. Data Analysis and Interpretation

Table 4.2. Ordinary least square output (log linear output regression)

Dependent Variable: LOG(RGDP)				
Method: Least Squares				
Date: 11/28/15 Time: 22:00				
Sample: 1981 2014				
Included observations: 34				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.001561	0.061644	81.13623	0.0000
LOG(FDD)	0.206452	0.072445	0.565136	0.0717
LOG(FEXD)	-0.041729	0.017801	-2.344149	0.0259
LOG(TMS)	0.184081	0.052479	3.507732	0.0014
R-squared	0.965110	Mean dependent var		6.042979
Adjusted R-squared	0.961621	S.D. dependent var		0.443258
S.E. of regression	0.086836	Akaike info criterion		-1.939452
Sum squared resid	0.226217	Schwarz criterion		-1.759880
Log likelihood	36.97068	Hannan-Quinn criter.		-1.878212
F-statistic	276.6171	Durbin-Watson stat		0.318514
Prob(F-statistic)	0.000000			

Sources: Eview-8 (Authors computation)

The output of the regression analysis unveils that the coefficient of the constant

(C) is 5.02133, which implies that if all other variables are held constant, the dependent variable is expected to be increased on the average by about 5.02 units. Of all the three variables used in this research work, only LOG(TMS) has a positive and significant relationship with real gross domestic product in the Nigeria economy (RGDP). This implies that an increase in the total money supply in the economy when the government is faced with a deficit strongly influences the growth of the Nigeria economy. This is to the extent to which a 1% increase in the TMS in the economy will bring about an 18% rise in the RGDP, all things being equal. While other variables like FEXD have a negative but significant relationship with RGDP, which suggests that an increase in external debt has a contagious effect on the growth of the Nigeria economy. This seems to indicate that an increase in total money supply and domestic debt are better options than external debt, as external debt has a negative effect on economic growth. However, according to dual gap theory, external debt contributes to economic growth but it should be optimized in such a way that it will not crowd out infant industries and private investors.

The adjusted R^2 shows a high predictive ability that about 97% of the variation in the dependent variable is captured and explained by the explanatory variables in the model. This, however, shows the global utility of the model.

Table 4.3 Unit Root Test (Augmented Dickey Fuller)

Considering the underlying shocks in the time series variable and also some shock which could be found in the error terms, we therefore intend to capture the stationary of the employed variable. Hence, this will help in forecasting and predicting a great possible effect of the shock, while non stationary data are not suitable for long run test.

Table 4.3

Variable	ADF Test Stat	Critical value (5%)	Order of integration	Remark
LOG(RGDP)	-7.626353	-2.960411	1(2)	stationary
LOG(FDD)	-8.697216	-2.960411	1(2)	Stationary
LOG(FEXD)	-7.606683	-2.960411	1(2)	stationary
LOG(TMS)	-4.034102	-2.971853	1(2)	stationary

Source:Eveiw-8 output (Authors computation).

The result of the ADF shows that the variable at their level are not stationary but, become stationary after the second differencing. Hence, the series are all intergraded series in order of 1 (2) indicating that there are all stationary at second differencing. Since the prerequisite of co-integration is the integration of all variables at same level, this parameter therefore leads to co-integration of employed variables. Hence. This justifies that our model is no longer spurious as previously specified in the ordinary lease square i.e if the value of the R2 is greater than the Durbin-Watson, the model is spurious but, by the reason of the stationary of the residual variable at second differencing, the model is no longer spurious. And as such we proceed to test for long run relationship.

Table4.4 Co-integration Test

Table 4.4 co-integration Test (Johansen co-integration)

Date: 11/29/15 Time: 02:37
 Sample (adjusted): 1984 2014
 Included observations: 31 after adjustments
 Trend assumption: Linear deterministic trend
 Series: LOG(RGDP) LOG(FDD) LOG(FEXD)
 LOG(TMS)
 Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.623512	53.50088	47.85613	0.0134
At most 1	0.321691	23.21793	29.79707	0.2355
At most 2	0.297398	11.18522	15.49471	0.2004
At most 3	0.007818	0.243319	3.841466	0.6218

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.623512	30.28294	27.58434	0.0220
At most 1	0.321691	12.03272	21.13162	0.5444
At most 2	0.297398	10.94190	14.26460	0.1571
At most 3	0.007818	0.243319	3.841466	0.6218

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

The result of the co integration test unveils that there exist one co-integrated equation. Hence according to the trace statistic, the overall variables are co-integrated meaning that there is a long run association between the four variable that is in the long run, all this four variable i.e RGDP,FDD,FEXD and TMS move together in a direction. hence, we can fudge ahead in running the parsimonious vector error correction model this is due to the fact that the variable are found co-integrated so, we proceed to parsimonious error correction model.

Table 4.5 Parsimonious Error Correction Model (ECM)

Dependent Variable: LOG(RGDP)

Method: Least Squares

Date: 11/28/15 Time: 22:03

Sample (adjusted): 1982 2014

Included observations: 33 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.021338	0.037992	132.1670	0.0000
LOG(FDD)	-0.032898	0.040361	-0.815100	0.4219
LOG(FEXD)	-0.033267	0.009888	-1.364375	0.0022
LOG(TMS)	0.231530	0.029447	7.862531	0.0000
ECM(-2)	0.960749	0.111730	8.598847	0.0000
R-squared	0.989992	Mean dependent var		6.058656
Adjusted R-squared	0.988562	S.D. dependent var		0.440455
S.E. of regression	0.047106	Akaike info criterion		-3.134125
Sum squared resid	0.062130	Schwarz criterion		-2.907381
Log likelihood	56.71306	Hannan-Quinn criter.		-3.057832
F-statistic	692.4384	Durbin-Watson stat		1.342448
Prob(F-statistic)	0.000000			

Source : Eview-8 (Authors computation)

Error correction model can only be run when the variable are co-integrated i.e the variable must be at stationary. VEC is used in to correct disequilibrium that is, to see how variation In the short run equilibrium can quickly be adjusted in the long run equilibrium state. However, the result of the regression above indicate that of all the variable used in the process of study, only TMS has a positive and significant worth toward GDP which specifies that debt monetization when faced with deficit is a better option so as to set off high governmental demand for loan able funds and hence avoid crowding out private investors. Mine while, FEXD shows a negative but weak positively significant relationship toward GDP while FDD is negative and hollowness toward GDP. R2 shows a very high predicting ability such that 98% fluctuation in the regressor variable is capture and explained by the regressand variable. While the Durbin Watson stat of 1.34 shows absence of serial correlation and then correct the Spurioucity which emerged in the result of the OLS. F stat indicate the overall significances of the variables. The positive ECM suggested some instability which may be caused by some specification problems attributed to the trend of the data. In this study, instead of the variable to converge at equilibrium, it took 96% divergence.

Table 4.5

Pairwise Granger Causality Tests

Date: 11/28/15 Time: 23:06

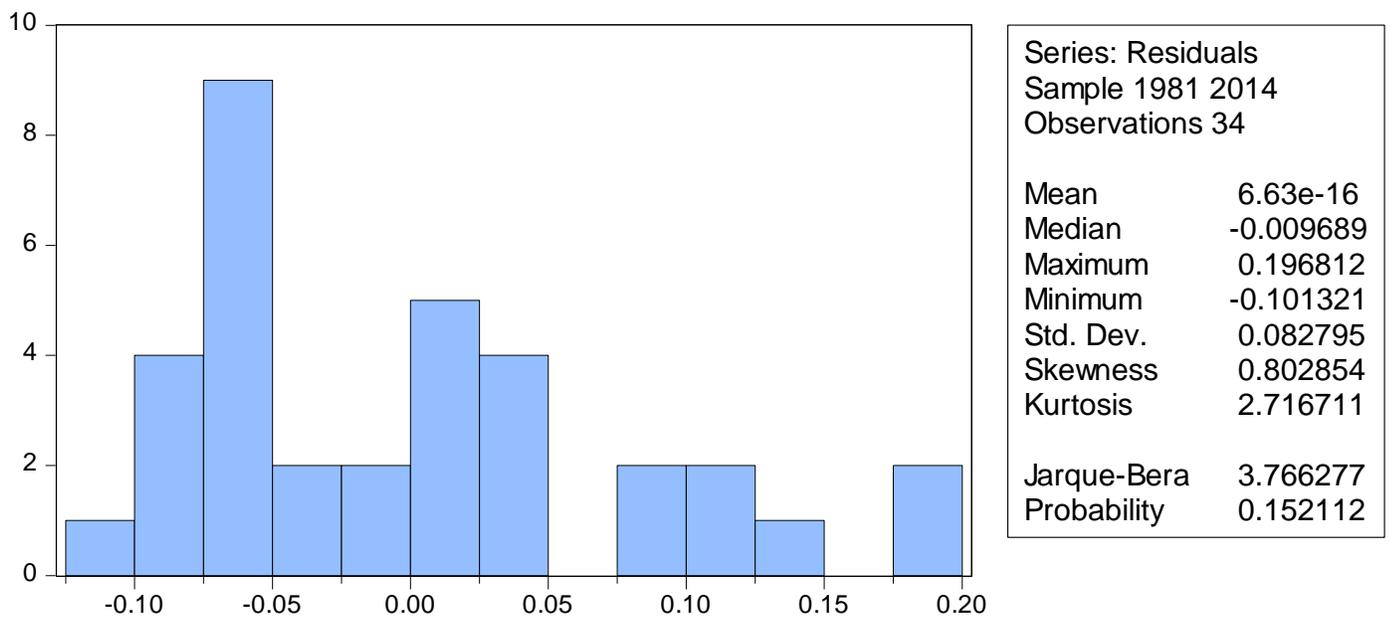
Sample: 1981 2014

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
LOG(FDD) does not Granger Cause LOG(RGDP)	32	1.42441	0.2582
LOG(RGDP) does not Granger Cause LOG(FDD)		1.30893	0.2867
LOG(FEXD) does not Granger Cause LOG(RGDP)	32	0.40585	0.6704
LOG(RGDP) does not Granger Cause LOG(FEXD)		0.27152	0.7643
LOG(TMS) does not Granger Cause LOG(RGDP)	32	0.89110	0.4219
LOG(RGDP) does not Granger Cause LOG(TMS)		0.15476	0.8574
LOG(FEXD) does not Granger Cause LOG(FDD)	32	0.09927	0.9058
LOG(FDD) does not Granger Cause LOG(FEXD)		0.15373	0.8582
LOG(TMS) does not Granger Cause LOG(FDD)	32	1.21281	0.3131
LOG(FDD) does not Granger Cause LOG(TMS)		2.17623	0.1330
LOG(TMS) does not Granger Cause LOG(FEXD)	32	0.24108	0.7875
LOG(FEXD) does not Granger Cause LOG(TMS)		1.79343	0.1856

The result of the granger causality test as shown above at lag 2 judging by the probability level reveals

Capitalizing on the F statistic ratio, there exist a unilateral causal relationship between the real gross domestic product and (FDD and TMS) which F statistic and probability value are 1.4957 (0.0005) and 0.88935 (0.0026) respectively at 5% level of significant while bi lateral causality exist within RGDP and FEXD. This suggested that RGDP has a causal relationship with FDD and TMS, while federal external debt does not granger cause economic growth of the Nigeria economic.

Table 4.6**Normality Test Output (Jarque-Bera)**

Source: Eview-8 Output (Authors Computation).

Based on the null hypothesis that the sample population follows a Gaussian (normal) distribution, judging by the Jarque-Bera output of 3.76627 and a high probability level of 0.152112 which is greater than the significance level of 0.05, Therefore we do not reject the null hypothesis it can thus be explained that the employed sample observations are inconsistent with the Gaussian (Normal) distributions. i.e. the variables are not normally distributed and not an asymptotic series. Though the kurtosis is playokurtic in nature and the variable are positively distributed to the right toward normality but judging the the probability value, the variable are not normally distributed to a reasonable extent.

Impulse Response and Variance Decomposition Analysis

This analysis is spontaneously used to forecasts into the future on how the variable used during these processes of research will respond to its residual variable in the long run and also to examine the breakdown effect of FDD FEXD and TMS on economic performance (GDP) over the long run.

Table 4.7 Impulse Response To One S.D Innovation

Response of LOG(RGDP)				
Period	LOG(RGDP)	LOG(FDD)	LOG(FEXD)	LOG(TMS)
1	0.034967 (0.00437)	0.000000 (0.00000)	0.000000 (0.00000)	0.000000 (0.00000)
2	0.039807 (0.00882)	-0.009667 (0.00695)	0.002411 (0.00632)	0.003303 (0.00640)
3	0.041238 (0.01174)	-0.011901 (0.00887)	0.003808 (0.00950)	0.004661 (0.00976)
4	0.038974 (0.01475)	-0.012588 (0.01112)	0.004603 (0.01150)	0.007220 (0.01228)
5	0.034964 (0.01790)	-0.011523 (0.01256)	0.004875 (0.01274)	0.010024 (0.01405)
6	0.030270 (0.02083)	-0.009600 (0.01331)	0.005286 (0.01327)	0.012835 (0.01531)
7	0.025915 (0.02320)	-0.007278 (0.01356)	0.006188 (0.01319)	0.015385 (0.01619)
8	0.022430 (0.02491)	-0.004886 (0.01357)	0.007614 (0.01279)	0.017531 (0.01680)
9	0.019950 (0.02604)	-0.002576 (0.01356)	0.009403 (0.01238)	0.019192 (0.01718)
10	0.018372 (0.02674)	-0.000405 (0.01366)	0.011341 (0.01218)	0.020350 (0.01737)

Source : Eview-8 (Authors Computation)

Going by the result of the above estimate to one standard deviation innovation in each of the variable in the VAR system which covers the dispensation of ten year period into the future representing 33 years of observation in these cause of study. The variable is in the order stated in the diagram above, as in LOG(FDD) → LOG(FEXD) → LOG(TMS) → LOG(RGDP).

The above analysis unveils that the RGDP response to own shock is positive 03% in the first year and as the year goes by, it increases simultaneously while the impulse response of RGDP to shocks moves from FDD FEXD and TMS in the second year thus -0.009667%, 0.002411%, and 0.003303% respectively. However, there is an evidence of fluctuation in the degree of responsiveness of the RGDP to shocks in deficit financing emanating from explanatory variable as time goes by into the future. Mine while, the response of FEXD and TMS to shocks in deficit financing was positive while FDD response to shock appear negative to deficit financing.

Table 4.8 Variance Decomposition Estimate Output

Period	S.E.	LOG(RGDP)	LOG(FDD)	LOG(FEXD)	LOG(TMS)
1	0.034967	100.0000	0.000000	0.000000	0.000000
2	0.054013	96.22362	3.203150	0.199178	0.374051
3	0.069253	93.99412	4.901749	0.423557	0.680577
4	0.080912	92.05996	6.011243	0.633925	1.294869
5	0.089589	90.32139	6.557487	0.813116	2.308006
6	0.096059	88.49437	6.702723	1.010129	3.792773
7	0.101128	86.41201	6.565603	1.285776	5.736615
8	0.105447	84.00230	6.253420	1.703982	8.040298
9	0.109456	81.28477	5.859187	2.319513	10.53653
10	0.113406	78.34458	5.459345	3.160771	13.03531

Source: Eview-8 (Authors Computation)

The empirical result of the variance decomposition of the four variable use during the process of research in VAR system of the model for ten quarter representing the whole 33 years of study into the future as with impulse response function. Variance decomposition model help to identified the overall proportion of forecast error attributed to own innovation and to innovation in the order variable (iyeli 2010).

Intuitively looking into the table, it is discover that in the short run, that is the quarter period 3, impulse or innovation or shock to RGDP account for about 96.22% variation of the fluctuation to RGDP (own shock). However on that same quarter period 3, shock to FDD can cause 3.20% fluctuation in RGDP while shock to FEXD and TMS cause about 0.42% an 0.68% fluctuation in RGDP respectively. Consequently, total fluctuation equal 100% which is happening in the short run . in the long run using quarter period 10 with the shock value of 78.3% to RGDP means that the shock to RGDP can contribute 78.3% to RGDP (own shock), shock to FDD is capable of contributing 5.45% fluctuation in the variance of RGDP while the value of FEXD and TMS is 3.1% an 13.03% respectively implies that an impulse or shock on FEXD and TMS can cause about 3.1% an 13.03% fluctuation in the RGDP. Within the ten quarter period own shock and innovation from all variable shows mixture of expansion and contraction in the variation in the forecast error of the regressand (RGDP). this explanatory variable shows that the variance explained in the RGDP is unstable consistently into the future.

Concluding remark and recommendations

The essence of this research work is to examine the effect of deficit financing and the economic performance of the Nigeria.

The result of the Dickey fuller test (ADF) indicate that the data achieves stationary after the second differencing at the order of 1(2).

The co integration result reveals a long run association exist among the variables and its dependent counterpart. The analysis reveals that there is a positive and significant equilibrium relationship between RGDP, TMS and FDD respectively.

Findings reveals that deficit financing through foreign borrowing has a negative but significant associated to economic performance. This is evident by the result of the OLS, ECM and granger causality test which justifies the fact that external debt does not granger cause economic growth. The result of the OLS reveals that of the three variables examine under this research, only TMS has a positive and significant relationship to economic growth while external debt has a weak and negative relationship to economic growth. this is to the extent that 1% increase in external debt when government is faced with deficit in the economy will bring about 0.4% decrease in the growth of the economy. The result of the granger causality test as shown above at lag 2 judging by the probability level reveals that there exist a unilateral causal relationship between the real gross domestic product RGDP and (FDD and TMS) whose F statistic and probability value are 1.49 (0.0005) and 0.88 (0.0026) respectively at 5% level of significant while bi lateral causality exist between RGDP and FEXD.

Own shock and innovation from all variable shows mixture of expansion and contraction in the variation in the forecast error of the regressand (RGDP). This explanatory variable shows that the variance explained in the RGDP is unstable consistently into the future.

Recommendations / Contribution to Knowledge

Haven't carried out series of analysis and test, the researcher hereby recommended that the government should monetize her debt as much as possible i.e putting in place some monetary policy tools to stimulate total money supply in the economy when the economy is faced with deficit which will in turn setoff high governmental demand for loanable fund. This measures will bring about reduction in the interest rate level and domestic firm will find it easy to access loan from the bank. This will however boost investment opportunity, create reasonable level of employment, stabilize price and influence economic growth in the county.

Policy maker should critically study the present state of the economy before deciding on measures through which deficit will be financed. As deficit financing when a country is under recession would stimulate interest rates, which will inturn downsize portfolio of investment trend and overall economic performance of the economy and hence demote production level.

The researcher further recommends that government should rather go for domestic debt than external debt as the result of the OLS shows that it has a weak relationship to the economic growth. domestic debt in this contest include issuing of bonds, treasury bills, treasury certificate. Etc. through the open market to avoid crowding out investors. This result is in line with the work of *Rabia Atique and Kamran MaliK, (2002)*.

Finally, government should maintain optimum level of external debt as it is one of the mechanism for economic growth but to an optimum level and that all external debt should be effectively utilized for the purpose for which it was obtained so as to promote economic growth.

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