

FISCAL DEFICIT AND EXTERNAL DEBT: THE NIGERIAN EXPERIENCE

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ABSTRACT: *This study seeks to ascertain the impact of fiscal deficit on external debt in Nigeria with a focus on determining the long run relationship between fiscal deficit and external debt, as well as to ascertain the direction of causality between fiscal deficit and external debt. The model employed in this study is the Error Correction Mechanism; Granger causality test was used to ascertain the direction of causality. The time frame for this study spanned between the years 1981-2019. This study found that fiscal deficit is not a significant determinant of external debt in Nigeria. Also, the variables of gross domestic product, degree of openness, exchange rate was found to be insignificant factors determining external debt except inflation which was significant in determining external debt in Nigeria. Furthermore, there was neither a uni-directional nor bi-directional causality between external debt and fiscal deficit. Although, there is causality flowing from budget deficit and degree of openness as well as budget deficit and gross domestic product. However, it was suggested that policies be implemented that will enhance the channeling of funds from the external sector to productive sectors of the economy in order to ensure diversification and revenue generation thereby ultimately lessening the external debt burden that Nigeria is faced with. Finally, there is need for fiscal discipline and fiscal prudence if fiscal deficits would be a true determinant of the size of external debt accumulated in the country.*

KEYWORDS: external debt, fiscal deficit, fiscal policy, budget, economic growth.

INTRODUCTION

A Budget shows the financial plans of the government through its revenues and expenditure outlay and how these government revenues would be expended to improve the economy. A country budget can be in surplus, balanced or deficit. Prevalent in the Nigerian economy is the operation of a budget deficit and this has been the case since the early days of independence (Oluba, 2008). A budget deficit indicates that government expenditures are greater than the revenues it receives. This could arise from either a shortfall of revenue, an increase in expenditures or both. It is also the yearly accrual of debt, or excess of expenditures over revenues on a yearly basis (Perry, 2014).

Budget deficit is however considered a major recovery tool especially in times of depression as it stimulates consumption and trigger higher private investment (Oluba, 2008). Okoro (2013) opined that deficit financing arises largely as a result of the need to expand the economy. The inability of the government to execute capital projects often gave rise to deficit. In recent times, rising fiscal deficits has been a common feature among less developed countries. According to Ariyo (1993), this

development is a consequence of increased demand of the populace and the desire to enhance economic growth and development. The gap occurs due to many problems that have bedeviled the revenue generation system in the country (Fasoranti, 2013).

In developed countries, budget deficit has the ability to stabilize an economy during recession, but the Nigerian government have struggled to utilize its efficacy. This could be attributed largely to the fiscal misconduct of the government and it has led to the gross misuse of funds which are designed to finance budget deficit and spur the country towards recovery, growth and development. The misuse of funds has caused the government to wander in the debt conundrum as Nigeria faces serious external debt burden due to fiscal mismanagement. Ariyo and Raheem (1990) showed that rising fiscal deficit has been a common characteristic of the Nigerian fiscal system and that there has been no identifiable and justifiable macroeconomics objectives for such. Moreover, Ariyo (1993) reported that fiscal deficit in Nigeria has become unsustainable since 1980 (Fasoranti, 2013).

Nigeria's budget deficit dates back to 1961, and appeared justified during the immediate post-independence era, and since then till now, a huge percentage of Nigeria's budget runs on deficit (Nwanna and Nkiruka, 2019). The deficits over the years have been financed through external or internal borrowings thereby resulting in depletion of reserves. The phenomenon of external debts by Nigeria was dated back to 1958, when a loan of \$US 28.0 million (N19.9 million) was contracted from the World Bank for railway construction (Ademola, Tajudeen and Adewumi, 2018).

The debt profile was then aggravated by the fiscal deficit profile of the country, which became unsustainable in the 1980s. The increased oil revenue gave impetus to the government to increase public expenditure, leading eventually to a deficit in 1980 primarily because the oil glut and this led to government inability to generate enough revenue to keep pace with public expenditure and real income declined. The fiscal situation deteriorated drastically after 1982, as expenditures continually exceeded revenues between 1982 and 1995. By 1983, the Federal budget deficit amounted to 12 percent of GDP and this resulted in excessive borrowing from both domestic and foreign sources (Osinubi and Olaleru, 2006). The country's total debts also rose steadily after 1981, indicating the extent of gross fiscal imprudence by the government. Fiscal imbalances contributed to huge domestic and foreign debts as it was financed by borrowing, gradual depletion of international reserves. Also, by 1983 foreign reserves had declined to about one-sixth of a peak 1980 amount, as well as arrears in external commitments (Oluba, 2008). In 2007, the federal government sought for debt cancellation which led to a drastic reduction of the debt to the tune of about \$US 3.4 billion (N427.8 billion) and despite this debt cancellation, Nigeria's debt acquisition has been on the increase since 2007. Furthermore, in 2018, the Nigerian government issued a \$2.5 billion Eurobond which resulted in \$US22.08 billion debt stock accumulation, with an external debt of N849 billion which later fell to N802.82 billion (Nwanna and Nkiruka, 2019).

The culminating effect of the above has been a decline in the growth of GDP, external reserves and accelerated inflation. The effort of the government to use the tool of budget deficit to stabilize the

economy seem not to have yielded significant result as the economy is still plagued with macroeconomic problems of unemployment, inflation, unstable power supply, balance of payment problem, exchange rate depreciation etc.

Nigeria as a developing nation is faced with challenges of effectively co-ordinating its fiscal policies in the face of a rising external debt created by budget deficits. Available evidence shows that over the years Nigeria budget deficits trend has been on the increase, recording forty years of deficits since 1970 (Osinubi and Olaleru, 2006). Deficits are meant to accelerate economic activities during depressions through induced variables or aggregates depending on the fiscal conduct of such government or how well funds are used to stimulate the economy. Consequently, the funds used to finance these deficits are not properly utilized, they are wasted on white elephant projects, while a portion goes into the purse of these government officials due to corruption and lack of accountability (Aluko and Arowolo, 2010).

Despite the fact that Nigerian economy has been operating deficits for these periods and also operated in a situation of less than full employment, it has been in distress which runs contrary to the essence of deficits. There is an obvious reduction in the standard of living of the citizens; there is a decline in growth of the economy; poverty is in the land; there is persistent unfavorable balance of payment, increased public debt, continuous depletion of foreign reserve, little or no savings, and decline in exports, increased inflationary pressure and continuous dependence on external economies (Barro, 1989).

It has also been observed that large budget deficits cause increase in money growth and inflation. For instance, some selected years from 1990 – 2019 show the trend of Nigeria fiscal deficit and the corresponding external debt for the same years. The fiscal deficit for 1990, 1995 and 2000 stood at N22.12 million, N1 billion and 103.78 billion respectively, and the corresponding external debt stood at N521 million, N1.37 billion, and N1.48 billion. Also, there was a dramatic increase from N47.38 billion in 2008 to N2.208 trillion in 2016 while external debt rose to N9.76 billion. In 2019, the Nigerian budget deficit stood at N1.92 trillion while external debt grew accordingly to N802.82 billion (Budget Office, 2020).

Since there is no consensus in the literature yet about the net impact of deficit financing in developing economies, we need to undertake further studies by extending the period to 2019. Furthermore, a long-run and causal relationship between fiscal deficits and external debt need be established to find out the causes of sustained fiscal deficits and external debt and the measures to be put in place by government. The paper traced the genesis, trend, and structure of the country's external debt as well as the factors that prompted the accumulation of the debt. The scope of this study covers the period of 39 years from 1981-2019. This period is chosen to cover the period after the fall in oil prices and also the post-debt relief era.

LITERATURE REVIEW

Nigeria's External Debt Profile

Nigeria has two major categories of external creditors; official and private creditors. Her official creditors include the International Fund for Agricultural Development (IFAD), African Development Fund (ADF), the International Bank for reconstruction and development (IBRD), the African Development Bank (AFDB), Economic Community of West African States (ECOWAS) fund and the European Investment Bank. The above listed are Nigeria's multilateral creditors which also include the World bank and International Monetary Fund (IMF) which were very active lenders in the 1970s/1980s. The bilateral creditors include the Paris Club and Non-Paris Club creditors. The Paris Club is an informal group of official creditors which was created to aid debtor countries going through payment difficulties by finding sustainable and lasting solutions. Also, part of Nigeria's debt profile are private creditors which are made up of promissory note holders and London Club Group. The total debt outstanding as at 31st December 2004 stood at US\$35.94 billion with Paris Club (85.82%), multilateral creditors (7.86%), London Club (4.01%), Non-Paris Club (0.13%) and Promissory notes (2.18%) (DMO, 2012). This clearly shows that the largest proportion of Nigeria's external debt is accrued to the Paris Club group of creditors.

Causative Factors of Nigeria's External Debt

Aluko and Arowolo (2010) pointed out that the major cause of the debt crisis situation in Nigeria is the fact that these foreign loans are not being used for developmental purposes. Instead of being ventured into capital projects that will better the economy, they are shrouded in secrecy. According to Debt Management Office of Nigeria (2012), the factors that led to Nigeria's external debt burden can be grouped into six areas. These are explained below:

Inefficient trade and exchange rate policies

Both the trade and exchange rate (monetary) policies were not quick enough to respond to show the external value of the naira at a time when there was a downturn in the oil market which led to a reduction in the flow of resources into the economy. This led to embarking upon foreign borrowing and in turn the accumulation of external debt.

Adverse exchange rate movements

Due to the inefficient exchange rate policies, Nigeria's exchange rate system was not flexible enough to adjust to fluctuations (upward and downwards movements) in the foreign exchange market which led to continuous external borrowing.

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Adverse interest rate movements.

Also, the debt quagmire in Nigeria can be attributed to external borrowing at higher interest rates. This will in turn lead to high interest payments of external debt and as such rapid debt accumulation.

Poor lending and inefficient loan utilization.

Also, the government of Nigeria rather than invest into capital projects that will lead to the development of the economy and also amortize the nation's debts poorly utilized the foreign loans and as such led to continuous borrowing.

Poor Debt Management Practices

In terms of debt sustainability and debt management Nigeria has performed poorly. The lack of understanding of the nature, structure and magnitude of external debt has not allowed for the Nigerian economy to effectively meet her debt service obligations and manage the debt stock appropriately.

Accumulation of arrears and penalties.

Also, accumulation of trade arrears and penalties with foreign nations due to high interest payments on external debt has led to the astronomical rise in Nigeria's external debt profile

Nigeria's External Debt Relief

Ekperiware et al., (2012) defined debt relief as an agreement by a creditor or a country to accept reduced or postponed interest and redemption payments from the debtor. Nigeria's debt relief with the Paris Club is widely recognized in external debt literature. The Paris Club was formed in 1956 and its role is to provide help to the debt payment challenges faced by debtor nations. It comprises of 14 member nations (United Kingdom, France, Germany, Japan, Italy, United States of America, Belgium, Netherlands, Denmark, Austria, Spain, Switzerland, Russia and Finland).

Nigeria's first loan from the Paris Club of Creditor Nations was a US\$13.1 million obtained from the Italian government in 1964 for the building of the Niger Dam (Gray and David, 2000). However, the oil boom of 1971-1981 introduced the era of massive borrowings in Nigeria. Loans were acquired by various tiers of government as Nigeria embarked on major development and reconstruction projects in the wake of the civil war. The borrowing continued well into the civilian era, as the Federal Government embarked on the guaranteeing of many unviable loans taken by private banks, state governments and government parastatals. In 1982, when oil prices crashed, Nigeria was unable to pay off the loans it borrowed. This resulted in rising interest payments and mounting of trade arrears and their penalties. A critical point was reached in 1986 when creditors refused to open new credit lines for imports to Nigeria.

In the reports of Gray and David (2000), the government therefore approached the creditors for debt relief leading to the restructuring arrangements with the Paris Club in 1986, 1989, 1991 and 2000. However, this did not stop the "leaps" and "jumps" in the external debt stock which led to Nigeria to stop paying its debts to the Paris Club altogether, after the Paris Club refused to substantially reduce Nigeria's debt. With the return to civilian rule in 1999 under the President Olusegun Obasanjo administration, Nigeria embarked on a relentless campaign for debt relief. The major concern was that Nigeria's spends more on debt service payments than it does on healthcare and education and as such with the high level of debt servicing could not achieve the millennium development goals. The

campaign efforts finally paid off in 2005 when the Paris Club group of creditors agreed to cancel 60% (US\$18.5 billion) of the US\$30.85 billion owed to it by Nigeria. This led to a relief in the nation's debt service burden.

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.

Empirical Literature

Since the early 1990s, there has been an important emergence of empirical studies which explored the issue of budget deficit and external debt. Even though these studies have gained importance after the latest financial and debt crisis world-wide, only a dearth of studies abound in literature on the

relationship and direction of causality between budget deficit and external debt. However, many scholarly researches have been made on the effects of budget deficit on some economic variables like gross domestic product (GDP), etc. Empirical tests were carried out on stationarity and co-integration techniques that explore the existence of a long-run equilibrium relationship among the fiscal variables, (Neaime, 2004).

Osinubi, Tokunbi and Oladele (2010), examined the relationship between Budget deficit, external debt and economic growth in Nigeria. They stated how the use of budget deficits as an instrument of stabilization leads to the accumulation of external debt with the attending effects on growth in Nigeria between 1970 and 2003. The results of the econometric analysis confirm the existence of the debt Laffer curve and the nonlinear effects of external debt on growth in Nigeria. The study concludes that if debt-financed budget deficits are operated in order to stabilize the debt ratio at the optimum sustainable level debt overhang problems would be avoided and the benefits of external borrowing would be maximized.

Qayyum and Haider (2012), investigated empirically the impact of external debt and foreign aid on economic growth by taking into consideration the quality of institution in terms of effective governance, using an annual data for the period 1984 to 2008 has been taken from a panel of sixty developing countries. Empirical results indicate that the good governance and foreign aid affect the economic growth positively while that of external debt has a negative impact. According to Falade and Folorunso (2013) debt and monetary financing remain the sources of fiscal deficit financing that have been identified in the literature. While minting of currency and increase in taxes constitute monetary financing, domestic and external borrowing constitute debt financing. The view of authors on monetary financing is convergent while that of debt financing is divergent.

Ojo and Okunroumu (1992) investigated the nexus among money supply, budget deficit, interest rate and inflation. The study employed time series data set over the period of 1980 – 2010. Empirical findings of the study showed that the relationship between inflation, budget deficit, interest rate and the lag one of inflation is negative while the relationship between inflation and exchange rate is positive. Also, inflation rate in the preceding period did have significant impact in the succeeding period.

Much scholarly effort that investigated the role of external debt in the economic growth has concentrated upon whether external debt has a positive or negative role in economic growth. The outcome of the research that considered LDCs either reached to a negative impact or a weak positive impact under sound policy environment or good governance. Recent studies that explored the relationship between external debt and economic growth found that external debt had a negative impact on the economy. Examining the impact of external debt on economic growth in Pakistan over the period 1970–2009.

Ramzan and Ahmad (2014) showed that external debt has a negative impact on growth, but this adverse effect can be reduced or even reversed in the presence of sound macroeconomic policy. They

concluded that bilateral, and not the multilateral, component of the total external debt that retards growth. Exploring the nexus between external debt and export competitiveness. Ouyang and Rajan (2014) found that once external debt exceeds a certain threshold it is negatively associated with export growth. Furceri and Zdzienicka (2012) assessed the short and medium-term impact of debt crises on GDP. Using an unbalanced panel of 154 countries from 1970 to 2008, the paper shows that debt crises produce significant and long-lasting output losses, reducing output by about 10 percent after 8 years. The results also suggest that debt crises tend to be more detrimental than banking and currency crises. The above reviewed literature indicates that debt source of fiscal deficit financing, whether external or internal, has macroeconomic consequences. Indeed, Gray (1996) and Gray and Woo (2000) affirmed that external debt is not favourable for governments in developing countries though they further argued that the choice of debt financing must bear in mind other economic policy components, including fiscal policy, monetary policy, exchange rate policy and trade policy. Beaugrand, Loko and Mlachila (2002), however, showed that highly concessional external debt is usually a superior choice to domestic debt in terms of financial costs and risks, even in the face of probable devaluation.

The causal relationship between public debt as well as its components and fiscal deficit has not been adequately addressed in the literature. Indeed, the relationship between both components of public debt and fiscal deficit is yet to be resolved. For instance, Fischer and Easterly (1990) opined that the relation between external debt and budget deficit is neither direct nor linear, especially in the short run. The paper revealed that government borrows to cover a growing deficit while few others have focused on the determinants of public debt in high and low-income countries.

Gaps in the Literature

Empirical studies in Nigeria failed to address the causal relationship between fiscal deficit and external debt. Indeed, most of the Nigerian research works have focused on the causal relationship between fiscal deficit and macroeconomic variables such as inflation, private investment, money supply, interest rate and economic growth. For instance, Osinubi, Tokunbi and Oladele (2010), examined the relationship between Budget deficit, external debt and economic growth in Nigeria. The results of the econometric analysis confirm the existence of the debt Laffer curve and the nonlinear effects of external debt on growth in Nigeria.

Falade and Folorunso (2013) maintained that debt and monetary financing remain the sources of fiscal deficit financing that have been identified in the literature. While minting of currency and increase in taxes constitute monetary financing, domestic and external borrowing constitute debt financing. Also, Ojo and Okunroumu (1992) investigated the nexus among money supply, budget deficit, interest rate and inflation. The study showed that the relationship between inflation, budget deficit, interest rate and the lag one of inflation is negative while the relationship between inflation and exchange rate is positive. It is evident from the review of literature that there is dearth of studies on the nexus between fiscal deficit and external debt as well as its components. The aim of this study is therefore to address the neglect issue on the nexus between fiscal and external debt, to also find out if there exists long-run relationship between fiscal deficit and external debt. This paper is of the view that causal and long-

run relationship may exist between fiscal deficit and external debt in Nigeria. Therefore, this present study fills the gap.

METHODOLOGY

Model Specification

Upon the background of the Keynesian twin deficit theory, the model for external debt and fiscal deficit, alongside other control variables were specified as can be seen in the works of Benjamin and Falade (2013). The core purpose of the study is to investigate the impact of Budget Deficit on External Debt in Nigeria by using data ranges from 1981 to 2019 for Nigeria. The control variables have been identified in the literature to influence budget deficit (BD) and external debt (ED), these include; the nominal income (GDP) and rate of inflation (INF) as mentioned by Abrego and Ross (2001) and Sinha et al (2011). In addition, Benjamin and Falade (2013) in their study 'Relationship between Fiscal Deficit and Public Debt' found that determinants of external debt include the fiscal stance (FBAL), aggregate nominal income (GDP), the currency exchange rate (EXR), inflation rate (INF) and interest rate (INT). Incorporating these auxiliary explanatory variables with little modification, the external debt (ED) model specified in linear form becomes:

ED = f(BD, DP, GDP, ER, INF). Econometrically specified as:

$$ED = \beta_0 + \beta_1 BD + \beta_2 DP + \beta_3 GDP + \beta_4 ER + \beta_5 INF + U$$

Where: In the model: ED = the level of External Debt, BD=Budget Deficit (Obtained by calculating the absolute difference between Government Revenue and Government Expenditure), DP = Degree of Openness, GDP = Gross Domestic Product, ER = Exchange Rate values, INF = Level of Inflation. The above-mentioned model is then transformed into a log form in order to bring variables that are non-normal to normality as well as compress the scales in which the variables are measured thereby reducing largeness of some values relative to others or reducing a tenfold difference between two values to a mere twofold difference (Gujarati, 2004).

$$\ln ED = \beta_0 + \beta_1 \ln BD + \beta_2 \ln DP + \beta_3 \ln GDP + \beta_4 ER + \beta_5 \ln INF + U$$

$\beta_1 > 0, \beta_2 > 0, \beta_3 < 0, \beta_4 > 0, \beta_5 > 0 \dots$ a priori expectation

Method of Analysis

The study adopts the Error Correction Mechanism. However, this study also employed Augmented Dickey Fuller (ADF) test for the unit root to ascertain whether the data series has a unit root in order to attain stationarity. The study also employed the use of Johansen co-integration test so as to ascertain the long run relationship between variables that were employed for this study. Further, ECM is employed to correct any form of dis-equilibrium in the short run. However, the techniques adopted for this study are further elaborated below;

Descriptive Statistics

The variables in table 4.1 below have low means and standard deviations except for gross domestic product and budget deficit which have high mean and standard deviation respectively. For instance,

means of external debt, degree of openness, exchange rate and inflation are 28, 32, 94 and 19 with standard deviations of 10, 12, 92 and 17 respectively while the means of budget deficit and gross domestic product are 1,433 and 30,559 with standard deviations of 1,932 and 41,655 respectively. Also, all the variables employed; external debt, budget deficit, gross domestic product, exchange rate and inflation are shown to be positively or moderately skewed given as 0.40, 1.25, 1.29, 0.89 and 1.78 respectively except for degree of openness which is negatively skewed given as -0.32, meaning that the right tail is longer. Furthermore, the positive values of kurtosis of the variables in this distribution are clear indication that the variables are all leptokurtic ie the distribution is peaked and possess thick tails.

Table 4.1: Descriptive Statistics

	ED	BD	DP	GDP	EXR	INF
Mean	28.55128	1433.269	32.41571	30559.51	94.14346	19.14646
Median	29.10000	242.1600	34.18262	6897.482	101.6973	12.55496
Maximum	54.83000	6404.790	53.27796	144210.5	306.9210	72.83550
Minimum	11.45000	0.150000	9.135846	144.8312	0.617708	5.388008
Std. Dev.	10.10505	1932.788	12.76767	41655.36	92.82186	17.06283
Skewness	0.404466	1.250420	-0.320626	1.292604	0.810180	1.783591
Kurtosis	3.065890	3.296303	2.095084	3.429122	2.854578	4.997667
Jarque-Bera	1.070409	10.30574	1.998874	11.15960	4.300915	27.16262
Probability	0.585550	0.005783	0.368087	0.003773	0.116431	0.000001
Sum	1113.500	55897.51	1264.213	1191821.	3671.595	746.7120
Sum Sq. Dev.	3880.261	1.42E+08	6194.514	6.59E+10	327404.1	11063.33
Observations	39	39	39	39	39	39

Source: Authors' computation using eviews 9

Unit Root/Stationarity Test

From the stationarity test results below, all the series were found to be stationary at first difference $I(1)$. Evidently, all the variables fluctuate round a long-run mean that is approximately zero. The stationarity tests results are reported in the tables below.

Table 4.2: Stationarity test

Variables	Test statistic	1% critical value	5% critical value	10% critical value	Order of Integration
LNED	-2.552127	-3.621023	-2.943427	-2.610263	$I(1)$
LNBD	-2.057916	-3.615588	-2.941145	-2.609066	$I(1)$
LNDP	-2.131399	-3.615588	-2.941145	-2.609066	$I(1)$
LNGDP	-1.047445	-3.615588	-2.941145	-2.609066	$I(1)$
EXR	-1.400004	-3.615588	-2.941145	-2.609066	$I(1)$
INF	-2.915636	-3.615588	-2.941145	-2.609066	$I(1)$

Source: Authors' computation using eviews 9

This table shows clearly that all the variables except exchange rate and inflation are in their natural log form. Therefore, LNED, LNBD, LNPD, LNGDP, ER and INF are non-stationary at level. However, the table shows that all the variables LNED, LNBD, LNPD, LNGDP, ER and INF are all stationary at first difference

Table 4.3: Cointegration Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.726820	119.1684	95.75366	0.0005
At most 1 *	0.514463	72.45395	69.81889	0.0303
At most 2	0.475503	46.44394	47.85613	0.0675
At most 3	0.298003	23.21256	29.79707	0.2358
At most 4	0.228617	10.47484	15.49471	0.2460
At most 5	0.030909	1.130294	3.841466	0.2877

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

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

Source: Authors' computation using eviews9

The co-integration result reveals evidence of co-integration. Since the Trace statistic table shows that we have 2 co-integrating equations while the Maximum Eigen table shows that we have 1 co-integrating equation, there exists a long-run relationship among the variables considered in this study.

Regression Results

The table below shows the ECM regression result which indicates that for each of the variables of budget deficit, degree of openness, exchange rate and inflation rate, a one percent increase in these variables will lead to a percent change in the dependent variable of external debt represented by their respective coefficients. It also showed the statistical significance of each of the independent variables in determining external debt in Nigeria.

Table 4.4: Error Correction Model Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNED(-1))	0.803088	0.226015	3.553257	0.0062
D(LNED(-2))	-0.193050	0.201552	-0.957814	0.3632
C	0.028299	0.141849	0.199498	0.8463
D(LNBD)	0.033711	0.032383	-1.040983	0.3250
D(LNBD(-1))	-0.109478	0.038897	-2.814593	0.0202
D(LNBD(-2))	-0.080120	0.039233	-2.042161	0.0715
D(LNBD(-3))	-0.012921	0.028090	-0.460004	0.6564
D(LNDP)	0.013591	0.160179	0.084850	0.9342
D(LNDP(-1))	-0.077507	0.162400	-0.477257	0.6446
D(LNDP(-2))	0.165884	0.175758	0.943819	0.3699
D(LNDP(-3))	0.508195	0.167214	3.039195	0.0140
D(LNGDP)	0.615802	0.805896	0.764120	0.4644
D(LNGDP(-1))	2.200142	1.053488	2.088437	0.0664
D(LNGDP(-2))	1.312648	0.713835	1.838869	0.0991
D(LNGDP(-3))	-0.532116	0.721700	-0.737310	0.4797
D(LNGDP(-4))	-3.825929	0.914853	-4.182014	0.0024
D(EXR)	0.004716	0.002573	1.832846	0.1000
D(EXR(-1))	0.002351	0.002686	0.875588	0.4040
D(EXR(-2))	-0.001413	0.002926	-0.483050	0.6406
D(EXR(-3))	0.003969	0.003043	1.304414	0.2245
D(INF)	-0.013628	0.005141	-2.650757	0.0264
D(INF(-1))	-0.014272	0.005785	-2.467175	0.0357
D(INF(-2))	-0.023537	0.007053	-3.337362	0.0087
D(INF(-3))	-0.005973	0.003739	-1.597469	0.1446
ECM(-1)	-0.575304	0.184955	-3.110515	0.0125
R-squared	0.804641	Mean dependent var		0.031702
Adjusted R-squared	0.283683	S.D. dependent var		0.193317
S.E. of regression	0.163615	Akaike info criterion		-0.641154
Sum squared resid	0.240927	Schwarz criterion		0.481169
Log likelihood	35.89963	Hannan-Quinn criter.		-0.258410
F-statistic	1.544540	Durbin-Watson stat		1.774629
Prob(F-statistic)	0.253906			

Table 4.5: Long Run Estimate

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBD	0.040707	0.131982	0.308427	0.7599
LNDP	0.571097	0.575920	0.991625	0.3293
LNGDP	-0.478635	0.386719	-1.237684	0.2254
EXR	0.011106	0.006703	1.656751	0.1080
INF	0.023108	0.021059	1.097280	0.2812
C	4.722547	1.906312	2.477321	0.0191

Source: Authors' computation using eviews9

Summary of Findings

The relationship between fiscal deficits and external debt in the Nigerian economy has been fundamental to policy makers and individuals. There is great concern among policy makers and citizens regarding the growing fiscal deficit and external debt crisis in Nigeria. This study therefore primarily attempts to investigate the impact and direction of causality between fiscal deficits and external debt in Nigeria.

The study applies the Augmented Dickey-Fuller (ADF) unit root tests to check if the variables are stationary or not. To ensure that long run relationship exists, the study used the Johansen co-integration test. The study showed the existence of long-run relationship among the variables employed in the research work.

The study finds out that the model passes the diagnostic test of autocorrelation using the Durbin Watson test and Breusch Godfrey Serial Correlation L-M test. The model also passes the stability test at the 5% significance level using the cumulative sum (CUSUM) and the cumulative sum of squares (CUSUM of squares) of recursive residuals. Using the F test, the overall model wasn't significant using F test, although the coefficient of determination was above 50%, autocorrelation was absent thus the model is fit and can be used for policy implications. The study also found that fiscal deficit has a positive and insignificant impact on external debt in the current year but a negative and insignificant impact on external debt two years prior to the current year using ECM model.

The study also found out that there is neither unidirectional nor bi-directional causality between fiscal deficit and external debt thus rising fiscal deficit is not a major cause of rising external debt and vice-versa. Finally, external debt is not significantly dependent on other variables; budget deficit, degree of openness, gross domestic product, exchange rate except inflation rate which significantly impacts external debt.

Granger Causality Test

This test shows the direction of causality between the dependent variable of external debt and each of the independent variables of budget deficit, exchange rate, degree of openness and inflation rate. It

tells us if causality is uni-directional or bi-directional. If the probability value is less than 0.05 then there exists causality between the two variables.

Null Hypothesis:	Obs	F-Statistic	Prob.
BD does not Granger Cause ED	37	0.57221	0.5699
ED does not Granger Cause BD		0.06005	0.9418
DP does not Granger Cause ED	37	0.34725	0.7093
ED does not Granger Cause DP		0.99831	0.3797
GDP does not Granger Cause ED	37	2.55942	0.0931
ED does not Granger Cause GDP		0.61884	0.5449
EXR does not Granger Cause ED	37	2.92637	0.0681
ED does not Granger Cause EXR		0.13239	0.8765
INF does not Granger Cause ED	37	0.02497	0.9754
ED does not Granger Cause INF		0.48048	0.6229
DP does not Granger Cause BD	37	1.22916	0.3060
BD does not Granger Cause DP		3.49727	0.0423
GDP does not Granger Cause BD	37	7.35821	0.0023
BD does not Granger Cause GDP		3.72052	0.0353
EXR does not Granger Cause BD	37	0.82122	0.4490
BD does not Granger Cause EXR		1.05699	0.3593
INF does not Granger Cause BD	37	0.13211	0.8767
BD does not Granger Cause INF		1.42636	0.2550
GDP does not Granger Cause DP	37	1.90309	0.1656
DP does not Granger Cause GDP		0.37151	0.6926
EXR does not Granger Cause DP	37	0.19445	0.8243
DP does not Granger Cause EXR		0.29513	0.7464
INF does not Granger Cause DP	37	0.42912	0.6548
DP does not Granger Cause INF		0.07101	0.9316
EXR does not Granger Cause GDP	37	8.64586	0.0010
GDP does not Granger Cause EXR		5.37296	0.0097
INF does not Granger Cause GDP	37	0.19718	0.8220
GDP does not Granger Cause INF		1.66483	0.2052
INF does not Granger Cause EXR	37	0.89278	0.4195
EXR does not Granger Cause INF		1.57792	0.2220

Source: Authors' computation using eviews9

From the table above showing causality between each of the independent variables of budget deficit, exchange rate, degree of openness and inflation rate to the dependent variable of external debt in Nigeria and vice-versa. We observed that there is neither unidirectional nor bi-directional causality between fiscal deficit and external debt.

However, gross domestic product and budget deficit as well gross domestic product and exchange rate exert a significant level of both uni-directional and bi-directional causality

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study revealed that fiscal deficit is not a major factor determining external debt in Nigeria as it is not a statistically significant variable determining external debt from our analysis. We also found that

in the current year there is positive relationship between fiscal deficit and external debt but two years prior to the current year there exists negative relationship between fiscal deficit and external debt. In the first case we observe a conformity with apriori expectation as the coefficient of fiscal deficit was positively signed, however in the second case there exists non-conformity with apriori expectation. This could be as a result of the policies of government in successive years to minimize the debt burden on the country or increase in debt service payment over the years.

Also, we observed that uni-directional or bi-directional causality does not exist between fiscal deficit and external debt in Nigeria. This was also contrary to apriori expectation. This could be as a result of the fact that rising external debt may not be used in the financing of fiscal deficit rather these debts are channeled towards extravagant and non-productive ventures by government authorities for instance during the military regime of Late General Sani Abacha.

Furthermore, external debt is dependent on other variables like gross domestic product, exchange rate and degree of openness but they are insignificant in determining external debt in Nigeria. From our analysis they were found to be statistically insignificant. However, inflation was, and this may be due to the fact that increase in general price level may reduce the demand for external debt.

Finally, external debt accumulation in Nigeria should be channeled towards the financing of fiscal deficits that would stabilize the economy through development of infrastructure and capital formation rather than spending it on non-productive ventures, white elephant projects, embezzlement by government authorities. This would then make the size of fiscal deficit a major determinant of the size of external debt in Nigeria.

Recommendations

Based on the findings made in the course of this study the following recommendations are made:

1. Since there is a long-run relationship between fiscal deficit and external debt, the debt accumulated from external sources should be ensured by government and its relevant authorities to be channeled towards productive ventures like creation of jobs for the citizens in order to improve the revenue generating power of the country through tax. This would lessen the budget deficit.
2. The government and its relevant authorities should ensure fiscal discipline among the state or local government in the execution of project and also ensure that external debts accumulated are effectively implemented.
3. There should be policies put in place by government to ensure effective monitoring of the budget and expenditure control in order to lessen the deficit acquired each year which would give government reason to accumulate external debt unnecessarily.
4. Policies be implemented that will enhance the channeling of funds from the external sector to productive sectors (power sector) of the economy in order to ensure diversification and revenue generation thereby ultimately lessening the external debt burden that Nigeria is faced with.

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