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Monetary Policy Reactions and Deficit Financing in Nigeria

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Abstract

The study used secondary data which was obtained from the World Bank development indicators and Central Bank Statistical Bulletin between 1981—2022. The Auto-Regressive Distributive Lag (ARDL) was adopted for regression analysis, the variables adopted as independent variables are Domestic debt financing, foreign debt financing, External Reserves, and Exchange rate while real gross domestic product (RGDP) is the dependent variable. The study revealed that both Exchange rate and foreign debt financing have no significant effect to economic growth in Nigeria while Domestic debt financing and external reserves have a significant effect to economic growth. The study therefore concluded that domestic debt financing and

external reserves have an unstable effect in the economy (asymmetric effect), this is due to inconsistency in its application in the country. From the research undertaken, we recommend that domestic debt should be channeled into economic activities that will stimulate growth and increase productivity. There should be a deliberate attempt to monitor the usage of domestic debt to avoid capital flight. The government should put a stop on foreign debt financing because it doesn't have an effect on the nation's economy. There should be a deliberate plan to increase the external reserves since it serves as the critical channel of financing developmental programmes and augment deficits in most cases.

Keywords: Monetary Policy, Deficit Financing, Nigeria

1. Introduction

The Keynesian school of thought advocates the need for expansion in government expenditures even above current income particularly during recession, when the economy suffers from insufficient active demand such as great depression of 1929 to 1932 and the recent 2008 Global financial and economic crisis. This will boost demand for productive output leading to a reduction in the level of unemployment. Government as an agent of the people requires revenue to provide education, employment, adequate health services, infrastructures and good roads but in the process of discharging this enormous responsibility the revenue and/or spending requirements of the government may sometimes outstrip its availability, hence the recourse to deficit financing so as to fill the gap between expenditure needs and revenue availability. Deficit financing is an important method adopted by a country to achieve its macroeconomic objectives of economic growth, increased employment, increased income, balance of payment surplus.

Deficit financing emanated considering the fact that there is a need for economic expansion. Since independence in 1960, over 85% of Nigerian budget are deficit-related. Inadequacy of fund on the side of the government to execute capital projects are what constitutes deficit. This suggested that government needed to source for fund in financing its deficit either through domestic debt, external debt or implementation of monetary instruments to increase the flow of fund in the economy. However, financing the state of an economy through prolong borrowing from foreign countries has a ripple effect on the performance of such an economy by crowding out sole investors due to high interest rates. The idea of borrowing abroad generates its source from fiscal policy. To understand the root of borrowing as a means of financing deficit, one must understand the relevant macroeconomic variable which is fiscal policy.

All government programmes must be financed whether in form of expenditures on goods and services or on asset acquisition through lending to private sector. The other part of the expenditure which has not been financed through income tax, individual's savings or domestic borrowing must be through fiscal deficit. Deficit financing can be seen as the practice of seeking to stimulate a nation's economy by increasing government expenditures beyond revenue sources (CBN, 2012). It

involves the government generating funds to finance the deficit which results from excess of expenditures over revenue. The gap being covered by borrowing from the public by sale of bonds or printing new money.

Government all over the world adopts deficit financing as an alternative means to reduce the revenue and expenditure gap in the budget while also faced with the need to finance its rising public expenditures in order to achieve its macro-economic objectives.

Nigeria's budget deficits can be traced back to 1961 and can also be witnessed during the post-independence era and since then 85% of the budget runs on deficit. Nigeria's government budget deficit has witnessed increase in the past decades. For instance, from 1981, deficits increased from ₦3.9billion to ₦8.3billion in 1986 and it further increased to ₦15.1billion in 1989. From 1990, the rising trend of budget deficit continued except in 1995 and 1996 when the budget witnessed or registered a surplus of ₦1billion and ₦32billion respectively. In 1998, the overall deficit jumped to ₦133.4billion and in 2002, it increased up to ₦301.4billion. Starting from 2003, government budget deficit declined from ₦202.7billion to ₦172.6billion, ₦161.4billion and ₦101.3billion in 2003, 2004, 2005 and 2006 respectively. Another increase was witnessed from 2007 at ₦117.2billion to ₦153.5billion in 2013 (CBN, 2014)^[6]. Okoro (2013)^[15] stated that deficit financing arises largely because of the need to expand the economy, government's inability to execute capital projects that expands the economy births deficit. This propels the need for government to finance its projects either through internal or external borrowing, or the implementation of monetary instruments to stimulate the flow of funds in the economy.

The culture of deficit financing in Nigeria was entrenched from 1970 when the country ran into deficit and sustained public sector spending boom (CBN 2012). The fiscal deficits of 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 1970's led to the return of deficit 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 nation's reserves (Nwanna & Umeh, 2019)^[11]. The level of external debt rapidly rose from \$9.0 billion in 1980 to \$17.8 billion and \$25.6 billion in 1983 and 1986 respectively (Olusegun, *et al.*, 2020). The need for adequate public expenditure program and management has therefore become paramount, particularly at this period when the country is in recession and when various arms of government and the private sector are experiencing several financial constraints.

Deficit financing and economic growth are one of the most recalling issues facing the country in recent times. Despite the increased borrowings and constant reduction of external reserves by the government in Nigeria over the years, the expected level of economic growth has not been achieved as a greater percentage of Nigerians still wallow in absolute poverty, persistent high mortality rate, low life expectancy due to inaccessibility of standard medical facilities, poor road network, shortage of food and high rate of unemployment.

According to Ayuba and Khan (2019), this is because despite the several fiscal policy measures introduced by governments in curbing excessive deficit coupled with the

huge quantum of domestic and external loans, the country's economy still remains worse with citizens suffering from high levels of unemployment and low per capital income, while poverty remains widespread both in urban and rural areas.

Overall, Nigeria's debt burden continues to accumulate and economic growth has been declining with destructive environmental degradation, low infrastructure, chronic poverty and high unemployment rate (World Bank, 1989).

The continued dependence of Nigeria on foreign debt to cover its fiscal deficits has raised concerns and has led to ongoing debate over the impact of foreign debt and investment on growth (Adesuyi & Falowo, 2013). This has led to an alarming debt crisis threatening the country. For example, total external equity increased from \$213.4 billion in 2010 to \$367.5 billion in 2013 (Ali, 2014)^[4]. According to the IMF's Global Economic Outlook (2017), total government debt (% of GDP) rose from 23% in 2013 to 62% in 2016. Despite large borrowings by the country, the lack of investment in infrastructure and other key areas has not changed much and this is a worrisome trend to economist.

Despite relentless efforts by scholars to come with a stand still solution on the ills attributable to deficit financing, most submissions raised by some scholars seems to be a mirage and does not give a true picture of the current events particularly the Nigerian economy (Ibrahim, 2015). Again, while some researchers such as Nwanna and Umeh (2019)^[11], Solawon and Adekunle (2018) believe that deficit financing has a significant effect on the economy; others such as Sulaiman and Azeez (2012), Nwanne (2014) believe that there is no significant effect on the economy. This remains an empirical issue. A major reason for the conflicting result may be traced to various estimation techniques and variables that have been used by these different scholars. Based on the foregoing issues, the question is, can we conveniently say that the huge quantum of loan borrowed by the governments of the country to ensure economic growth in the country has stimulated economic growth from 1981 to 2022? Better still, to what extent has deficit financing influenced economic growth in the country. These questions still linger in the heart of many. In a bid to provide answer to this pressing issues, the researcher is inspired to investigate the reactions of monetary towards deficit financing and economic expansion or growth in Nigeria during the period 1981 to 2020. Does domestic debt financing stimulate economic growth? Does foreign debt financing influence economic growth? Do external reserves have any impact on economic growth? These are the questions this study intends to answer.

2. Empirical Literature

A lot of studies have been carried out on deficit financing and economic growth in Nigeria. This sub section reviews the existing studies carried out by the researcher in this field and the results that were obtained.

Awolaja and Esefo (2020) studied the relationship between deficit financing and economic growth in 20 sub Saharan Africa countries from 1991 to 2018 using error correction model. Pooled Mean Group (PMG) estimated the variables. Results revealed budget deficit related negatively and significantly with economic growth in the long-run, while budget deficit related positively and significantly with economic growth in the short-run.

Nwanna and Umeh (2019)^[11] assessed the effect of deficit finance on Nigeria economic growth covering the period 1981 to 2016 using ordinary least square. Findings showed deficit financing via external debt had a negative and significant effect on economic growth. However, domestic debt had a positive and significant effect on economic growth.

Okah *et al* (2019)^[13] studied the effect of deficit financing on economic growth in Nigeria covering 1987 to 2017. Variable estimation was done via Vector autoregressive (VAR) model. Result showed deficit financing had a positive, but non-significant impact on economic growth in Nigeria.

Ali *et al* (2018)^[3] assessed the impact of deficit financing on economic growth in Nigeria for the period 1981 to 2016. Autoregressive distributed lag (ARDL) employed for variable estimation. Finding proved deficit financing significantly influenced output growth.

Onwioduokit and Inam (2018)^[17] examined relationship between deficits financing and economic growth in Liberia employing ordinary least square (OLS) and error correction model (ECM). There existed a positive and significant relationship between budget deficit and economic growth.

Tung (2018) investigated the effect of fiscal deficit on economic growth in Vietnam using error correction model (ECM) to estimate quarterly data for the period, 2003-2016. Results revealed fiscal deficit had harmful effects on economic growth in both short and long-run.

it is clear that scholars in this field of study were unable to reach a consensus on the relationship between deficit financing and economic growth which serves as a motivation for this particular study.

Some scholars reported negative relationship between deficit financing and economic growth, while others revealed that deficit financing has a positive relationship with economic growth and thereby canvas support for the Keynesian school. Their findings are inconclusive as to the exact relationship that exists between deficit financing and economic growth. Sequel to this identified gap, this study sets out to contribute to the line of research by investigating the causality flow between deficit financing and economic growth in Nigeria between 1981-2020.

3. Methodology and Data

This study is anchored on Keynesian model and functional finance theory. These theories advocate for an active government expenditures/ financing in the economy in order to stimulate economic growth.

3.1 Model Specification

The estimation of the relationships between the independent variables (foreign debt financing, domestic debt financing, external reserves reserve and exchange rate) and the dependent variable (real gross domestic product) is modeled using multiple regression econometric models. The models in this study surpass previous scholars' models because it captured external reserves and exchange rates (control variable).

For the purpose of this research, the model used by Onuorah and Ogbonna (2013) that carried out similar study in Nigeria for the period 1981–2012 was employed as our model and modified to suit this work. Onuorah and Ogbonna (2013) in their work specified that real gross domestic product is significantly influenced by total domestic debt and the total external debt. That is,

$$RGDP = f(TDD, TED) \quad (1)$$

Considering the Keynesian and functional finance theory as our anchor theory for our model, we modified the model above to suit this work and arrived at the model below,

$$RGDP=f(FDF, DDF, EXR, EXTRN) \quad (2)$$

Transforming the model above to a regression model we have,

$$RGDP=\beta_0+\beta_1FDF+\beta_2DDF+\beta_3EXR+\beta_4EXTRN+\mu \quad (3)$$

Where, RGDP is Real gross domestic product, FDF is Foreign debt financing, DDF=Domestic debt financing, EXR is Exchange rate (₦) (control variable), EXTRN is External Reserves (₦)

μ is Error term and B_0 is Constant term, β_1 — β_4 are Parameter estimates.

4. Result Presentation Stationarity Test

Table 1: Unit Root Test (ADF)

S. No	Variables	Level		First Diff.		Order
		T-Stat.	Crit. Value	T-Stat.	Crit. Value	
1.	Log(RGDP)	-1.845814	-2.938987	-30.07666	-2.941145	1(1)
2.	DDF	16.2938987	-2.938987	-3.471874	-2.941145	1(1)
3.	FDF	-3.457418	-2.938987	-	-	1(0)
4.	EXR	-4.493302	-2.943427	-	-	1(0)
5.	ETRN	-2.222615	-3.533083	-6.694924	-536601	1(1)

Source: Author's computation using e-view

Table 1 illustrates the stationarity test of all the variables in the model. The unit root test was conducted with the augmented Dickey and Fuller test (ADF) and the test statistics showed that foreign debt financing and exchange rate were mean-reverting or stationary at their level while real gross domestic product (RGDP), domestic debt financing (ADF), and external reserves measured in naira became stationary after being subjected to first difference. This is consistent with Box and Jenkins' (1970) discovery that time series data are always non-stationary and that difference is the best way to stabilise time series data. Hence, we conclude that there are mixed orders of integration in the data set, which justifies the adoption of the autoregressive distributed lag (ARDL) model. The ARDL framework presents the cointegration result through the bounds test. The bounds test output determined gives directives on further estimation.

Table 2: Bounds Cointegration Result

Test Statistic	Value	K
F-statistic	6.995727	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	3.03	4.06
5%	3.47	4.57
2.5%	3.89	5.07
1%	4.4	5.72

Source: Author's computation using e-view

Table 2 illustrates the bounds cointegration output for the study. The f-statistic is 6.995729 while the upper bound

critical value at 5% is 4.57. This implies that the variables in the model have a long-run relationship or that there will be convergence in the long run. Since there is evidence of a long-run relationship, the researcher proceeded to estimate their short-run and long-run causation and the error correction term.

Table 3: Error correction regression and short-run causation

Included observations: 36				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(RGDP(-1))	0.747581	0.309007	2.419303	0.0287
DLOG(RGDP(-2))	0.571942	0.235125	2.432497	0.0280
D(DDF)	-0.000099	0.000338	-0.292611	0.7738
D(DDF(-1))	0.000060	0.000635	0.094746	0.9258
D(DDF(-2))	0.000101	0.000739	0.136139	0.8935
D(DDF(-3))	0.001050	0.000581	2.807763	0.0107
D(FDF)	-0.000604	0.000653	-0.925586	0.3693
DLOG(ETRN)	-0.601938	0.213477	-2.819691	0.0129
DLOG(ETRN(-1))	0.023910	0.130328	0.183459	0.8569
DLOG(ETRN(-2))	-0.017368	0.124088	-0.139963	0.8906
DLOG(ETRN(-3))	0.554850	0.142845	3.884268	0.0015
D(EXR)	-0.004540	0.004176	-1.086957	0.2942
D(EXR(-1))	-0.000046	0.006701	-0.006846	0.9946
D(EXR(-2))	0.005232	0.007294	0.717327	0.4842
D(EXR(-3))	-0.010797	0.006529	-1.653673	0.1190
D(@TREND())	-2.079529	0.380595	-5.463888	0.0001
CointEq(-1)	-0.454651	0.093770	4.848578	0.0002
R-squared	0.816975	Mean dependent var	0.048423	
Adjusted R-squared	0.572941	S.D. dependent var	0.555247	
S.E. of regression	0.362852	Akaike info criterion	1.101556	
Sum squared resid	1.974927	Schwarz criterion	2.025276	
Log likelihood	1.171985	Hannan-Quinn criter.	1.423959	
F-statistic	3.347795	Durbin-Watson stat	2.436955	
Prob(F-statistic)	0.010347			

Source: Author's computation using e-view

Table 3 depicts the error correction regression and the short-run causation. On the statistical front, the r-square is 0.816975 while the adjusted R-square is 0.57241. This implies that 57 percent of the changes in economic growth are associated with the interplay of the variables in the model, while the remaining 32 percent are externally determined by variables in the error term. The f-statistic value of 3.347795 and the significant probability value of 0.010347 show that the entire model has a good fit. The Akaike information criterion is the best for the model since it has the lowest value of 1.101556. The error correction term appeared with the normal sign (-), and it is statistically significant at 5 percent. As a result, Nigeria's past disequilibrium caused by deficit financing and economic growth will be corrected at a rate of 45 percent per year. Alternatively, past disequilibrium will herald long-run equilibrium at a 45 percent annual rate. The acceptance of short-run causation is predicated on the fact that the past values of the model's dependent variable are known. The lag values of the dependent variables RGDP (1) and RGDP (-2) are 0.747581 and 0.571942, while their probability values are 0.0287 and 0.0280. This means that the past values of real gross domestic product (RGDP) have a growth-enhancing tendency in the short-run. This development is the prelude to the acceptance of the model and represents the Nigeria experience. In the short-run, the past value of domestic debt financing DDF (-3) influences real gross domestic product (RGDP) positively and it is statistically

significant since the probability value of 0.0107 is less than the 0.05 threshold. This implies that a unit increase in domestic debt will increase economic growth by 0.0001050 units, all things being equal. Also, it means that deficit financing of economic growth in Nigeria through domestic sources drives further development. This exposition is consistent with apriori expectations and economic theory.

On the contrary, the coefficient of foreign debt financing (FDF) has a negative impact on economic growth, but it is not statistically significant at 5%. The insignificant disposition of the series is premised on the fact that the probability value of the series is 0.3693 and it is greater than 0.05. This implies that external debt financing has had no significant effect on economic growth in Nigeria over the period of the study.

In the short run, the coefficient of external reserve has a negative effect on the dependent variable, and it is statistically significant at 5%. Therefore, an increase in external reserves will, all things being equal, amount to a 0.601938 reduction in economic growth in Nigeria. Alternatively, the increase in external reserve will cause a reduction in economic growth in Nigeria by 60 percent. On the contrary, the third-year lag value of external reserves has a positive short-run effect on economic growth and is statistically significant at 5%. All things being equal, an increase in the lag value will amount to 0.554850, or a 55% increase. This exposition is consistent with economic theory and explains the expected trajectory.

In view of the above, it has become eminently clear that external reserves have an unstable effect on economic growth in the short-run. The inconsistency in the series could mean that external reserves in Nigeria are constantly depleted in the short-run and this has made them unable to sustain the Nigerian economy. Finally, the coefficient of exchange rate (EXR) has an insignificant mixed effect on economic growth in Nigeria. That means that, in a deficit financing environment, the exchange rate is not a significant factor in the short-run.

5. Discussion Findings

Domestic debt financing and economic growth in Nigeria. Evidence from the estimated long-run and short-run test indicates that domestic debt financing (DDF) has negative effect on economic growth in the long-run while it lag value affects economic growth positively. Therefore, we assert that domestic debt financing has a mixed effect on economic growth in Nigeria. One reason for such inconsistency could be that domestic debt applications are ineffective. Therefore, the null hypothesis, which states that there is no statistically significant relationship between domestic debt financing and economic growth, is rejected while the alternative hypothesis is accepted. Hence, we assert that domestic debt financing has an unstable effect on economic growth or that it has an asymmetric effect on economic growth. This exposition is consistent with the work of scholars like – Nkaku (2015), Iya (2014)^[8], and Akinmulegun (2014).

The research on the effect of deficit financing on economic growth in Nigeria is premised on the suspicion of mounting debts and the oscillation of economic growth over the study period (1981–2020). The research was intended to identify the debt financing sources that have a mere impact on economic growth in Nigeria and the study is anchored on theories such as – Keynesian and functional finance theory. The final abstractions from the study are: An increase in

domestic debt financing increases economic growth by 0.001050 in the short-run and reduces economic growth by 0.000957 in the long-run. An increase in foreign debt financing has no effect on economic growth in Nigeria. An increase in external reserves causes a decline in economic growth by 0.558299 in the long run. In the short-run, the increase in external reserves reduces economic growth by 0.601938 while it lags behind value, it increases economic growth by 0.554850. The appreciation of the exchange rate has no effect on economic growth in Nigeria.

6. Conclusion

The study concludes that domestic debt financing and external reserves have an unstable effect on economic growth in Nigeria. Also, that the lag-value of external reserves is the most significant determinant of economic growth in Nigeria. Domestic debts should be channelled into economic activities that will stimulate the economy's growth. There should be a deliberate attempt to monitor the usage of domestic debt to avoid capital flight. The government of Nigeria should put a stop to foreign debt financing because it doesn't have an effect on the nation's economy.

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