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Deficit Financing, Interest Rate And Money Supply In A Developing Economy: The Nigerian Experience

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ABSTRACT
This study examines the effect of deficit financing, interest rate and money supply in a developing economy, specifically the study sought to determine how these variables have impacted on the Nigerian economy as a developing economy. In the cause of this study, we adopted true series data from CBN's statistical bulletin where variables were analyzed using econometric model of data analysis. It was also discovered that there is a positive relationship between fiscal and monetary policies in achieving effective growth that is required for economic development. And as such a more prudent approach should be applied on issues affecting deficit financing. The study therefore, recommends that economic planners and the monetary authorities should address the issue of excessive deficit financing due to its bandwagon effect on interest rate and money supply in Nigeria.
Keywords: Finance, Money Supply activities, spending, Income, consumption, capital.

INTRODUCTION

Deficit finance has been applied for several years in Nigeria. This can be attributed to the fact that the government has been involved in consistent spiral public expenditure coupled with the need to expand the economy.

Deficit finance also includes generating funds to cover deficits that occur from spending which exceeds income. Towards this backup, deficit financing can be seen as an attempt to stimulating the economy through increase in government spending.

In the view of Akinmulegun, (2014) are posited that deficit financing arises as a result of the need to expand the economy. But Ali (2014) asserted that the government applies deficit financing for several reasons. This could also be viewed from the position of increasing money supply with the aim of influencing economic activities in the economy. Furthermore, when deficit financing is appropriately applied, it increases the spending capacity of both investors and the government. While Iya, Aminu and Gadbo (2014) opined that where deficit financing is not applied appropriately, it will lead to government inefficiency by putting such economy or government in a dangerous and unstable position. This is because deficit financing is a situation where the government spends more money than it receives as revenue which could occur for several reasons, but it is mainly a conscious effort taken by the government to stimulate the economy, (Dillow, 2010). Such influence of government deficit is basically to influence the economy.

But the importance of interest rate is considered based on its equilibrating influence on supply and demand for money. In the views of Onoh (2012) he posited that channeling savings into a given financial asset and the willingness for the individual to incur financial consequences is greatly influenced by

interest rate. Considering its linkage between the financial and real sector of the economy, the important of interest rate cannot be under estimated. But in the views of Thomas (2012), he opined that high interest rate discourages investment borrowing while it encourages savings with the rate is high, we can therefore say that interest rate is crucial for economy growth and investment purposes. Thus, it will be economically expedient for economic planner to advocate for market driven interest rates rather than administrative fixed interest rate Baiter, (2009)

Interest rate is considered as the opportunity cost for current consumption into the future therefore it is an important economic price. In the views of Brendar Drazen (2018) they stated that whether interest rate is seen from the point of view of cost of capital or opportunity cost of funds, interest rate has a fundamental implication on the economy. But Omodero (2019) stated that interest rate has both positive and negative effects on borrowing and as such it affects the demand and supply of capital. Thus the demand for capital is inversely related to the rate of interest (Anthonjo and Yasfir, 2019). Money supply simply implies the amount of cash and currencies available in an economy and as such it affects output; income and prices coupled with balance of payment. Therefore, deficit financing leads to increase in money supply Umoh (2018).

REVIEW OF RELATED LITERATURE

When a government decides to pursue deficit budget, it simply indicates that its expenditure exceeds her intended revenue as income and as such there is the need to provide funds for such an excess expenditure. But Onwioduokit and Inam, (2018) opined that Deficit financing remains a veritable tool for the promotion of economic growth and development. While Nwana and Umeh, (2019) stated that if deficit financing is efficiently applied, by the borrowing nation, it will lead to increase in domestic savings and also lead to economic growth. Therefore, the government must look for how to generate the required resources from alternative resources. Thus Anyanwu (2014), Ayuba and Khan, (2019) and Nduugu (2016) where of the view that several developing nations undertake deficit financing with the aim of achieving certain macro-economic objectives.

But Festus and Sabiu (2019) opined that fiscal deficit is a phenomenon caused by an imbalance in the national budget which could be either positive or negative. Thus, deficit financing is viewed as an economic state in which government spending is more than her earnings as revenue. This is believed will lead the government to determine where to operate such shortfall which could be borrowing which can be either internal or external. But governments can apply deficit financing with the aim of providing financial assistance. CBN (2013) defines deficit financing as the practice of paying more than the government receives as revenue. But Salowaon and Adekinle (2018) asserted that deficit financing can result from government inefficiency, which reflects wide spread of tax evasion or wasteful spending instead of an operation of a planned counter cyclical policy. It is therefore imperative for the government to apply deficit financing with the aim of accelerating economic growth and development and as such it is considered to have positive impact on economic activities. But Blondas (2004) asserted that deficit financing occurs for several reasons but it a conscious effort taken by the government to stimulate the economy to an acceptable growth path.

The narrow definition of money which is referred to as Mo or Mi recognizes notes and coins in circulation. But Omodero (2019) posited that money supply is a money instrument that is viewed to be very important in improving a nation's economy development. While Asinya (2019) further reviewed that relationship between money supply and output and asserted that money supply is synonymous with terms such as money stock, quality of money which can be regarded as the total amount of money in circulation. But the supply of money in Nigeria is viewed from an assumption based on its composition which is basically considered based several economic factors which could be viewed from the behavior of the banks considering the amount of reserves that may decide to keep at any given point in time. The second point of note is the behavior of the non bank public on how they intend to keep deposits. And various positions that the monetary authorizes might intend to address. Such intent of the non bank public Good had (2013).

Interest rate is considered as an important economic price because it has a serious implication for the economy because it can impact on the cost of capital or credit, considering the impact of interest rate on any economy, its place cannot be ignored (Jhingan, 2017) (CBN, 2015). While Ojo, (1993) posited that the importance of interest rate is based on its influence on the supply and demand side of the financial sector. Therefore, interest rate can be considered based its interlocking linkage that exists between financial and real sector of the economy Blinder (2012).

METHODOLOGY

Data and Variables

To examine the impact of deficit financing (DF), money supply gross domestic product (GDP), we use yearly time series data covering from 1981 to 2021. The data on these variables are obtained from the CBN statistical EViews version 10. As usual, we log-transformed the data to outliers on our empirical analysis.

Table 1: shows the summary Statistics for the variables, while figure 1 shows the time series plots of the data.

Model Specification

This study adopted econometric method of data analysis. The data was obtained from CBN's statistical bulletin. The study further covered a period of 41 years with the model stated as gdp = f(df, ms, intr)

This was transformed using algorithm which is stated as:

$\text{Log (GDP)} = \beta_0 + \beta_1 \text{Log DF}_{ut} + \log \text{MS}_{ut} + \beta_3 \log \text{Intr}_{ut} + \varepsilon_{ut}$

Where GDP = Gross domestic product

DF = Deficit Financing

MS = Money Supply

Intr = Interest rate

β_0 = Intercept

$\beta_1, \beta_2, \beta_3,$ = estimated parameters

ε_{ut} = error term

Table 1: Summary Statistics

Variables	Mean	Std. Dev	Skewness	Kurtosis	Jarque-Bera (P-value)
GDP	3502239.00	15523345.00	4.19	18.57	0.0000
DF	8.87	15.85	2.77	9.99	0.0000
MS	7944.08	11415.15	1.27	3.18	0.0040
INTR	21.26	6.28	0.06	2.57	0.8412

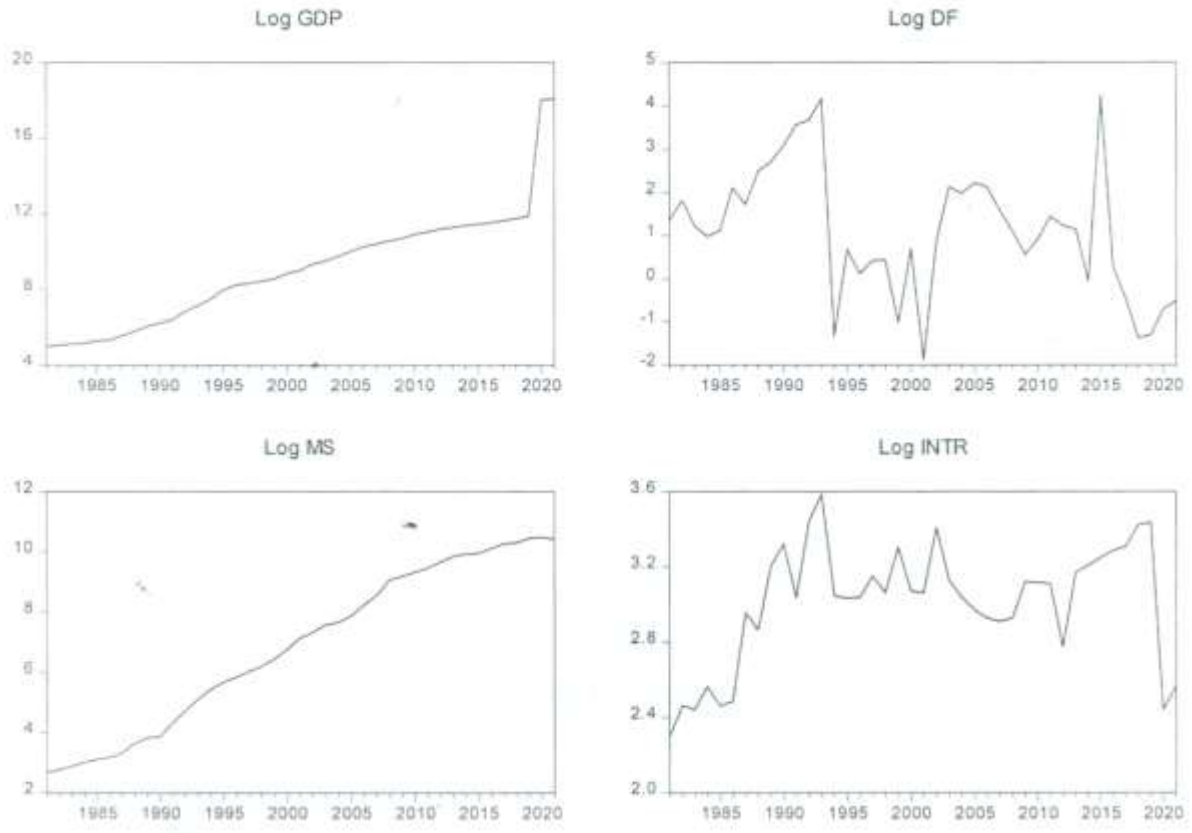

Figure 1: Time series plots of log GDP, log DF,

ANALYSIS AND DISCUSSION

Stalionarity Tests

Table 2 shows the ADF non-stationary test results for GDP, deficit financing, money supply, and interest rate. Both level and first different tests are reported, and the lag determination is based on Schwarz information criterion (SIC).

Table 1: Summary Statistics

Variables	Level Test	First Difference Test	Remark
LGDP	2.4205*	-6.7229	1(1)
	(0.3638)	(0.0000)	
LDF	-3.6520	-	1(0)
	(0.0089)		
LMS	-1.3435	-3.6186	1(0)
	(0.5998)	-	
LINTR	-3.1748	-	1(0)
	(0.0290)		

***indicates that the test equation incorporates time trend**

From Table 2, the results show that our variables have different levels of integration. The test on the level data is not significant for both LGDP (p-value = 0.3638) and LMS (p-value = 0.5998), while it is

significant at the 1% and 5% levels respectively for LDF (p-value = 0.0089) and LINTR (p-value 0.0290). However, the first difference testis highly significant for LGDP (P-value 0.0000) and LMS (p-value = 0.0098). This shows that both GDP and money supply are integrated of the first order, while both deficit financing and interest rate are integrated of the zero order. This implies that both short-run and long-run effects of deficit financing, money supply, and interest rate on GDP can be fully captured using a well-specified ARDL model, since this Framework does not discriminate variables based on their order of integration.

Estimation and Results

Table 3 reports the empirical estimates for the impact of deficit financing, money supply, and interest rate on GDP. The Schwarz information criterion is used to determine the optimal specification of our empirical model and the results show that the criterion considers an ARDL (1,0,0, I) as the best description of the specified relationships (see Figure 2). This implies that a model with one period lagged values of GDP and interest rate as additional explanatory factors is the optimum specification of the dynamic relationship between deficit financing, money supply, and interest rate on GDP. Further, we follow the 1-IAC error procedure, which produces consistent and robust standard errors even were there are both serial correlation and heteroskedasticity in the data.

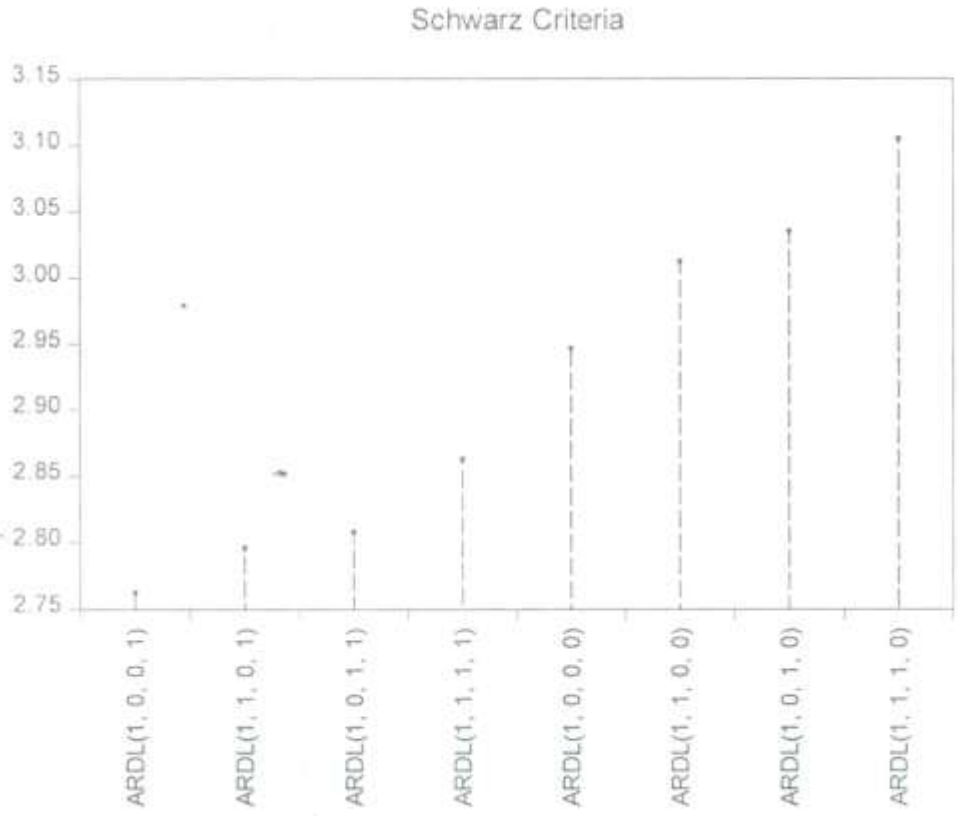

Figure 2: SIC Model Selection Criterion

Table 3: Estimated Model Results

Variable	Coefficient	P-value
Intercept	-0.9957	0.3324
LGDP(-1)	0.9178	0.0000
LDF	-0.0016	0.9822
LMS	0.1279	0.2540
LINTR	-23949	0.1669
LINTR (1)	1.9625	0.1298
CointEq(-1)	-0.0821	0.0041
R-Squared	0.9417	
Adjusted R-s	0.9332	
F-statistic	109.96	0.0000
Durbin-Watson	2.2001	

From table 3, the adjusted R-squared of 0.9332 shows that the estimated GDP model is highly fitted. while the F-statistic (p-value = 0.0000) indicates that the dynamic relationship between deficit financing, money supply, and interest rate is highly statistically significant. The Durbin Watson statistic (DW = 2.2001) is greater than 2, indicating that negative autocorrelation is most likely present in the model residuals. However, this specification bias would not adversely affect our empirical results since the estimation is based on robust standard errors suggested by Newey and West (1987).

Our results also indicate that GDP is positively and highly significantly related to its own one period lagged value. The coefficient on LGDP (-1) has an estimated value of 0.978 with a pvalue of 0.0000, showing that a 1% increase in GDP in the current period would lead to about 0.92% increase in the next period G[)P, other explaining factors remaining constant. This implies that economic growth is persistent and can be predicted from its own immediate history.

Further, the results show that the relationship between deficit financing, money supply, interest rate and GDP has a significant long-run dimension, with the error correction term (CointEq: beta =-0.0821,.p-value = 0.0020) having the expected negative sign, which is what one would expect if GDP had a stable long-run path with deficit financing, money supply, and interest rate. This negative sign, therefore, shows that it takes GDP about O.O8years to its long-run equilibrium path with deficit financing, money supply, and interest rate after moving away from it due to short-run disruptions.

Deficit Financing and Economic Growth

Our results show the relationship between deficit financing and economic growth has no dynamic effect. The eoefficientson LDF is estimated at-0.0016, with a probability value of 0.9822, indicating that deficit financing has a negative but not significant contemporaneous effect on gross domestic product. The estimated coefficient implies that ceteris par/bus, an increase in deficit financing would have almost zero effect on gross domestic product. Hence, our result contradicts the fiscal policy argument that fiscal variables such as taxation, government spending and budget deficit can effectively be used to achieve higher growth rate. Hence, an expansionary fiscal policy increases deficit financing would not have any material effect on the Nigerian economy.

Money Supply and Economic Growth

Our results show the relationship between money supply and economic growth has no dynamic effect. The coefficients on LP.4S is estimated at 0.1279, with a probability value of 0.2540, indicating that money supply has a positive but statistically insignificant contemporaneous effect on gross domestic product. The estimated coefficient implies that celeria paribus, gross domestic product would concurrently increase by only approximately 0.13% following a 1% increase in money supply. Although, the positive sign of the estimated money supply coefficient is consistent with monetary policy theory, the small size of this coefficient as well as its lack of significant shows that increasing money supply would not significantly affect economic growth.

Interest rate and Economic Growth

Our results show that the relationship between interest rate and economic growth has a dynamic effect. The coefficients of -2.3949 and 1.9625 show that the effect of interest rate on gross domestic product extends into the next period. These coefficients imply that holding other factors constant, if there is a 1% increase in

interest rate, GDI would concurrently decrease by approximately 2.39% but would increase by approximately 1.96% one year after so that the net effect is -0.4324. Although, the negative net effect is consistent with monetary policy argument that higher interest rate leads to lower economic growth, the p-values of 0.1669 and 0.1298 however, show that both the contemporaneous and lagged effects of interest rate on GDP are not statistically significant. Hence, our results do not support the argument that expansionary monetary policy through reduction in interest rate would lead to higher economic growth.

CONCLUDING REMARKS

This study investigates the impact of deficit financing, money supply, and interest rate on economic growth in Nigeria using the ARDL model. The analysis was based on time series data collected at yearly frequency from 1981 to 2019. Our results, which is based on a model that controls for both serial correlation and heteroskedasticity problems, do not provide supportive empirical evidence that both monetary and fiscal policies can be effectively used as an instrument for achieving higher growth.

RECOMMENDATIONS

The study therefore recommends that an effective approach should be applied on issues affecting deficit financing and also determine ways or steps that could be applied in reducing deficit financing due to its impact on the economy. The study also recommends that the monetary authority and relevant agencies should be concerned with projects that are ranked based on their relevance within the periods of execution.

REFERENCES

Akinnulegun, S.O. (2014) Deficit financing and economic growth in Nigeria: preliminary investigation. Department of banking and finance. Adekunle Ajasin University Ondo State.

Ali, S.A. (2014) The impact of public expenditures on economic growth in Jordan, International journal of Economic and finance 6(10).

Antonio, A and Yastir, I. (2019) Macro economic effects of public debt: An empirical analysis of Mozambique. Applied economics 52(2).

Anyanwu, J. (2014) Nigerian Public Finance, Onitsha Joanee Educational Publishers.

Ayuba, I.K. and Khan, S.M. (2019) Domestic debt and economic growth in Nigeria: ARDL Bounds test approach. Economic and Business 33(1).

Bakare, A. O., Adesanya, A.O. (Ond Bolariniwa, S.A. (2014). An empirical investigation between budget deficit, inflation and money supply in Nigeria. European Journal of Business and Social Sciences 2(12).

Bvender, A. and Dvazen, A. (2018) How do budgets deficits and economic growth affect re-election process? Evidence from a large panel of countries American economic review 98(2).

CBN, (2013) Statistical bulletin vol. 24.

Ekpo, A.H. and Umoh, O.J. (2018) An overview of Nigerian economic growth retrieved July 3 (2021).

Festus, G.E. and Sabin, M.O. (2019) Effect of external debt on Nigerian Economy, further evidence.

Iya, I.B., Anunu, U and Gadbo, U (2014) An empirical analysis of the effects of fiscal deficit on economic growth in Nigeria. International journal of Emerging technology and Advanced Engineering 4(1).

Nwanna, I.O. and Umeh, G.N. (2019) Deficit financing and Economic growth. The Nigerian experience International Journal of economics and financial management. 4(1).

Omodero, C.O. (2019) Effect of money supply on economic growth. A comparative study of Nigeria and Ghana. International Journal of social sciences studies 7.

Onoh, (2002) Dynamics of Money and Finance in Nigeria, Aba, Astra publishers.

Onwioduokit, E.A. and Inam, U.S. (2018) Budget deficit and economic growth in Nigeria: An empirical Investigation. American Journal of social sciences and Humanitarian Research 2(6).