© *Pakistan Journal of Economic Studies*
https://journals.iub.edu.pk/index.php/pjes/
(2018) 1:1, 79-93

Fiscal Financing and Money Supply in Nigeria: An Empirical Analysis

Abdurrauf Babalola[1,2], Saidat. O. Onikosi-Alliyu and Rafiu[1]. A. Mustapha[1]

Abstract

The study investigated the impact of fiscal financing on money supply in Nigeria. ARDL is employed for empirical analysis. The descriptive statistics indicated that all variables were normally distributed except foreign borrowing. The correlation matrix showed that all variables have an average positive relationship except for the relationship between money supply and domestic borrowing which indicated a very high association. From the ARDL analysis, the finding revealed that, in the short run, foreign borrowing had a negative and significant impact on money supply at instant and one-lag periods. Also, in the short run, at the impulse period, domestic borrowing had a negative and significant impact. However, in the one-lag period, domestic borrowing indicated a positive and strongly significant impact on the money supply. The adjustment path of the money supply using the model was quite insignificantly weak. In the long run, both foreign and domestic borrowing had a positive and significant impact on the money supply in the Nigerian economy. Finally, the result revealed that domestic borrowing had more and symbolic impact on money supply than foreign borrowing. The study, therefore, suggests that the government could make use of borrowing from the foreign source than domestic, as more foreign borrowing will reduce the money supply in the short run. In line with this, the government could choose either of the two sources of financing, as that will depend on the monetary policy target.

Keywords: Fiscal policy, Fiscal financing, Money supply, ARDL, Nigeria
JEL Classification: E42, E51, E62, G18

[1] Department of Economics, Faculty of Management Sciences, Al-Hikmah University, Ilorin, Nigeria.
[2] Email: abdclement@yahoo.com (Corresponding Author)

1. Introduction

The money supply is the volume of money in circulation. It includes the currency in circulation plus demand and time deposit. In other words, it can be said to be the total currency in circulation plus commercial bank reserves. The Keynesians defined money supply as currency with the public and demand deposit with commercial banks. Demand deposits are savings and current accounts of depositors with commercial banks (Jhingan, 1997). Another definition is traceable to the modern quantity of money theory led by Friedman. He defined money supply at any moment as the number of money people possess in their pockets, the amount of demand deposits in their banks, as well as time deposit (Jhingan, 1997). It can also be defined as the aggregate money in circulation plus demand deposits and time deposits with banks plus deposit with non-bank financial institutions.

The Nigerian economy has been facing serious excess spending over and above its revenue for the past decades, in the history of the country. It has experienced a balanced budget between 1995 and 1997 but ever experienced surplus budget in 1996. The budget deficit has always been financed through either borrowing from internal source or from the foreign source. It could also be done through money financing – seignior-age. Whatever may be the source of finance for budget, it has its economic implication on the economy of the country. The concern of this paper divulges the influence fiscal financing has on the stock of money which is expected to be exogenously determined by the monetary authority.

Actions of the government's fiscal policy would have long lasting effect on the stock of money which could, at the end, have impact on monetary policy rate and general price level. The main way the Nigerian government finances its deficit is through borrowing – foreign or local. When the government finances deficit through money financing, money stock increases dearly except for the reason reasons given by Keynes (1936) that when money supply is increased during depression, price level is not likely to rise, and the effect of this increase is to raise output or income in the system. Therefore, during depression, government budget deficit could be financed by printing more currency (seignior-age). If otherwise, like when the economy is at full employment, such seignior-age will lead to what some economists called inflation tax.

The government can finance budget deficit by increasing tax – tax financing. This also has a serious implication on the economy as it

will reduce their consumption level. Summing them up, aggregate demand will reduce, investment will be discouraged and hence unemployment menace could erupt. Financing budget deficit through borrowing from the sources the Nigerian economy explores and its implication on the money stock, interest rate and inflation are yet to be unveiled. In the recent past, the government has been managing deficit with the major aim of inducing and developing the economy, but the implication of this action, vis-a-vis how it conflicts with other macroeconomic objectives like inflation through money supply, is yet to be looked into.

Supply of money can be increased or reduced depending on the economic policy that the monetary authority intends to pursue. The stock of money in Nigeria has been on the increasing trend. The increasing trend of the stock of money in Nigeria cannot be without its attendant economic issues such as inflation and interest rates. M1 increased from N31.4 billion in 1981 to N3100.6 billion in 2001, and further increased to N39661.0 billion in 2017. Also, from the figure, M2 increases from N55.32 billion in 1981 to N5180.7 billion in 2001, and further increase to N88154.0 billion in 2017. It can be stated that if there is upward movement of money supply without corresponding increase in output, inflation arises. Therefore, it is not out of place if research effort is devoted to finding out the determinants of money supply in Nigeria (Central Bank of Nigeria (CBN), 2018).

Therefore, this study intends to find out the determinants of money stock in Nigeria, it now considered fiscal deficit as a determinant of money supply. So, the study specifically investigated the effect of fiscal financing on money stock.

2. Review of Literature

2.1 Theoretical Review

There are two theories of the determinants of money supply. One is that, money supply is exogenously determined by the apex bank or the highest monetary authority while second theory states that the money supply is endogenously determined by changes in the economic activities. This influences the desire to demand for cash compared to deposits, the rate of interest etc. (Jhingan, 1997). The classical economists are silent about the topic on fiscal deficit as it affects macroeconomic variables since they believe the government should not intervene in the operations of the economy – laissez faire. In this regard, three major theories explain this transmission mechanism.

The Keynesians hypothesized that increase in fiscal deficit, which could be financed through different sources such as borrowing, seignior-age or increase in tax levy, would have positive impact on macroeconomic variables through increase in aggregate demand which will increase price level, investment, employment and money supply. However, the Mundell-Fleming believed that fiscal deficit will increase pressure on interest rate which will make the cost of investing to go high. Nevertheless, it will increase capital inflow and improve the currency worth of the economy. (Bhaduri, 2002). The Neo-classicals are consistent in that budget deficit will have adverse effect on macroeconomic variables through increase in interest rate.

2.2 Empirical Review

Ackay, Alper and Ozmucur (1996) studied the long-run and short-run relationship among budget deficit, inflation and money supply in Turkey. They based their study on annual data for the period 1948-1994 and quarterly data for 1987:01-1995. The annual variables employed include ratio of budget deficit to Gross National Product (GNP) and GNP deflator-based inflation. The study applied Vector Autoregression (VAR) and Vector Error Correction (VEC) as estimation technique and the result reveals that from Impulse Response Function, the effect of shocks to budget deficit to Gross National Production percentage of currency in circulation and inflation rate are not significant.

In a related study by Sajid and Riaz (2000) on the causality among money supply, inflation and budget deficit in Pakistan, using annual times series data from 1971 to 2003 which was interpolated into quarterly series by the method given in Khan and Raza (1989). To avoid the fluctuation in the data, natural log of money supply, inflation and budget deficit was used in the research. The results from vector error correction model (VECM) reveal that budget deficit has impact on the two measures of money supply (M1, M2).

Petraq (2012) examined the effect of the budget deficit on the currency and inflation in Romania, Bulgaria and Albania, based on quarterly data. The sample period was June 1993-March 1998 for Albania, June 1991-December 1997 for Bulgaria and June 1993-March 1997 for Romania. Deficit budget, which was measured as budget deficit to gross domestic product at current prices was used as an exogenous variable. Real gross domestic product growth rate and the lag value of nominal money supply growth rate are used as control variables. The study employed various test to check for time series

property of the data. It used OLS method to analyse the impact of budget deficit on supply of money for the three countries. The regression results reveal that deficit budget has significant impact on money supply in the three countries. However, the study did not reveal clearly the unit of measurement of the variables and it fails to state categorically the econometrics technique employed in the study.

Hoang (2014) studied the effect of budget deficit on the growth of money and inflation in Vietnam. The study applied VAR econometric technique in analysing the impact of five variables, namely: inflation, interest rate money growth, budget deficit growth, and real GDP growth. Monthly data were used in the study from January 1995 to December 2012. But interpolation was used for budget deficit and GDP growth rate to derive their monthly series. The study revealed that a positive shock to budget deficit growth has no effect on money growth. This implies that budget deficit is not likely to be financed through money creation. Variance decomposition test in the study also showed that the effect of budget deficit growth in explaining money growth variations is fairly limited.

Chimobi and Igwe (2010), examined the connection among budget deficit, money supply and inflation in Nigeria using cointegration and vector error correction model as tools of analysis. It was evident in their result that, 1 per cent increase in fiscal deficit led to about 0.9 per cent increase in growth of money supply. This implies that fiscal deficit has significant positive impact on growth of money supply.

Odeleye (2013) employed ARDL to investigate the nexus among inflation, budget deficit, money supply and interest rate in Nigeria, using data from 1980 to 2010. Her findings indicated a negative relationship between money supply and budget deficit among other variables.

Raji, Jusoh and Jantan (2014) used multivariate granger causality test to study real money supply relationship with fiscal deficit among other variables in the Nigerian economy between 197 and 2010. Their finding divulged that in the short run, the causality was unidirectional from real money supply to fiscal deficit.

Umeora and Ikeora (2016) examined the effect of fiscal policy on money supply in Nigeria, engaging ECM and granger causality on data between 1970 and 2014. They made money supply as the

regressand and fiscal deficit as regressor. Their finding indicated that fiscal deficit has negative and significant effect on money supply

Adeneye and Isa (2016) investigated the impact of budget deficit on Nigerian economic growth. Picking annual time series data from 1983 to 2014 and employing OLS and cointegration tools for analysis, they discovered that, there is long run association between budget deficit and general price level, and also between money supply and inflation. Ibrahim (2017) scrutinized budget deficit and money demand nexus in the Nigerian economy, if it is a myth or reality. The study made use of cointegration and ECM methods to divulge the short and long run impact periods. His finding showed a strong and consistent long run connection.

Other researchers on similar studies relating budget deficit/fiscal deficit to demand for money and/or supply of money are: Yellen (1989); Vamvoukas (1998); Reinhart & Sack (2000); Khan & Khattak (2008); Vamvoukas & Gargalas (2008); Khrawish, Khasawneh & Khrisat (2012); Li (2013) ; Aamir, Yasir, Ullah & Ahmad (2014) and Bakare, Adesany & Bolarinwa (2016).

Most similar studies are those of Bwire and Nampewo (2014) and Gali (2016). Bwire and Nampewo (2014) titled their work as, fiscal deficit financing on monetary policy in Uganda, but the body of their study was really budget deficit, money creation and inflation which is quite different from this our study. Gali (2016) studied the effect of seignorage on macroeconomic variable, which is a departure from our study also.

Therefore, of all these researchers and many others, none of them, to the best of our knowledge, has made any findings about the impact of fiscal financing through foreign and domestic sources on money supply in Nigeria, and this is actually the gap in literature that this study intends to fill.

3. Model, Data and Methodology

The paper investigates the impact of fiscal financing which is represented with the two main ways the Nigerian government finances its deficit, foreign borrowing (FB) and domestic borrowing. (DB), on money supply represented by the broad money supply (MS). The study adapts the model of Umeora and Ikeora (2016) who also adapted the model of Chaudhary and Ahmad (1995) as

$$MS = f(FB, DB)$$

$$MS = \alpha 0 + \alpha 1FB + \alpha 2DB + u_t$$

To partially remove trend from the variables and also get the responses of money supply (MS) to changes in foreign borrowing and domestic borrowing, we took the logarithm of equation 2 to give

$$\log MS = \alpha 0 + \alpha 1 \log FB + \alpha 2 \log DB + u_t$$

where
logMS = log of broad money supply
logFB = log of foreign borrowing outside Nigerian economy
logDB = log of domestic borrowing within the Nigerian economy
u_t = the stochastic disturbance term

The study used descriptive statistics to explain the individual variables for normality diagnosis; correlation matrix to showcase relationship of variables; and Autoregressive Distributive Lag (ARDL) through which short run, long run and ECM were analyzed. The study did not test for unit root because ARDL models do not require it and automatically get first difference when analyzing the short run and ECM.

4. Results and Discussions

Now we do the preliminary analysis of data along with an explanation of the econometric results. The descriptive statistics results of this analysis are depicted the following sections.

4.1 Descriptive Statistics

Table 1 displays the descriptive statistics of the three variables. LMS has the highest mean of 4.023, followed by LDB with 1.670. The standard deviation shows that LMS has the lowest deviation followed by LDB. From the measurement using the Kurtosis criteria, LMS is somehow mesokurtic with value 2.51 and LDB is a little out of mesokurtic environment as its value averaged 3.59. LFB is out rightly leptokurtic with value more than 4.5.

Table 1
Descriptive Statistics

Statistics	LMS	LFB	LDB
Mean	4.022964	-0.193228	1.669694
Median	3.289444	0.012644	1.621175
Maximum	10.09165	6.582025	7.347235
Minimum	-0.020917	-11.33897	-8.111728
Std. Dev.	2.919353	3.572298	3.402185
Skewness	0.607134	-0.898953	-0.404052
Kurtosis	2.508018	4.707523	3.593509
Jarque-Bera	2.145616	7.685124	1.256605
Probability	0.342047	0.021439	0.533497
Sum	120.6889	-5.796831	50.09082
Sum Sq. Dev.	247.1560	370.0781	335.6710
Observations	30	30	30

Source: Author's computation from E-views

Hence, it could be inferred that LMS and LDB are somehow normally distributed. In the same vein, the Jarque-Bera statistics shows that LMS (2.146) and LDB (1.257) are normally distributed as indicated by their respective probabilities (0.343 and 0.533) which accept the null hypothesis of normal distribution. However, the value of LFB (7.685) seems not to be normally distributed as its probability (0.02) shows that the null hypothesis be rejected.

4.2 Correlation Analysis Model Selection Order

Table 2 showcases the pair-wise correlation matrix for the three variables. From the Table, it is evident that there exist 61.4% positive correlation between LMs and LFB, a little above average. On the other hand, 90.7% association exists between LMS and LDB, implying that they both have a very strong positive connection.

Table 2
Pair-wise Correlation Matrix

	LMS	LFB	LDB
LMS	1.000	0.614	0.907
LFB	0.614	1.000	0.572
LDB	0.907	0.572	1.000

Source: Author's computation from E-views

However, since correlation does not mean causality, the study carried out further analysis, employing the ARDL model. Prior to this,

model selection order was carried out using the Akaike information criteria (AICI). The result is presented on Table 3.

Table 3
Model Order Selection Criteria

Model	LogL	AIC*	BIC	HQ	Adj. R-sq	Specification
10	21.9821	-1.6449	-1.2529	-1.6059	0.9985	ARDL(1,2,2)
1	22.673866	-1.608690	-1.167577	-1.564843	0.998449	ARDL(2,2,2)
3	18.841575	-1.393126	-1.050039	-1.359023	0.998052	ARDL(2,2, 0)
2	18.935662	-1.286549	-0.894448	-1.247573	0.997860	ARDL(2,2,1)
11	17.594062	-1.246360	-0.903272	-1.212257	0.997744	ARDL(1,2,1)
12	16.475489	-1.232410	-0.938335	-1.203179	0.997661	ARDL(1,2,0)
18	10.934823	-0.815862	-0.619811	-0.796374	0.996202	ARDL(1,0,0)
9	11.463810	-0.760448	-0.515386	-0.736089	0.996134	ARDL(2,0,0)
15	11.392545	-0.752064	-0.507001	-0.727704	0.996101	ARDL(1,1,0)
17	11.113460	-0.719231	-0.474168	-0.694871	0.995971	ARDL(1,0,1)
14	11.830231	-0.685910	-0.391834	-0.656678	0.995960	ARDL(1,1,1)
6	11.787529	-0.680886	-0.386810	-0.651654	0.995940	ARDL(2,1,0)
8	11.472946	-0.643876	-0.349801	-0.614644	0.995787	ARDL(2,0,1)
16	11.159344	-0.606982	-0.312906	-0.577750	0.995628	ARDL(1,0,2)
13	11.990438	-0.587110	-0.244022	-0.553007	0.995639	ARDL(1,1,2)
5	11.932177	-0.580256	-0.237168	-0.546153	0.995609	ARDL(2,1,1)
7	11.523905	-0.532224	-0.189136	-0.498120	0.995393	ARDL(2,0,2)
4	12.029873	-0.474103	-0.082002	-0.435127	0.995177	ARDL(2,1,2)

Source: Author's computation from E-views

Among the 18 models tested, model 10 happens to be the best-ARDL (1, 2, 2). As such, it was made use of in all through our analysis.

4.3 Result of ARDL (1, 2, 2) Model

Table 4 showcases the analysis of ARDL (1, 2, 2) with LMS (money supply) as the dependent variable. From the Table, the response of LMs to changes in LDB is negative at instant period and 2-lag period and its responses are significant as their standard errors (0.029 and 0.016) and t-statistics (-2.178 and -4.490) indicate. However, in the 1-lag period, the response of LMS to changes in LDB is positive and significant at a 5% level as seen by its probability (0.0301). This result implies that increase in government financing of fiscal deficit through domestic borrowing (LDB) will harm money supply at the instantaneous year and 2-lag year since money supply will

converge in the hand of the government and people will not have money in their hand and circulation as they have bought government bond and securities in the financial market. So at these periods, an increase in government domestic borrowing will reduce the money stock measured by broad money supply.

Table 4
Result of ARDL (1, 2, 2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LMS(-1)	1.129648	0.070182	16.09587	0.0000
LDB	-0.062944	0.028909	-2.177337	0.0574
LDB(-1)	0.048662	0.018920	2.571974	0.0301
LDB(-2)	-0.071802	0.015993	-4.489735	0.0015
LFB	-0.022903	0.007237	-3.164712	0.0115
LFB(-1)	-0.116912	0.052505	-2.226683	0.0530
LFB(-2)	0.063314	0.025674	2.466073	0.0358
C	-0.182346	0.226632	-0.804590	0.4418
R^2	0.999159			
R^2-Adjusted	0.9985			
F-Statistics	1527.039			
Prob(F-Stat)	0.0000			
Durbin-Watson stat.	2.2169			

Source: Author's computation from E-views.

However, after the present year of the policy, in the following year, the implication is that the government domestic loan will bring about a direct impact on money supply since the money borrowed by the government through the financial market is in short term, monies of domestic investors would have been ripe for return, thereby increasing the money supply after their monies are returned with interest on it. This was what the former CBN governor was saying about the issue of mopping money by the apex bank, that initially, it may reduce the quantity of money in circulation but after a while, it increases the money stock, when investors get back their money. This result is in line with the finding of Sajid and Riaz (2000) but contrary to that of Hoang (2014) in Vietnam.

The coefficients of LFB on Tables 4 and 5 show that LFB harms LMS in both instant period and 1-lag periods (-0.023 and -0.117) and their impacts are significant at 5% level as their standard errors (0.007 and 0.053), t-statistics (-3.165 and -2.227) and probabilities (0.012 and 0.053) indicate. However, at a 2-lag period, the impact of

LFB is positive/direct as the coefficient (0.063) shows and the impact is significant at 5% level – probability (0.036). This result implies that, when a government borrows from foreigners, it will reduce the money stock of the Nigerian economy conceiving the fact that internationally borrowed monies are not given in cash but in goods needed by the receiving country to fix what it is needed for. Also, the receiving country experiences an opportunity cost of not spending any amount on those goods supplied by the international creditors. Hence, the government will not spend any money on the goods imported which would have increased the quantity of money stock, therefore, reducing the money supply of the debtor country, Nigeria.

The R2 and R2- adjusted may not be needed in the policy implication as the point of interest is the coefficients of the explanatory variables. However, the coefficient of determination (R2) shows that about 99.92% of the variation in LMS is explained by the explanatory variables in the model. The F-statistics (1527.039) is quite large implying a good fit with very high significance at a 1% level, as shown by its probability (0.0000). The Durbin-Watson statistics (2.22) are averages at 2 meaning that autocorrelation/serial correlation is absent.

4.4 Result of Short-run Analysis

Table 5
Short-run and ECM Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LDB)	-0.062944	0.028909	-2.177337	0.0574
D(LDB (-1))	0.071802	0.015993	4.489735	0.0015
D(LFB)	-0.022903	0.007237	-3.164712	0.0115
D(LFB(-1))	-0.063314	0.025674	-2.466073	0.0358
ECM	0.129648	0.070182	1.847295	0.0978

Source: Author's computation from E-views

More so, from the result on Table 5 which also represents the short-run impact of fiscal financing on money supply, summarily indicates that LDB has a significant negative impact on money supply in the impulse period but a positive and significant impact at one-lag period. Thus, 1% increase in domestic borrowing (LDB) on the average, leads to about 6.3% reduction in money supply (LMS) but a year after the domestic borrowing, a 1% increase in domestic borrowing, ceteris paribus, will lead to 7.2% increase in the money supply. These impacts are significant at 5% and 1% levels, as earlier explained. Also, the short-run result in Table 5 shows a constant,

negative and significant impact of foreign borrowing on money supply in Nigeria. In both instant and one-lag periods, a 1% increase in foreign borrowing, on the average, leads to 2.29% and 6.33% decrease in the money supply (LMS). The result of the ECM (0.1296) shows a weak adjustment path of the model – about 12.96%, with an unusual positive sign and only significant at the 10% level.

4.5 Long Run Analysis

Table 6 presents the long-run impact analysis of fiscal financing on money stock. From the Table, in the long run, LDB (0.664) and LFB (0.59) both have a positive and significant impact on LMS. As such, a 1% rise in LDB and LFB, ceteris paribus, leads to a 6.64% and 5.9% increase in LMS. The three significant test statistics of standard error (0.206 and 0.218), t-statistics (3.219 and 2.703) and probability (0.011 and 0.024) indicate that they are both significant at 1% and 5% levels. Implicatively, in the long run, government borrowing from domestic and foreign sources will have a direct impact on money supply in the country using broad money as a measure of the money stock. In essence, it is evident in the long-run result of Table 6 that, the implication of domestic borrowing is more serious and more significant, indicative, symbolic and weightier in impacting money supply than foreign borrowing.

Table 6
Long-run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LDB	0.663987	0.206296	3.218605	0.0105
LFB	0.590064	0.218299	2.703002	0.0243
C	1.406470	1.001325	1.404608	0.1937

Source: Author's extract from E-views.

5. Conclusion and Policy Recommendations

The study investigated the impact of fiscal financing on money supply in Nigeria. Fiscal financing which represented the two main sources through which the government borrows to fund its fiscal deficits were foreign and domestic borrowing. Data between 1970 and 2017 was sourced from the CBN statistical bulletin. Money supply (M2) was made the dependent variable while foreign and domestic borrowing as explanatory variables. Descriptive statistics, pair-wise correlation matrix, ARDL, and ECM were employed to analyze the data set. The descriptive statistics indicated that all variables were normally distributed except foreign borrowing. The correlation matrix showed that all variables have an average positive relationship except

for the relationship between money supply and domestic borrowing which indicated a very high association.

From the ARDL analysis, the finding revealed that, in the short run, foreign borrowing had a negative and significant impact on money supply at instant and one-lag periods. Also, in the short run, at the impulse period, domestic borrowing had a negative and significant impact. However, in the one-lag period, domestic borrowing indicated a positive and strongly significant impact on the money supply. The adjustment path of the money supply using the model was quite insignificantly weak. In the long run, both foreign and domestic borrowing had a positive and significant impact on the money supply in the Nigerian economy. Finally, the result revealed that domestic borrowing had more and symbolic impact on money supply than foreign borrowing.

The study, therefore, suggests that the government could make use of borrowing from the foreign source than domestic, as more foreign borrowing will reduce the money supply in the short run. In line with this, the government could choose either of the two sources of financing, as that will depend on the monetary policy target.

References

Aamir, S., Yasir, M., Ullah, M. & Ahmad, S. (2014). The Relationship and Impact of Money Growth and Budget Deficit on Inflation in Pakistan. *Journal of Transactions on Education and Social Sciences, 5*(2), 29-36.

Adeneye O. A. & Isa A. A. (2016). The Impact of Budget Deficit on the Nigerian Economic Growth. *Journal of Economics and Sustainable Development*, *7*(14), 1-11.

Akcay, O. C., Alper, C. E., & Ozmucur, S. (1996). Budget deficit, money supply and inflation: Evidence from low and high frequency data for Turkey. *Bogazici University Research Papers, 12.*

Bakare, I. A. O., Adesanya, O. A., & Bolarinwa, S. A. (2014). Empirical Investigation between Budget Deficits, Inflation and Money Supply in Nigeria. *European Journal of Business and Social Sciences, 2*(12), 120-134.

Bwire,T. & Nampewo, D. (2014). Fiscal Deficit Financing: Implication for Monetary Policy Formulation in Uganda. *Journal of Applied Finance & Banking, 4*(2), 125-138.

Chimobi, O. P., & Igwe, O. L. (2010). Budget deficit, money supply and inflation in Nigeria. *European Journal of Economics, Finance and Administrative Sciences, 19*(5), 52-60.

Chaudhary, M. A. & Ahmad, N. (1995). Money Supply, Deficit and Inflation in Pakistan. *The Pakistan Development Review, 34*(4 Part III), 945-956.

Galí, J. (2016). Thinking the unthinkable: The effects of a money-financed fiscal stimulus. *VoxEU blog, accessed*, 27-07

Ibrahim, T. (2017). Budget Deficit-Money Demand Nexus in Nigeria: A myth or reality? MPRA Paper 86265, *University Library of Munich, Germany*, revised 09 Nov 2017. <https://ideas.repec.org/p/pra/mprapa/86265.html>

Jhingan, M. (2004). Macroeconomic Theory. Mayur Vihar.

Keynes, J. M. (2018). *The general theory of employment, interest, and money.* Springer.

Khieu, H. (2014). Budget deficit, money growth and inflation: Empirical evidence from Vietnam. *MPRA Paper,* 54488.

Khan, Q. A & Khattak, R. N. (2008). An analysis of Short-term Effects of Budget Deficits on Macroeconomic Variables: Evidence from Pakistan (1960-2005). *Sarhad Journal of Agriculture, 24*(2), 1-14.

Khrawish, H. A., Khasawneh, A. Y., & Khrisat, F. A. (2012). The impact of budget deficits on money demand in Jordan: co-integration and vector error correction analysis. *Investment Management and Financial Innovations, 9*(2), 101-108.

Li, M. (2013). Government Debt and Demand for Money: A Cointegration Approach. *World Review of Business Research, 3*(1), 52 – 58.

Milo, P. (2012). The Impact of the Budget Deficit on the Currency and Inflation in the Transition Economies. *Journal of Central Banking Theory and Practice, 1*(1), 25-57.

Odeleye, A. T. (2013). Inflation, Budget Deficit and Money Supply in Nigeria: A New Outlook. *Babcock Journal of Economics, Banking and Finance, 2*, 14-28.

Umeora, C. E. & Ikeora, E. J. (2016). Effect of Government Fiscal Deficit on Money in Nigeria: 1970-2014. *International Journal for Research in Business, Management and Accounting, 2*(6), 57-67.

Sajid, G. M., & Bushra, R. I. A. Z. (2002). Budget deficit, money supply and inflation: Testing for causality. *Pakistan Journal of Applied Economics, 18,* 65-84.

Reinhart, V., Sack, B., & Heaton, J. (2000). The economic consequences of disappearing government debt. *Brookings Papers on Economic Activity, 2000*(2), 163-220.

Raji, J. O., Jusoh, J. & Jantan, M. (2014). Real Money Supply, Price and Fiscal Deficit in Nigeria. Evidence from Multivariate Granger Causality Tests. *Journal of Economic Cooperation and Development, 35*(4), 85-112.

Yellen, J. (1989). Symposium on the Budget Deficit. *Journal of Economics Perspectives, 3*(20) 17-21.

Vamvoukas, G. A. (1998). The Relationship between Budget Deficits and Money Demand: Evidence from a Small Economy. *Applied Economics, 30*(3), 375-382.

Vamvoukas, G. A., & Gargalas, V. N. (2008). Testing Keynesian Proposition and Ricardian Equivalence: More Evidence on the debate. *Journal of Business & Economics Research, 6*(5)67-76.