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The Relative Impact of Money Supply and Government Expenditure on Economic Growth in Nigeria

Peter Siyan[1] --- Adewale Emmanuel Adegoriola[2*]

[1,2]Department of Economics, University of Abuja, Nigeria

Abstract

This study investigates the relative impact of money supply and government expenditure on economic growth in Nigeria. In order to achieve the objectives, we proposed and specified models with parameters, which were estimated and used to test the hypothesis on relative impact of money supply vis-à-vis government expenditure. The Beta Coefficients techniques and Two Stage Least Square were employed to analyze the data. The empirical result showed that the government expenditure is relatively more effective compared with money supply on economic activities. Government expenditure as a fiscal policy instrument is greater, more reliable (predictable) and faster than the use of money supply as a monetary policy instrument in stabilizing the economy. Since both government expenditure and money supply are policy instruments use to stabilize the economy, government should rely more on government expenditure than money supply. However, the combination and harmonization of both money supply and government expenditure are highly recommended.

Keywords: Money supply, Government expenditure, Economic growth, Beta coefficient, Nigeria

Contents

** Corresponding Author*

1. Introduction

Macroeconomic policy management in Nigeria is dominated by monetary and fiscal policies. Other policies include income, prices, employment, trade, industrial etc. Money supply and government expenditure are two cardinal tools of monetary and fiscal policies respectively. Generally, both monetary and fiscal policies seek to achieve relative macroeconomic stability. The objectives of monetary and fiscal policies in Nigeria are wide-ranging. These include increase in gross domestic product (sustainable growth), reduction in the rate of inflation and unemployment, improvement in the balance of payment, accumulation of financial saving and external reserves as well as stability in exchange rate.

Sustainable economic growth and development is undoubtedly one of the most challenging development issues in third world countries today. Even from the days of father of Economics, (Adams, 1992) the main focus of macroeconomic thinkers and policy makers is how to attain macroeconomic stability. In Nigeria, especially before the introduction of Structural Adjustment Programme (SAP), there had been an undue emphasis on the use of fiscal policy at the expense of monetary policy which is frequently breached. It was in 1987, after SAP, that emphasis shifted to monetary policy following the deregulation of money market which prevents money becoming a major source of disturbance in the Nigeria economy. Today, fiscal and monetary policies are inextricably linked in macroeconomic management as development in one sector directly affects development in the other.

Moreover, there is consensus among economists that monetary and fiscal policies jointly and individually affect the level of economic activities. The degree and relative superiority of one instrument over the other in achieving macroeconomic objectives has been subject of debates and controversies among policy makers and economists; tentative resolutions are attempted empirically for different countries and different periods and circumstances. The debates have been mainly between the monetarists and Keynesians. The monetarists led by Milton Friedman believed that money supply exerts greater impact on economic activities while the Keynesians economics led by John Maynard Keynes believed that government expenditure rather than money supply exerts greater influence on economic activities (Adefeso and Mobolaji, 2010).

Money supply which affects output, income and prices as well as the balance of payments is therefore, the central piece of monetary tools and intermediate target of monetary policy. In theoretical terms, it is denoted as M_1 or M_2, narrow and broad definition of money respectively. Government expenditure is the main tool of fiscal policy. It can be financed from direct and indirect taxes, monetization of foreign exchange earnings, and domestic credit from the banking system including ways and means of advances by the central bank and borrowing from non-bank public. On the user's side, disbursement of these funds could be informed by current or capital expenditure which is broken down further into smaller subheads.

Since the late 1970s, fiscal policy has become a major instrument in Nigeria. The reason for this is the dominant role of the public sector in major economic activities in Nigeria. This can be traced to several factors among which is oil boom in early 1970s; the need for reconstruction after the civil war; the industrialization strategy adopted at the time (import substitution industrialization policy) and the militarization of governance. The other reason for the increasing dominance of fiscal policy in the management of the economy is the fall in the international price of oil in the late 1980s. Furthermore, the persistent fiscal deficit since the early 1970s and role of underwriting Central Bank of Nigeria (CBN) treasury securities to commercial agents as also influenced the dominance of fiscal actions. Government subsequently opted for discount houses which specialized agency focusing mainly on this function.

Another cause of the declining local capacity utilization has the fierce competition from foreign firms under the spirit of liberalization which is a cardinal principle of SAP. Poor physical and economic infrastructure, despite the huge oil revenue the country has earned thus far, has made it difficult for indigenous firms to complete globally. Most indigenous firms are required to make capital investments in basic infrastructure like roads, securities, water and electricity. The result of such huge outlay is that the indigenous firms are greatly disadvantaged when competing in global markets.

2. Empirical Literature

Several studies have examined the effectiveness that fiscal policy and monetary policy. The argument about fiscal policy can be dated back to Keynesian times, which predicts that expansionary fiscal policy (increasing government expenditure or decreasing tax) will increase disposable income, and raise the private consumption. However, investment will be partially crowded out because of the increase in interest rate. Most of the empirical studies support this idea. Blanchard and Perotti (2002); Fatas and Mihov (2001) confirm the positive effect of government expenditure and revenue on consumption and output.

However, many studies also show that fiscal policy can have Non-Keynesian effects. Government expenditure increase may lead to increase aggregate demand because government expenditure increase means tax cut, and people will expect increase in future income, thus, increase current consumption and aggregate demand. Giavazzi and Pagano (1990) provided empirical supports for this idea. According to the study of Denmark (1983-1986) and Ireland (1987-1989), they found that contractionary fiscal policy may have expansionary result.

Many empirical studies examined the arguments; however they do not reach consensus result. Hutchison *et al.* (2010) showed that tightening monetary policy will significantly cause the reduction of output, and monetary expansion has no discernable effect. Goderis and Ioannidou (2008) and Kraay (2003) took some other factors into account. They studied the relationship between interest rate and exchange rate during currency crisis, controlling for national fundamental factor, short term bond yields, balance sheet and so on. They found that the most important factor is short term bond yield. When the short term bond yield level of a country is low, increasing interest rate will help defense exchange rate, this effect will decrease with the increasing short term bond yield.

Keran (1970) cross-selected time series study based on data from seven developed countries outside USA. Keran found that money supply exert more influence on GDP than changes in government expenditure. Teigen (1973) applied the methodology to data from three Scandinavia countries, namely, Denmark, Finland and Norway to determine the relative effectiveness of money supply and government expenditure. In all the three countries studied,

it is observed that government expenditure dominates economic activities, even after transforming the data and used beta and elasticity coefficients. The results contradicted the earlier conclusions by Anderson and Jordan which was collaborated by that of Keran.

In Lybeck and Teigen (1975) used Swedish data, the Anderson and Jordan methodology, quarterly changes in normal GDP were regressed on quarterly changes in money supply and government expenditure. Unlike the earlier results from the data on Denmark, Finland and Norway by Teigen, the findings with Swedish data showed inconclusive evidence as to which of the two policy instruments had stronger influence on GDP. The inconclusive of the result was linked to conflicting on the exogenous variables and autocorrelation.

Friedman (1977) extended the original data of (1933-1968) used in the study of Anderson and Jordan (1968) to 1976, his empirical research found that government expenditure becomes significant. Though, Carlson (1978) was of the opinion that Friedman (1977) was suffering from the problem of heteroscedastcity and suggested that the regression should be estimated in percentage first difference form.

Batten and Hafer (1983) in an attempt to resolve the controversy on the impact of fiscal and monetary actions, they carried out empirical study outside United States on five developed countries namely: Japan, Canada, United kingdom, France and Germany using St. Lious equation and found that monetary policy exert greater impact on economic growth in these countries than the fiscal policy and equally that St. Louis can be applied to a variety of other countries. For example, the result of this study cannot be generalized for the developing countries since they have significantly different economic and political structures.

Darrat (1984) investigates the relative influence of fiscal and monetary actions with in a modified St. Louis single-equation in 5 Latin American countries. The annual time series data was taken during the time period from 1950 to 1981 of gross national product, money stock, government spending and exports are used. The results suggested that fiscal policy significantly lead monetary policy in explaining changes in nominal income.

Chowdhury (1986) in his study of monetary and fiscal impact on economic activity in Bangladesh, he also made use of the ordinary least square (OLS) technique in his empirical investigation. He adopted St. Louis equation in estimating the monetary and fiscal variables; he was also of the opinion that fiscal rather than monetary actions had greater influence on economic activities.

As Goldfajn and Gupta (1999) mentioned, when the economy encounters currency crisis together with banking crisis, the policy is not effective. Many banking crises, especially those in countries with fixed exchange rate turn out to be twin crises since currency depreciation exacerbating banking sector through foreign currency exposure of borrowers or banks. Kaminsky and Reinhart (1999) find that banking crises often precede balance-of-payment and the collapse of the currency deepens the banking crisis, activating a vicious spiral. Peso crisis in 1994 and Asian financial crisis are the examples of twin crisis.

Taylor (2000) suggested that this may be due to the Fed executing a more aggressive and successful monetary policy since the 1980s, which may reduce the need for fiscal policy. To be sure, the data used contained few experiences with discretionary fiscal policy explicitly aimed at stabilizing the macro economy. Consequently, the results are only suggestive and should not be interpreted as an outright dismissal of fiscal policy. Furthermore, they emphasized the other important goals of tax and expenditure policy, namely to improve general equity and efficiency in the economy. And it would be most fortunate if fiscal policy could achieve these primary goals while also serving to stimulate a weak economy as a side effect. In terms of quick, easy-to-implement policies aimed at taming macroeconomic fluctuations, though, it appears that monetary policy reigns supreme.

Snyder and Bruce (2005) used new evidence regarding the relative importance of monetary and fiscal policy for taming business cycles in the U.S. Using quarterly data from 1966 to 2000, estimated a series of error correction vector auto regressions to determine the predictive power of changes in tax rates, government spending, M_2, and FFR in explaining movements in consumption, investment and GDP. Forecast error variance decompositions and impulse response functions support the relative importance of monetary policy.

Ali *et al.* (2008) examined the effects of fiscal and monetary policies on economic growth by using annual time series data from 1990 to 2007 in case of South Asian countries. Autoregressive distributed lag (ARDL) model has been used. Results indicated that money supply has significant and positive effect on economic growth in both short run as well as in long run, while fiscal policy has insignificant effect on economic growth both in the short run and long run. They concluded that monetary policy is a more powerful tool than fiscal policy enhancing the economic growth in case of South Asian countries.

Yucel (2009) analysed the relationship among financial development, trade openness and economic growth in Turkish economy by using the monthly data from January 1989 to November 2007. The authors applied Johansen and Juselius technique to check the long run relationship between variables while employed Granger causality test to find the evidences of causality. The study found that trade openness is positively related with economic growth while financial development is negatively related with economic growth. Granger test found the evidences of bi-literal causality between financial development, trade openness and economic growth.

Mohammad *et al.* (2009) examined the long run relationship among M_2, inflation, government expenditure and economic growth in Pakistan by using annual time series data from 1977 to 2007. Co-integration results show that public expenditure and inflation has significant and negative effect while M_2 has significant and positive effect on economic growth in the long run.

Jawaid *et al.* (2010) investigated the comparative effect of fiscal and monetary policy on economic growth in Pakistan using annual time series data from 1981 to 2009. Co-integration test confirms positive long run relationship between monetary and fiscal policy with economic growth. However, monetary policy is found to be more effective than fiscal policy in enhancing the economic growth of Pakistan. They suggested that policy makers should focus more on monetary policy than fiscal policy to ensure economic growth however; the short run relationship should also have been checked.

Khosravi and Karimi (2010) investigated the relationship between monetary, fiscal policy and economic growth in Iran. The annual time series data was taken from 1960 to 2006. Gross domestic product, narrow money (M_1),

Government expenditures, exchange rates and consumer price index have been considered. Bound testing (ARDL) approach and co-integration were used. Results confirm that there exists co-integration relation between growth, monetary and fiscal policy. The results identify the effect of inflation and exchange rates on growth are negative, government expenditures have significant and positive effect on economic growth. It is suggested that the policy makers must have to diminish inflation rate and exchange rates to find the stability in the future.

Taban (2010) re-investigated the government spending-economic growth nexus for the Turkish economy using bounds testing approach and MWALD Granger causality test by using the quarterly data from 1987:Q1 to 2006:Q4. Results show that share of total government spending and the share of government investment to GDP have significant and negative effect on growth of real per capita in the long run. On the other hand, government consumption spending to GDP ratio has insignificant effect on per capita output growth. Results also show that there is bi-directional causality between government spending and economic growth, uni-directional relationship running from per capita output growth to government investment to GDP ratio.

Jie and Tang (2010) studied the effectiveness of fiscal and monetary policy responses to 72 episodes of twin crisis during 1977 to 2010. It found that monetary expansion measures contribute to reduce the output losses associated with twin crises. However, expansionary and contractionary policies have no discernable effects on twin crises, neither is contractionary monetary policy. Comparing with the policy effectiveness on single crisis, banking crisis and currency crisis separately, it was found only monetary expansion help reduce the output losses associated with banking crisis. Monetary policy has no discernable effect on currency crisis. And fiscal policy, expansionary or contractionary, has no effect on banking and currency crisis either.

Looking at specific studies on the relative effectiveness of both monetary and fiscal policy in Nigeria, for example, Ajayi (1974) maintained that much reliance have been placed on the use of fiscal policy rather than monetary policy. He used data from 1960-1970 in Nigeria. In his study, he estimated the variables of fiscal and monetary policies using Ordinary Least Square technique. His result was in line with that of Anderson and Jordan (1968) which revealed that monetary actions are much larger and more predicable than fiscal action. This result was confirmed with the use of beta coefficients that changes in monetary action were greater than that of fiscal action. In essence, greater reliance should be placed on monetary actions.

Ubogu (1985) used 15 African countries including Nigeria. In his study, three variables were involved: GDP was regressed on differences of money supply (M_1) and total government expenditure (G). Time series data spanning 17 years were obtained from them; first and second differences were calculated and applied to obtained regression estimates like in the early studies, beta coefficients of the monetary and fiscal instruments were computed for direct comparison of the impact coefficients. The result indicated non-existence of serial correlation in the data. Moreover, chow test confirms the structural stability of the model. On the basics of findings, Ubogu recommended the need for policy tool for purpose of selecting the correct stabilization instruments.

Olaloye and Ikhide (1995) in their study of the role of fiscal and monetary policies in a depressed economy, a case study of Nigeria estimated a slightly modified form of St. Louis equation. Data from 1986-1991 was employed, the analysis of their results showed that fiscal policy exerts more influence on the economy than monetary policy. The result, therefore, suggests that fiscal policy have been more effective in Nigeria at least in the period of depression. They are however, of the opinion that government expenditure will be an appropriate measure of fiscal policy.

Asogu (1998) adopted the modified version of the St. Louis equation as in Batten and Hafer (1983) and provided estimates based on first differences and percentages changes of the data. The results also include the respective t–ratios, beta elasticity coefficient to facilitate direct comparisons. The result of the estimate showed that coefficients of money supply were statistically significant while those of government expenditure were not significant. This agreed with the hypothesis that monetary actions are more potent than fiscal policy. However, coefficient of export is not significant and this confirmed earlier results by Ubogu (1985) such that exclusion of export variable in the earlier studies in Nigeria and that emphasis on fiscal action of the government has led to greater distortion in the economy. However, the study recommends that both policies should be complementary.

Ajisafe and Folorunso (2002) investigated the relative effectiveness of monetary and fiscal policy on economic growth in the context of Nigeria using annual time series data during the year 1970 to 1998. M_1 and M_2 were used as proxies of money supply and government revenue, government expenditure and budget deficit as the proxies of fiscal policy. Result indicated that monetary policy has significant effect on economic growth rather than fiscal policy. However, the study recommended that both policies should be complementary.

Adefeso and Mobolaji (2010) empirically examined the relative effectiveness of fiscal and monetary policy on economic growth in Nigeria. Annual time series data from 1970 – 2007 was employed. Error correction mechanism and co-integration technique was also used in the study. Gross domestic product, broad money, government expenditure and degree of openness have been used in the study. Results indicate that the effect of monetary policy on economic growth in Nigeria is much stronger than fiscal policy. They recommended that policy makers should emphasize on monetary policy for the purpose of economic stabilization in Nigeria.

Ogunmuyiwa and Ekone (2010) investigated the relationship between money supply and economic growth in Nigeria by using the data for the period 1980-2006. The study employed OLS and Error correction mechanism in order to check the relationship while Granger causality test for checking the causality. The study found that economic growth is influenced by the level of money supply in the economy.

3. Theoretical Framework

The question of whether an expansion monetary policy (MP) or fiscal policy (FP) will help to raise output starts from the basic Keynesian model. In general, an increase in government expenditure or an increase in money supply will lead to an increase in output. Nevertheless, for many years, and to some extent and even now, there is the view that Keynesians ascribe that only fiscal policy (FP) can affect income and output, while monetarists believe that only monetary policy (MP) can have such an effect. It turns out, therefore, that in certain special cases, only FP works and

in another special case, only MP works. It has, however, been observed that only FP will work, and MP will not have any effect, if one of the links between changes in money supply and changes in investment is broken. The accounts of Keynesian theory concentrate on the liquidity trap as the extreme Keynesian special case. The important implication of the liquidity trap is that once the rate of interest has fallen to the level at which the liquidity trap occurs an increase in the money supply will not reduce the interest rate any further. Therefore if the level of investment which could occur at this minimum rate of interest is still not great enough to provide expenditure equal to full employment output, then MP will not be able to increase investment and thereby restore full employment and income by this route.

However, in a liquidity trap, an increase in government expenditure will still increase output. In fact, as long as we remain in liquidity trap, an increase in government expenditure will have the full effect on income because interest rates do not rise at all and there is no crowding out of private investment to offset any of the effects of the increase in government expenditure. Hence, the support for the fiscal action of the government is to boost output.

It follows therefore that the general theoretical framework accepted by Keynesians indicated that provided that the economy was not in a liquidity trap and provided that there was some sensitivity of investment to interest rates, monetary policy would affect output. This view is now accepted as the empirically relevant case. The converse case in which monetary policy can affect income while fiscal policy is powerless will also not occur in the general Keynesian model. This view referred to as the monetarists' view is expressed by making reference to the "Quantity Theory of Money" as in equation 1 below:

$$MV=PY \quad \ldots\ldots 1$$

Where M stands for money stock; V, velocity of circulation; P, an index of the price level and Y, the income. The right-hand side of equation 2 is the value of nominal income. It tells us that there is a one-to-one relationship between changes in the stock of money and changes in the values of national income.

$$M=kPY \quad \ldots\ldots 2$$

If, in addition, as in the present context of our discussion of monetary and fiscal policy, we keep the price level (P) fixed, then the only way that Y can change is if M changes. The implication is that any other change, such as a change in government expenditure will not affect the level of real income. Hence fiscal policy must be powerless while monetary policy will affect real output.

Considering equation 2 as a demand for money which is not dependent at all on interest rates, one has the idea that there is one, and only one, level of national income which would lead to a demand for money balance which is equal to the exogenously given money supply. This suggests that if there is an increase in one of the component of desired expenditure, such as government expenditure, what will happen is that there will be an access demand for funds which will drive up the interest rate in the finance markets. The process will only stop when enough investment has been crowded out by the rise interest rates so as to leave total expenditure back to its old level.

The end result of the dynamic process is however clear from the model in equation 3 below:

$$Y = C + I + G \quad \ldots\ldots 3$$

An increase in government expenditure will lead to drop in private investment of exactly the same magnitude leaving total expenditure and output unchanged. In terms of equation (3), the increase in G will be matched by a fall in I, and there is full crowding out. Hence fiscal policy cannot have any effect in the special case where the demand for money is completely insensitive to interest rate. Given the above discussion, the tendency now is for the monetarists to say that Keynesian believes only in fiscal policy (government expenditure) and for Keynesians to accuse monetarists of believing only monetary policy (money supply). The issue now is to determine which view is more relevant to the Nigerian economy. From the above theoretical framework, it is important to note that Jie and Tang (2010) theoretical framework will be applied in the model, using Ordinary Least Square (OLS) and Beta Coefficients technique. Gross domestic product (GDP), money supply and government expenditure will serve as variables respectively.

4. Model Specification and Data Analysis

On the basis of empirical studies, the model to examine will be divided into four. They are: the simultaneous equation model derived from Dike (1977) monetary block (model), fiscal block (model) and monetary and fiscal block (model) combined together. The simultaneous equation model is used to verify the stabilization effect of monetary and fiscal policy on output. The Monetary block is a model used to test the effect of monetary indicators like money supply and interest rate on gross domestic product, while the fiscal block is the model used to test the impact of fiscal indicators like government expenditure, tax revenue and budget deficit on gross domestic product. Monetary and fiscal block is used to test which of the policy instruments, money supply or government expenditure is more potent in Nigeria. Following Dike (1977) the changes in output is a function of multiplicity of factors including changes in aggregate government spending, government taxing actions, government monetary actions and changes in other variables that exogenously determined such as war spending, strikes, and whether, among others. Also borrowed from Jie and Tang (2010) "Monetary and fiscal models in twin crises", general empirical models of three blocks showing the impact of monetary variables (money supply and interest rate), impact of fiscal variables (government expenditure, tax revenue and budget deficit) and impact of money supply and government expenditure on gross domestic product (GDP) were used.

4.1. Econometric Models

4.1.1. Simultaneous Model

$$GDP = F(E, R, M, Z) \quad \ldots\ldots 4$$

Where:

GDP = Gross Domestic Product

E = Aggregate government expenditure

R = Aggregate government taxing actions

M = Aggregate government monetary actions

Z = Other factors (export revenue has been used for this study)
$\Delta GDP = F(\Delta E, \Delta R, \Delta M, \Delta Z)$……5
In empirical terms, the following model was considered:
$\Delta GDP = L_1\Delta E + L_2\Delta R + L_3\Delta M + L_4\Delta Z + U_t$……6
Where U_t is the error term of the model.
Note that L_1- L_4 is estimated through the regression of the observed value of ΔGDP on the values of ΔE, ΔR, ΔM and ΔZ.
And, $\Delta Z = a_1\Delta E + a_2\Delta R + a_3\Delta M + U_t$……..7

Equation four embodies the indirect effects partly in a_1,a_2, and a_3 of the observed values of the independent variables on that of the dependent variable, while both the direct and the indirect effects are embodied in L_1,L_2 and L_3. Using ΔM for example, the expression $(b_3 + a_3 L_4)$ is an estimate of L_3, the total response of ΔGDP to ΔM. The direct response is b_3, and the indirect response is $a_3 L_4$. Consequently, the equation estimated and reported in from the application of two-stage least square is:
$\Delta GDP = (b_1 + a_1 L_4)\Delta E + (b_2 + a_2 L_4)\Delta R + (b_3 + a_3 L_4)\Delta M + U_t$……..8

4.1.2. Monetary Model

$GDP = \alpha_0 + \alpha_1 M_2 + \alpha_2 INT + U_t$…….....9
GDP = Gross Domestic Product
M_2 = Broad Money Supply
INT = Interest Rate
α_0,α_1 & α_2 = parameters
U_t = Error term

4.1.3. Fiscal Model

$GDP = \beta_0 + \beta_1 GEX + \beta_2 TR + \beta_3 BDF + U_t$……10
GEX = Government Expenditure
TR = Tax Revenue
BDF = Budget Deficit
β_0,β_1, β_2 & β_3 = parameters
U_t = Error term

4.1.4. Monetary and Fiscal Model

$GDP = \Theta_0 + \Theta_1 GEX + \Theta_2 M_2 + U_t$ ……11
Θ_0,Θ_1,Θ_2,Θ_3 &Θ_4 = parameters
U_t = Error term
The rest of the variables have already been defined.

5. Estimation Technique

In other to find the relative impact of money supply and government expenditure on economic growth in Nigeria, beta coefficients were used. The data were tested for unit root (non-stationary by using Augmented Dickey Fuller ADF test. We analyzed the OLS regression results from the postulated models. Based on this, we tried the models specified and discovered that the double log (log-log) specification suits the data more in terms of tolerable level of multi co-linearity.

6. Empirical Results

Table 1 below presents summary of unit root test on the selected variables. Gross Domestic Product (GDP), Government Expenditure (GEX), and Money Supply (MS) are stationary after second difference while Interest Rate (INT), Tax Revenue (TR) and Budget Deficit (BDF) are stationary after first difference. To adjudge whether a variable is stationary or not, the estimated Augmented Dickey-Fuller statistic is compared with its corresponding critical value at one percent level of significance.

Table-1. Summary of Unit Root Test

Variable	ADF-Statistic	Critical value	Order of Integration
GDP	-9.284776	-3.632900	D (2)
GEX	-5.635828	-3.661661	D (2)
MS	-4.032535	-36389	D (2)
TR	-5.453102	-3.6171	D (1)
INT	-6.038279	-3.6171	D (1)
BDF	-14.44609	-3.615588	D (1)

Source: Author's Computation

Table-2. Beta Coefficient: Relative Impact of Money Supply and Government Expenditure on Economic Growth.

Model		Unstandardized Coefficients		Standardi-zed Coefficie-nts	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
	(Constant)	-125.647	226.796		-.554	.583	-584.770	333.477
	GEX	7.097	.756	.941	9.386	.000	5.566	8.627
	MS	.143	.291	.049	.491	.627	-.446	.731

Dependent Variable: GDP
Source: SPSS 17.

Findings from the Two Stage Least Squared estimates showed all the variables of the model got the right signs. Government spending has both positive direct and indirect effects on output. The effects of monetary policy and tax revenue on output are mixed. Whereas monetary policy has a positive indirect effect on output, its direct effect is negative on output. For tax revenue, negative effect indirectly runs on output, while direct effect on output is positive. While export though has positive impact but has insignificant influence on output.

Monetary policy has more destabilizing effect on output than government expenditure because of the mixed effects of the former. Therefore, for stabilization purposes, fiscal policy (government expenditure) is greater, more reliable and faster than monetary policy (money supply).

When only monetary policy is used to fine tune economic activities, broad money supply and interest rate do exact, separately, positive influence on the aggregate level of economic performance. However, broad money supply induces significant domestic economic progress than the interest rate variable. When these monetary variables are removed out of the equation of monetary policy, it implies absence of monetary policy in the management of the Nigerian economy. The general level of domestic economic performance will reduce, although insignificantly. Findings from the monetary policy model reveals that changes in the general level of domestic performance is significantly accounted for by changes in the level of monetary management.

Findings from the fiscal policy model also reveals that the instrument of this policy are important determinants of the general level of domestic economic performance, as lack of fiscal policy measure in terms of budget implementation, and revenue generation leads to poor economic performance in Nigeria. On the separate effects of the variables, government expenditure and tax revenue positively influence the direction and level of the general domestic economic performance, while budget deficit on the other hand exact negative influence on economic growth. Apparently, only government expenditure appears to pass the test of statistical significance out of the three fiscal policy variables used. However, changes in GDP significantly affect changes in the entire fiscal policy variables used. This implies that budget policy and tax revenue can be combined with government expenditure to predict the part of growth of the economy.

Plausibly, when both money supply and government expenditure are isolated from the equation of the domestic economic progress, positive growth could be recorded going by the findings of the combined fiscal and monetary policies model. Aggregate government expenditure and broad money supply exact the desired and expected positive effect on the growth of the economy taken the entire period of observation. Over the entire period of consideration, using Beta coefficients to test the relative impact of money supply and government expenditure on economic growth in Nigeria; government expenditure is more statistically significant than money supply. This finding supports the overwhelming role of money in an economy in facilitating both direct and indirect production activities and exchange.

Other findings in the study revealed that reduction in interest rate does not enhance growth; increase in government spending does enhance growth while government expenditure exacts greater influence on the Nigerian economy than the money supply.

7. Policy Recommendations

From the findings of this study, the following recommendations became imperative:

Since revenue generation does not translate into growth by itself, fiscal policy measures aim at stimulating economic growth by the government should be directed at increasing the level of government expenditure since this factor represents the actual production (and consumption) activities that the government is engaged in. This does not however suggest that budget deficit should be increased in excess of actual revenue generation as increasing budget deficit does not lead to growth in Nigeria as indicated or revealed by this study.

Coordination of money supply and government expenditure imply, among others, fiat monetary restraint which should be matched with lower deficit spending. Where deficits must be, they should be strictly applied to productive ventures and not financed by Central bank. This means tilting the deficit budgeting to surplus budgeting or at worst balanced budget. This can be achieved through evolving an effective tax policy, adequate to beat tax evasions, avoidance and inequity.

The growth rate of broad money supply should be appropriately managed by the Central Bank of Nigeria to induce sustainable economic growth, in order to prevent the negative consequences of a continues increase in the growth rate of broad money stock arising from inflation and exchange rate volatility.

Since both money supply and government expenditure are used to fine tune the economy to the desired part of growth, government should rely more on government expenditure than money supply in order to achieve rapid and sustainable economic growth.

In the event of deficient aggregate demand that may be arising from financial debacle or turmoil, government should rely on fiscal measures to bring back the economy into the desired part of boom. This implies that government should rely on government expenditure during recession than its money supply counterpart.

The role of budget deficit as an instrument of fiscal policy can be more effective for enhancing economic growth by eliminating corruption, leakages of resources and inappropriate use of resources. However, the combination and harmonization of both money supply and government expenditure are highly recommended.

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Appendix

Table-3. Regression Result for Monetary Policy Block
Dependent Variable: GDP
Method: Least Squares
Date: 03/20/14 Time: 06:20
Sample: 1970 – 2012
Included observations: 43

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
MS	2.756915	0.114104	24.16138	0.0000
INT	82851.07	47501.44	1.744180	0.0892
C	-352.7321	751.8096	-0.469177	0.6416
R-squared	0.943496	Mean dependent var		4519.625
Adjusted R-squared	0.940522	S.D. dependent var		7962.210
S.E. of regression	1941.831	Akaike info criterion		18.05101
Sum squared resid	1.43E+08	Schwarz criterion		18.17639
Log likelihood	-367.0456	Hannan-Quinn criter.		18.09666
F-statistic	317.2594	Durbin-Watson stat		0.388169
Prob(F-statistic)	0.000000			

Table-4. Regression Result for Fiscal Policy Block

Dependent Variable: GDP
Method: Least Squares
Date: 03/20/14 Time: 06:18
Sample (adjusted): 1970 – 2012
Included observations: 43

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GEX	6.903259	1.667351	4.140256	0.0002
TR	0.991074	3.547034	0.279409	0.7815
BDF	-0.333890	0.394487	-0.846390	0.4029
C	-179.8998	230.7853	-0.779511	0.4408
R-squared	0.978711	Mean dependent var		4632.483
Adjusted R-squared	0.976937	S.D. dependent var		8030.364
S.E. of regression	1219.533	Akaike info criterion		17.14496
Sum squared resid	53541392	Schwarz criterion		17.31385
Log likelihood	-338.8993	Hannan-Quinn criter.		17.20603
F-statistic	551.6722	Durbin-Watson stat		1.035235
Prob(F-statistic)	0.000000			

Table-5. Regression Result for Monetary and Fiscal Policy Block

Dependent Variable: GDP
Method: Least Squares
Date: 03/20/14 Time: 06:25
Sample: 1970 – 2012
Included observations: 43

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GEX	0.340634	0.808994	0.421059	0.6762
MS	4.508708	0.476768	9.456827	0.0000
DGEX	12.02537	1.924542	6.248434	0.0000
DMS	-6.375405	0.804468	-7.924994	0.0000
C	3.290192	124.9286	0.026337	0.9791
R-squared	0.994347	Mean dependent var		4519.625
Adjusted R-squared	0.993718	S.D. dependent var		7962.210
S.E. of regression	631.0527	Akaike info criterion		15.84650
Sum squared resid	14336188	Schwarz criterion		16.05548
Log likelihood	-319.8534	Hannan-Quinn criter.		15.92260
F-statistic	1582.975	Durbin-Watson stat		1.237483
Prob(F-statistic)	0.000000			

Table-6. Unit Root Test

Null Hypothesis: D(BDF) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-14.44609	0.0000
Test critical values:	1% level		-3.615588	
	5% level		-2.941145	
	10% level		-2.609066	

*Mackinnon (1996) one-sided p-values.

Table-7. Augmented Dickey-Fuller Test Equation

Dependent Variable: D(BDF,2)
Method: Least Squares
Date: 04/30/12 Time: 03:33
Sample (adjusted): 1972 – 2011
Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BDF(-1))	-1.740419	0.120477	-14.44609	0.0000
C	51.21001	120.1112	0.426355	0.6724
R-squared	0.852875	Mean dependent var		38.92632
Adjusted R-squared	0.848788	S.D. dependent var		1904.019
S.E. of regression	740.3966	Akaike info criterion		16.10344
Sum squared resid	19734735	Schwarz criterion		16.18963
Log likelihood	-303.9655	Hannan-Quinn criter.		16.13411
F-statistic	208.6896	Durbin-Watson stat		2.198061
Prob(F-statistic)	0.000000			