The Effect of Fiscal Policy on Economic Growth in Nigeria

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Abstract: This study investigated the effect of fiscal policy on economic growth in Nigeria. The main objective is to analysis how various components of fiscal policy have contributed to the growth rate of the Nigerian economy. This study uses secondary data which were obtained from the Statistical Bulletin of the Central Bank of Nigeria (CBN) covering the period from 1985 to 2015. Descriptive statistics and the ordinary least square (OLS) multiple regression analytical method was used for the data analysis after ensuring data stationarity. The results from the analysis revealed that total government expenditures is significantly and positively related to government revenue, with expenditures climaxing faster than revenue. Investment expenditures were much lower than recurrent expenditures evidencing the poor growth in the country’s economy. Consequently, it is recommended that government should formulate and implement viable fiscal policy options that will stabilize the economy. This could be achieved through the practice of true fiscal federalism and the decentralization of the various levels of government in Nigeria.

Keywords: Fiscal Policy, Expenditure, Economic Growth, Sationarity, CBN, OLS, GDP

1. Introduction

Fiscal policy is the means by which a government adjusts its level of spending in order to monitor and influence a nation’s economy [3]. It is used along with the monetary policy which the central bank uses to influence money supply in a nation. These two policies are used to achieve macroeconomic goals in a nation. In other words, fiscal policy is a major economic stabilization weapon that involves measure taken to regulate and control the volume, cost and availability as well as direction of money in an economy to achieve some specified macroeconomic policy objective and to counteract undesirable trends in the Nigerian economy [11]. Therefore, they cannot be left to the market forces of demand and supply as well as other instruments of stabilization such as monetary and exchange rate policies among others, are used to counteract are problems identified [19].

The Nigerian economy has been plagued with several challenges over the years [5]. Nigeria’s potential for growth and poverty reduction is yet to be realized. A key constraint has been the recent conduct of macroeconomics, particularly fiscal and monetary policies. This has led to rising inflation and decline in real incomes [3]. Researchers have identified some of these challenges as: gross mismanagement/misappropriation of public funds, [24], corruption and ineffective economic policies [12]; lack of integration of macroeconomic plans and the absence of harmonization and coordination of fiscal policies [27]; inappropriate and ineffective policies [6]. Imprudent public spending and weak sectoral linkages and other socioeconomic maladies constitute the bane of rapid economic growth and development [5].

According to [2], the debate on the effectiveness of fiscal policy as a tool for promoting growth and development remains inconclusive, given the conflicting results of current studies. In the words of [28] “the role of fiscal policies in the development of emerging economies has been a major source of concern in economic literature. Majority of studies in this area have however, concentrated on the industrialized countries of the Western World, with little or no reference to the emerging economies of the developing countries”. According to [3] a review of Nigeria’s macroeconomic indices shows that inflation has accelerated to double-digit levels (from 6.94 in 2000 to 18.87 in 2001), (IMF, 2001). This double digit inflation continued up to 2005, and
decreases to single digit in 2006 and 2007. In 2008 the inflation rate reverted to double digit - 11.58 and continued to increase and in 2010 it was 13.72% (IMF, 2011).

Unemployment and poverty is also a serious concern in the country. In 2000 the unemployment rate was 13.1%. On the average there has been an upward trend and in 2010 it was 21.10% (Nigerian Bureau of Statistics 2010, CBN 2005, 2006, 2009). Per capita income in Nigeria has been increasing steadily from year 2000 when it was ₦39,657 to ₦71,131 in year 2010, (IMF, 2011). This increase in per capital income has not led to an increase in the standard of living of the citizens because of increasing cost of goods and services. To tackle this are institutions such as: Nigerian Directorate of Employment (NDE) introduced in 1989 and the National Poverty Eradication Programme (NAPEP) introduced in 2001.

The country’s debt profile is also steadily increasing. According to [22] Nigeria debt profile was $32.5 billion as at September 2010, i.e. $5,241,667m as at September 2010. In year 2000, the total outstanding debt of Nigeria was N3,995,638m. There continued to be an upward trend until in 2006 when it came down to (₦39,657 to ₦71,131) because of debt cancellation agreement between Nigeria and Paris Club [25]. Thereafter, it started rising again and reached ₦5,241,667m in 2010.

The expenditure pattern of Nigeria has been on the increase. In 2000, the total expenditure was ₦701,059m. It has increased steadily and in 2010 it was ₦4,199,429m. Generally, increase in expenditure should lead to reduced unemployment rate but in Nigeria the reverse is the case i.e. as total expenditure increases, rate of unemployment increases. This is because a greater percentage of the total expenditure is channeled to recurrent expenditure and the proportion is worsening. In 2000, the percentage of the total expenditure spent on recurrent was 66% and has increased to 79% in 2010. The implication is that less percentage of the total expenditure is spent on capital project which creates job in the economy. One of the major issues raised against Nigeria’s 2012 budget is the high rate of recurrent expenditure. Based on the budget, government proposed spending most of its money on running the administration rather than in the badly needed infrastructure projects to create jobs and boost growth in the continent’s second largest economy [26].

2. Conceptual Issues and Review of Related Literature

Fiscal policy aims at stabilizing the economy [5]. Increases in government spending or a reduction in taxes tend to pull the economy out of a recession; while reduced spending or increased taxes slow down growth [9]. Government interventions in economic activities are basically in the form of controls of selected areas/sectors of the economy. These controls differ, and depend on the specific needs or purpose the government desires to achieve. [31], distinguished between two forms of regulation, namely:

(i). Economic regulation (involving control of prices, entry and exit conditions, regulation of public utilities, such as transportation and media organizations, regulation of the financial sector operations.

(ii). Social regulation (aimed at protecting the health and safety of workers at work place, the environment, and protection of consumer rights. our focus is on economic regulation.

Proponents of government expansion are of the view that government expenditures provide valuable public goods including: education, roads, infrastructure, and security, among others [18]. They claim that increases in government spending are capable of enhancing growth through, perhaps, rises in purchasing power of the citizenry, both in the short- and long-run [30]. Proponents of minimal government spending, however, are of the opinion that high government spending do crowd out private investments and hence, undermine economic growth. They are of the opinion that increases in government spending often transfer resources from the productive sector of the economy to government, where the resources are likely to be used inefficiently. They also argue that expanding public sector can complicate efforts aimed at implementing pro-growth policies such as, fundamental tax reform and personal retirement accounts [18].

[8] conducted investigation on the endogenous growth model of fiscal policy and concluded that in the endogenous growth model of fiscal policy (government expenditure and income) is very crucial in predicting future economic growth. [1] analyzed the relationship between government expenditure and economic growth and found that the size of government expenditure is very important in determining the performance of the economy. He further advised that, government should not only support and encourage the private sector to accelerate economic growth, but should also increase its budgetary provision on infrastructure, social and economic activities. [20] also conducted a meta-analysis of past empirical studies of fiscal policy and growth and found that in a sample of 41 studies, 29% indicate a negative relationship between fiscal policy and growth, 17% a positive one, and 54% an inconclusive relationship. [15] maintains that fiscal policy is generally believed to be associated with growth, or precisely, it is held that appropriate fiscal measures in particular circumstances can be used to stimulate economic development and growth. [13] investigated the impact of government expenditure on economic growth using panel data and discovered that countries with large government expenditure in term of budgetary provisions tend to experience higher economic growth, but the effect varies from one country to another. [17] studied the relationship between fiscal policy and economic growth in Egypt, Morocco and Tunisia. The spans of data for each country are: 1970-2002 for Morocco, 1972- 2002 for Tunisia and 1975-2002 for Egypt. The empirical results showed that 1 percent increase in public spending raised the real GDP by
1.26 percent in Morocco, 1.15 percent in Tunisia and 0.56 percent in Egypt. The results also indicated existence of long-run relationships for all the three countries. Chowdhury (1986) in his study of monetary and fiscal impacts on economic activity in Bangladesh was also of the opinion that fiscal rather than monetary action had greater influence on economic activities. In Nigeria, [10] studied the contributions of public expenditure to economic growth in Nigeria over the periods 1960 to 1992. The findings from the study provided support for fiscal policy-led growth through crowd-in private investment resulting from government expenditure on infrastructure. [21] analyzed the impact of government expenditure on economic growth in Nigeria over the period 1970 – 2008. The paper revealed that government total capital expenditure, total recurrent expenditures and expenditure on education have negative effect on economic growth while expenditures on health, transport and communication are growth enhancing. On the other hand, [29], studied the impact of budgetary expenditure on the defense sector on economic development of Nigeria and discovered that defense expenditure exert significance positive influence on economic growth. 

[7] conducted a study on the impact of government spending on economic growth in the United States of America and found that, expenditure on the main infrastructure (streets and highways, mass transit, water and sewage systems and electricity and gas supplies) had a powerful explanatory role in economic growth, while infrastructure such as police and fire stations, court houses office buildings etc had a mild positive statistically significance impact on growth, while education infrastructure such as construction of classroom were statistically insignificant in impacting on economic growth. [32] used functional categories of public expenditure in their economic growth regressions. The study found out that public expenditure had a negative impact on developing countries but had a positive impact on developed countries. The study had categorized expenditure into productive and non-productive categories by taking into account the level of resources invested and output produced by different programs. For instance the study reported that government expenditure on health and transport and communications to be growth promoting but found no positive impact of education and military spending on economic growth. [4] using time series data covering 1960-1995 to estimate a Cobb-Douglas production function that includes public infrastructure for Chile, found a positive and significant correlation between public infrastructure and economic growth. The study reported that public investment crowds out private investment. One major weakness of the study was that it omitted impact of important variables such as education, health care and public order and security. Were (2001) conducting a research on impact of external debts on economic growth and investment in Kenya, found out that current investment in human capital development to be growth supporting. But lagged public investment in human capital was found to adversely affect growth. The weaknesses of the study were that the time series data used was for a short period of time and it took into account investment in human capital ignoring investment in physical infrastructure. [8] set out to determine how government size affected the economic growth by looking at OECD countries in the period 1970 – 1999. The study using panel data alluded to the fact that the government size had a negative and statistically significant impact on economic growth. The only countries which did not fall under the above conclusion were USA, Sweden and Norway with their coefficients turning out to be statistically insignificant. [14] conducted a study on the impact of government spending on economic growth in Kenya and found that though expenditure on education had a positive relationship with economic growth; it does not spur any significant change to growth. Given the reason that the expansion of education is higher than that of job growth in Kenya and there are relatively few job opportunities outside government for secondary and university graduates hence education have been blamed for producing surplus graduates, and long waits for government jobs. The study also asserted that a mere expenditure growth does not necessarily bring potential to spur growth; growth on the GDP was dependent on other factor too such as political will efficiency and also prioritization on the key components of the economy. [16] while conducting study on the impact of government expenditure on economic growth in Kenya reported that improved government expenditure on areas such as physical infrastructure development and in education enhance economic growth while areas such as foreign debts servicing, government consumption and expenditure on public order and security, salaries and allowances were growth retarding.

3. Methodology

Research design is the structure and strategy for investigating the relationship between the variables of the study. The research was adopted to examine the effect of fiscal policy on economic growth in Nigeria. The study made use of ex-post facto research design. An ex-post facto investigation seeks to reveal possible relationships by observing an existing condition or state of affairs and searching back in time for plausible contributing factors.

The variables used in the study and the model specification were based on established theoretical relationships, their use in previous studies and the availability of useable data.

Descriptive statistics was utilized to show the contribution of government fiscal policy to economic growth, ascertain and explain growth rates, and an OLS in a multiple form to ascertain the relationship between economic growth and government expenditure components after ensuring data stationarity which span a period from 1985 to 2015 (i.e. a total of thirty one years).

To measure the relationship between the variables we adopt a generic regression equation specified in the following
form:
\[
\text{Real GDP} = a_0 + a_1 \beta_1 + a_2 \beta_2 + a_3 \beta_3 + a_4 \beta_4 + U_i
\]
Where: Real GDP - Real Gross Domestic Product
M1 - Administration [Capital + Recurrent]
M1 - Economic Services [Capital + Recurrent]
M2 - Social Community Services [Capital + Recurrent]
M2 - Transfers [Capital + Recurrent]
U_i - Error term

4. Results and Discussions

Descriptive statistics involve the use of mean, median, maximum and minimum value to evaluate the selected variables. The following measures of descriptive estimates, such as the mean, standard deviation and variance were employed so as to see the degree of variability of these estimates.

Table 1. Descriptive Statistics of the Annual Values of all the Focal Variables.

| Descriptive Statistics | Mean   | Std. Deviation | N  |
|------------------------|--------|----------------|----|
| GDP at Current Basic Prices (N' Billion) | 15184.14 | 22738.53 | 31 |
| TotAdm | 416.0607 | 505.86843 | 31 |
| TotEcoServ | 281.8863 | 308.25519 | 31 |
| TotSocComServ | 219.9330 | 301.86087 | 31 |
| TotTrans | 402.1427 | 445.46802 | 31 |
| Credit to Private Sector (CPS) (N' Billion) | 2823.75 | 4659.16 | 31 |
| Inflation Rate | 20.878 | 19.3142 | 31 |

Source: SPSS Computation

Table 2. Model Summary.

| Model Summary | R    | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---------------|------|----------|-------------------|---------------------------|---------------|
| 1             | .992 | .984     | .980              | 3215.078108383644600      | 1.916         |

a. Predictors: (Constant), Inflation Rate, Credit to Private Sector (CPS) (N’ Billion), Tot Eco Serv, Tot Trans, Tot Adm, Tot Soc Com Serv
b. Dependent Variable: GDP at Current Basic Prices (N’ Billion)

Source: SPSS Computation

Table 3. Analysis of Variance.

| ANOVA | Sum of Squares | df | Mean Square | F        | Sig.   |
|-------|----------------|----|-------------|----------|--------|
| 1     | Regression     | 6  | 2374955037.173 | 229.759 | .000*  |
|       | Residual       | 22 | 10336727.243  |          |        |
|       | Total          | 28 |              |          |        |

a. Dependent Variable: GDP at Current Basic Prices (N’ Billion)
b. Predictors: (Constant), Inflation Rate, Credit to Private Sector (CPS) (N’ Billion), Tot Eco Serv, Tot Trans, Tot Adm, Tot Soc Com Serv

Source: SPSS Computation

The tables above depict the result of model fitness/ANOVA test. The R^2 and adjusted R^2 are quite high and Durbin-Watson suggesting no autocorrelation. The overall result however indicates that the data fits into the regression model since the regression model for the entire data put together is significant at 0.05.

Table 4. Regression Analysis Result.

| Coefficients | Unstandardized Coefficients | Standardized Coefficients | t   | Sig. |
|--------------|----------------------------|---------------------------|-----|------|
| Model        | B                      | Std. Error | Beta |   |     |
| (Constant)   | 417.268                | 1500.367   | .278 | .784 |
| TotAdm       | 9.483                  | 9.639      | .211 | .984 | .001 |
| TotEcoServ   | 13.477                 | 6.089      | .183 | 2.213 | .038 |
| TotSocComServ | 83.670                | 20.504     | 1.111 | 4.081 | .000 |
| TotTrans     | 5.397                  | 5.770      | .106 | .935 | .002 |
| Credit to Private Sector (CPS) (N’ Billion) | .673 | .789 | .138 | .853 | .003 |
| Inflation Rate | 1.883                  | 35.505     | .002 | .053 | .958 |

a. Dependent Variable: GDP at Current Basic Prices (N’ Billion)
Source: SPSS Computation

The second table is the regression analysis result which shows the sign of the coefficient and the significance of the respective variables to GDP at current basic prices. As expected, all the economic services expenditure has positive
relationships with economic growth suggesting that a growth in budgetary allocations to this sector will certainly drive economic growth. The result strongly suggests that such government expenditures are supposed to provide an enabling environment for economic growth and strengthen economic growth. This result is also in line with [3].

Moreover, this study recommends that government should carry out a critical examination of the various components of its expenditure pattern, to identify areas were increased spending might not lead to improvements in the standard of living.

5. Conclusions

This study was carried out to determine the effect of fiscal policy on Nigeria’s economic growth. The various components of government expenditure, such as: Expenditure on Administration, Expenditure on Economic Services, Expenditure on Social Community Services and Expenditures on Transfers, were used to proxy for fiscal policy.

The public expenditures incurred by the Nigerian government have been on the increase because of the realization that it promotes economic growth. According to [3], the trend shows that the country started in 1961 with a surplus budget until 1970 when it recorded its first deficit of (455.10) billion naira which reached its peak at the end of the period, year 2010, with (1,105,439.78) billion naira.

Studies that relate government spending to growth have not clearly brought out the nature and type of government expenditures. Furthermore, the studies have been on highly aggregated data mainly cross-country or cross-sectional studies. In this study, we attempted to differentiate the data in a single country's public expenditures. This study identifies those components of public expenditure that could be protected and sustained. In fact, our results show that public expenditures on economic services (agriculture, construction, transport and communication) have enormous returns to economic stability and growth. Our results suggest that these expenditures crowd in private investment. Hence there is some evidence of positive correlation between government expenditure on economic services and economic growth. An increase in budgetary allocation to economic services will lead to an enhancement in economic stability. Therefore, in public spending, it is important to note that the effectiveness of the private sector depends on the stability and predictability of the public incentive framework, which promotes or crowds in private investment. Productive government spending or the quality of government spending is significant in enhancing the efficiency and productivity of the private sector, as the level and quality of public expenditures seems to determine the rate of growth.

This means that rising capital inflow will increase economic growth. On the basis of these findings, it is recommended that the government should formulate and implement viable fiscal policy options that will stabilize the economy. This could be achieved through the practice of true fiscal federalism and decentralization of levels of government in Nigeria. Again, there should be consistency in macroeconomic policies implementation in the non-oil sectors of the economy by providing incentives to foreigners (especially tax holidays) wishing to invest in the agricultural sector and manufacturing sectors.

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