

Impact of Fiscal Policy Instrument on Economic Growth in Nigeria

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Abstract

This study examined the impact of fiscal policy instrument on economic growth in Nigeria using time series annual data from 1981-2014 which constitutes 34 years observations. This study used secondary data obtained from the CBN annual statistical bulletin. Fiscal policy instrument was proxied with government recurrent expenditure, government capital expenditure, public domestic debt, and public external debt while economic growth was proxied with Gross Domestic Product (GDP). The data were analysed using Ordinary Least Square method and vector error correction mechanism was conducted. The study found that recurrent expenditure and public domestic debt exert negative relationship while the capital expenditure and external debt exert positive relationship in the long run on the economic growth (GDP) and in the short-run the entire variables are having positive influence except REC (recurrent expenditure) on the economic growth (GDP). The study recommends that the government should put in place effective debt management strategies and fight the problem of corruption because without a reduction of the level of corruption in the country, fiscal policy components will not achieve the required level of economic growth in Nigeria.

Key words: Fiscal Policy, Economic Growth, recurrent expenditure, capital expenditure

1.0 Introduction

The current dwindling concern is that large and growing governments have deleterious effect on the long-run growth of their economies. The usual policy prescription calls for a scaling back of government activity and budgets, constraining public spending from growing faster than output. In countries facing fiscal imbalances and high debt burdens, this has prompted

wide-ranging fiscal consolidation programs to reduce government spending (IMF, 2003). However, parallel to this thrust has been a call for fiscal space in which governments argue for room in their budgets to allow for the provision of productive public goods that will foster economic growth (Heller, 2005). The realization of this growth undoubtedly is not automatic but requires policy guidance, which are Fiscal and Monetary policy instruments which are the main instruments of achieving the macroeconomic targets. The basic fiscal policy instruments are Government Expenditure and Tax revenue. To most economist all over the world, fiscal policy has been an important growth determinant of any country, this deep seeded belief that increase in taxation, public investment, Maintaining Surplus Budget, wage control, inflation and other aspect of fiscal policy instrument contribute more to the growth determinant of any country both developed and developing countries.

Vast researches have been done on the nature of fiscal policy and the economic growth for years, most of the studies considered fiscal policy impact on the development of economy in both the developed and developing countries. However, recent literatures have justified the need to jointly take into consideration fiscal policy and economic growth in an economic model and economic techniques for unbiased result. Marzie and Safdari (2011) asserted that there is a linkage between fiscal policies variables of gross domestic product growth rate, growth of exchange rate, growth of the price index of goods and services, and growth of government. This conclusion was in conformity with several studies that have been carried out worldwide to investigate the nature of relationship that exists between fiscal policy and economic growth, but not much have been done in Africa most especially in Nigeria. studies carried out in Nigeria have not been able to effectively resolve the issues on the problem of fiscal policy and economic growth ,some of them propose that there is no positive relationship between fiscal policy and economic growth while a few of them find the evidence to support the motion, as some of them make use of the Keynesian approach and while some focus on the effectiveness of this policy measure in stimulating economic growth in this country during regulation and deregulation periods. Based on these divergent findings the researcher considers this area of interest and re-examine the dynamic impact of fiscal policy instruments on the Nigerian economic growth using multiple regression and vector error correction mechanism using time series data from 1981 to 2014.

The overall objective of this study is to analyse the impact of fiscal policy instruments on Nigerian economic growth. However the specific objectives of the study are to; examine the impact of government capital expenditure on the Nigerian economic growth; access the impact of government recurrent expenditure on the Nigerian economic growth; examine the impact of public external debt on the Nigerian economic growth; access the impact of public domestic debt on the Nigerian economic growth.

To examine the relationship between fiscal policy instrument and the Nigerian economic growth, the following research questions would be useful to aid the study; What impact does government capital expenditure has on the Nigerian economic growth?; What impact does government recurrent expenditure has on the Nigerian economic growth?; Does public external debt has impact on the Nigerian economic growth?; Does public domestic debt has impact on the Nigerian economic growth? The research Hypotheses for the study was formulated in their null forms as follows; Recurrent expenditure has no significant impact on the Nigerian economic growth; Capital expenditure has a significant impact on the Nigerian economic growth; Public external debt has no significant impact on the growth of Nigeria economy; Public domestic debt has no significant impact on the growth of Nigeria economy.

The scope of this study shall be restricted only to the impact of fiscal policy instruments proxy with (recurrent expenditure, capital expenditure, public external debt and public domestic debt) and the economic growth proxy with (GDP). The study was limited to 34 years annual observations ranging from 1981 to 2014. The fiscal policy instruments are limited to these variables because the accessibility of data on tax revenue generated by federal government is a bit challenging. Data would be sourced from the CBN statistical bulletin and data used would be only secondary data.

2.0 Literature Review

2.1 Concept of Fiscal Policy

The term fiscal policy has conventionally been associated with the use of taxation and public expenditure to influence the level of economic activities. Fiscal policy deals with government deliberate actions in spending money and levying taxes with a view to influencing macro-economic variables in a desired direction. This includes sustainable economic growth, high employment creation and low inflation (Microsoft Corporation, 2004). Thus, fiscal policy aims at stabilizing the economy. 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 a boom (Dornbusch & Fischer, 1990).

Fiscal policy involves the use of government spending, taxation and borrowing to influence the pattern of economic activities and also the level and growth of aggregate demand, output and employment. Fiscal policy entails government's management of the economy through the manipulation of its income and spending power to achieve certain desired macroeconomic objectives (goals) amongst which is economic growth (Medee & Nembee, 2011).

Peter and Simeon (2011) define fiscal policy as the process of government management of the economy through the manipulation of its income and expenditure and to achieve certain desired macroeconomic objectives. Central Bank of Nigeria (2011) defined fiscal policy as the use of government expenditure and revenue collection through tax and amount of government spending to influence the economy.

In finance, fiscal policy is the use of government revenue collection (taxation) and expenditure (spending) to influence the economy. The two main instruments of fiscal policy are government taxation and expenditure. Geoff (2012) contended that fiscal policy involves the use of government spending, taxation and borrowing to affect the level and growth of aggregate demand, output and jobs creation. It is the government spending policies that influence macroeconomic conditions. These policies affect tax rates, interest rates and government spending, in an effort to control the economy. Fiscal policy is the means by which a government adjusts its levels of spending in order to monitor and influence a nation's economy.

From all these definition, it was deduced that one of the regulatory policies used by government in achieving its objectives to bring about economic growth is fiscal policy. Fiscal policy is an outgrowth of Keynesian economics; its logical analysis suggests that it offers a sure-fire means of stabilizing the economy. The goal of modern fiscal policy is to achieve economic efficiency and stability. In a modern economy, no sphere of economic life is untouched by the government. Two major instruments or tools are used by government to influence private economic activity; taxes and expenditure but not limited to these two, it may include public debt, public work among others.

2.2 Concept of Economic Growth

Economic growth has long been considered an important goal of economic policy with a substantial body of research dedicated to explaining how this goal can be achieved (Fadare, 2010). Economic growth has received much attention among scholars. According to Khorravi and Karimi (2010), classical studies estimate that economic growth is largely linked to labour and capital as factors of production. The emergence of the endogenous growth theory has encouraged specialists to question the role of other factors in explaining the economic growth phenomenon (Bogdanov, 2010).

Economic growth represents the expansion of a country's potential GDP or output. For instance, if the social rate of return on investment exceeds the private return, then tax policies that encourage can raise the growth rate and levels of utility. Growth models that incorporate public services, the optimal tax policy lingers on the characteristic of services (Olopade & Olopade, 2010). Economic growth has provided insight into why state growth at different rates over time; and this influence government in her choice of tax rates and expenditure levels that will influence the growth rates.

2.3 Empirical Review

Several researchers have carried out various empirical studies on fiscal policy and economic growth. This aspect of the paper has discussed some such previous research works and their empirical conclusions that are related to the study.

Taiwo and Agbatogun (2011) in their paper analyse the implications of government spending on the growth of Nigeria economy over the period 1980-2009. Using Johansen co-integration, unit root test and error correction model, it was discovered that total capital expenditure, inflation rate, degree of openness and current government revenue are significant variables to improve growth in Nigeria. In the final analysis, future expenditure on capital and recurrent should be managed along with adequate manipulation of other macroeconomic variables to ensure steady and accelerate growth. The research was well conducted and the methodology was well specified.

Medee and Nenbee (2011) study centred on an empirical investigation of the impact of fiscal policy variables on economic growth in Nigeria between 1970 and 2009, while adopting the not widely understood method of vector auto regression (VAR) and error correction mechanism techniques, the researchers found that there exist a mild long-run equilibrium relationship between economic growth and fiscal policy variables in Nigeria.

In Oseni and Onakoya (2013), the researchers aimed at testing the argument that only three fiscal variables (productive expenditure, distortionary tax and fiscal deficit) contribute to growth by using annual time-series data of Nigeria from 1981 to 2010. The study finds that in the case of Nigeria, four fiscal variables (productive government expenditure, unproductive government expenditure, distortionary taxes, non-distortionary taxes, government budget deficit) contribute immensely to growth either positively or negatively. However, the study does not specify how distortionary and non-distortionary was computed.

Chude (2013) studied the impact of government expenditure on Economic Growth in Nigeria. This study investigates the effects of public expenditure in education on economic growth in Nigeria over a period from 1977 to 2012, using cointegration error correction model (ECM). The results indicate that total expenditure on education is highly and statistically significant and has positive relationship with economic growth in Nigeria in the long run. The

researchers conclude that economic growth is clearly impacted by factors both exogenous and endogenous to the public expenditure in Nigeria. The research specified the method of collecting data in a clear manner.

Nurudeen and Usman (2010) 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. However, the statistical part of the analysis is not well interpreted.

Enache (2014) investigated the connection between fiscal policy and economic growth in Romania using forecasted time series data which covered periods between 1992 and 2013. The researcher used OLS as the technique for data analysis. Empirical results showed weak evidence for the positive impact of fiscal policy on economic growth. The study concluded that government authorities could use fiscal policy to affect economic growth in an indirect manner.

Alm and Rogers (2011) ask in their research: what factors influence state economic growth in the United States? The study employs annual state (and local) data for the years 1947 to 1997 for the 48 contiguous states to estimate the effects of a large number of factors, including taxation and expenditure policies, on state economic growth. The study used orthogonal distance regression (ODR) to deal with the likely presence of measurement error in many of the variables. The results indicate that the correlation between state (and state and local) taxation policies is often statistically significant but also quite sensitive to the specific regressor set and time period; in contrast, the effects of expenditure policies are much more consistent.

Baum and Koester (2011) searched for the answer to the question: does the state of the business cycle matter for the effects of fiscal policy shocks on GDP? This study analyzes quarterly German data from 1976 to 2009 in a threshold structural vector autoregressive model. The analysis finds that hiking spending results to a short-term fiscal multiplier of around 0.70, while the fiscal multiplier resulting from an increase in taxes and social security contributions yields -0.66. Moreover, the threshold model derives basically new revelations on the impact of shocks, depending on when in the business cycle they occur, their size and their direction. Fiscal spending multipliers are much bigger in periods of an inverse output gap but have only a very weak effect in periods of a positive output gap.

Cottarelli and Jaramillo (2012) in their study discussed the relationships between fiscal policy and growth both in the short and in the long run. While using the tools of debt ratio and GDP ratio with the tools of sensitivity analysis, and cross section data from the G7 countries in 2011 and 2012, findings reveal that a fiscal tightening will have a negative impact on growth. The authors concluded that with the proper policies, the deep links between potential growth and fiscal policy could promote a virtuous circle in which pro-growth fiscal adjustment measures, other structural reforms, and lower debt boost growth and the latter facilitates fiscal adjustment.

Sineviciene and Vasiliauskaite (2015) studied the interaction of fiscal policy with Private investment in the Case of the Baltic States. It was for the period 1995-2010 using annual data. It showed that fiscal policy indicators have positive and significant relationship with private investment in the Baltic States. The study reveals that current taxes on income, wealth, etc.,

indicators explain about 86 percent of the changes in private investment. Gross fixed capital formation by public sector indicator contributes about 80 percent of the private investment changes in the Baltic States. From the study reviewed above, relating to fiscal policy and economic growth in both Nigeria and other countries the study found that varying outcome of the findings and conclusions emanates these may be due to differences in methodology, variables used and the period of study. The disparities in these studies present an opportunity to look at this area of research and collect data in order to re-examine the impact of fiscal policy instruments and economic growth. The variables used in the study are real gross domestic product (dependent variable) and government capital expenditure, government recurrent expenditure, public external debt and public domestic debt (independent variable) using time series data from 1981-2014.

2.4 Theoretical Framework

The study adopted both the Keynesian Theory and Endogenous growth theory

2.4.1 Endogenous growth theory

According to “Endogenous growth theory” fiscal policy can affect both the level and growth rate of per capita output. A group of economists believe that economic growth is the result of capital accumulation and other group believes that technical progress is effective and do not accept that economic growth is influenced by factors such as fiscal policy. To examine the effects of fiscal policy on economic growth, first need to be properly classified and then Impact of each of them separately to be examined on economic growth. A detailed illustration of the mechanism through which fiscal policy influences growth can be found in, amongst others, Barro (1990) and Barro and Sala-i-Martin (1992, 1995). These authors employ a Cobb-Douglas-type production function with government provided goods and services (g) as an input to show the positive effect of productive government spending and the adverse effects associated with distortionary taxes. The endogenous growth models predict that an increase in productive spending financed by non-distortionary taxes will increase growth, whilst the effect is ambiguous if distortionary taxation is used. In the latter case, there is a growth-maximizing level of productive expenditure, which may or may not be Pareto efficient (Irmen-Kuehnel, 2008). Also, an increase in non-productive spending financed by non-distortionary taxes will be neutral for growth, while if distortionary taxes are used the impact on growth will be negative.

2.4.2 Keynesian Theory

The role of fiscal policy in the achievement of macroeconomic objectives has been extensively dealt with the Keynesian Theory of an activist macroeconomic policy. The Keynesian analysis leads to the conclusion that demand management policies can and should be used to improve macroeconomic performance. An activist macroeconomic policy involves setting monetary and fiscal variables in each time period at the values which are thought necessary to achieve the government’s objectives. A basic premise of Keynesian economics is that the private sector is inherently unstable. It is subject to frequent and quantitatively important disturbances in the components of aggregate demand.

The broad objectives of Keynesian macroeconomic policy are not in dispute, these objectives are full employment, a stable price level, the absence of significant deviations of output from its equilibrium time path, a satisfactory rate of economic growth, an equitable distribution of income, and balance of payment equilibrium. There exist, however, differing opinions, regarding the priorities accorded to these objectives. In fact, there is an even greater divergence of views on them as to which such objectives can be actualized. Keynesian

activist policy has come under increasing attack from the monetarist and classical schools, which regard the private sector as inherently stable. They do not deny that random disturbances occur in the private sector but they do not think that these are either large or further amplified by quantifying adjustments. The private sector adjusts via relative price changes to such disturbances quite adequately, so active stabilization policy is not required. Furthermore, it (stabilization policy) may, if implemented increase rather than diminish fluctuations in output and employment. Nevertheless, stabilization policy requires that policy makers can determine feasible targets, have a reasonable knowledge of the workings of instrumental variables and can effectively control the instrumental variables.

Keynesian theory posits that removing spending from the economy will reduce level of aggregate demand and stabilizing prices. However, recent researchers have made an impact to the development of fiscal policy and economic growth through their contribution to the theoretical issues on this study.

3.0 Research Methodology

The study adopted descriptive research design which ensures that the procedure to be employed in the study is carefully planned so as to obtain correct and reliable information about the research work. The population of this study is the all fiscal policy instruments data on government expenditure, public debt and gross domestic products from 1960 till date i.e from the independence till date. The study employed purposive non-probability sampling techniques in drawing the sample size of the study. The sample size is 34 annual observations ranging from 1981 to 2014. Data for the study were obtained from secondary sources (time series data), These sources include the statistical bulletin of the Central Bank of Nigeria (CBN) for various editions and the Central Bank of Nigeria (CBN) annual publication. The study employs the use of the multiple regression technique which offers explanation on the relationship between a dependent variable and two or more explanatory variables. The ordinary least square (OLS) method was used based on its BLUE (best, linear, unbiased, estimator) properties. The essence of this technique is its unique feature compared with other techniques of estimation of models. Also, vector error correction mechanism was used to capture the dynamic impact of fiscal policy instruments and economic growth in both short-run and long-run. A system based program known as E-Views (Econometrics views) has been adopted for the econometric and statistical analysis of the data.

3.1 Model specification

The model of this study is specified below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + U \dots \dots \dots (1)$$

$$GDP = \beta_0 + \beta_1 RE + \beta_2 CE + \beta_3 PED + \beta_4 PDB + U \dots \dots \dots (2)$$

Where; Y= Dependent Variable, RE=Recurrent Expenditure, CE= Current Expenditure, PED= Public External Debt and PDB= Public Domestic Debt

Where β_0 is intercept or constant term, β_1 , β_2 , β_3 and β_4 are Coefficient of the regressors and U is random disturbance/error term. The error term takes care of the measurement errors that would have resulted in the collection and processing of the data. This specification was in line with that applied by Adeoye (2006).

3.2 Measurement of variable

Recurrent Expenditure was measured by yearly federal government recurrent expenditure, Capital Expenditure was measured by yearly federal government capital expenditure, Public external Debt was measured by total federal government borrowing source from international countries or organisation and Public Domestic Debt was measured by the federal government internal debt.

3.3 A priori Expectation

It is expected that based on a priori functional relationship between dependent and independent variables that $\beta_1, \beta_2, \beta_3$ and $\beta_4 > 0$ for the model.

4.0 Results and Findings

4.1 Presentation and Interpretation of Results

➤ Unit Root Test

Table 4.1 Augmented dickey-fuller unit root test

Variables	ADF Statistics	1% critical value	5% critical value	10% critical value	Integration Order
LGDP	-5.378235	-3.653730	-2.957110	-2.617434	I(1)
LCEX	-5.746844	-3.653730	-2.957110	-2.617434	I(1)
LPDB	-4.306972	-3.653730	-2.957110	-2.617434	I(1)
LPED	-4.443952	-3.653730	-2.957110	-2.617434	I(1)
LREC	-7.827426	-3.653730	-2.957110	-2.617434	I(1)

Source: Researcher computation from Eview Output 2015

The researcher subjected each of the variables to unit root test using ADF test to check for stationarity, this is because there is now a growing consensus that the stationarity test procedure due to Dickey and Fuller (1979) (hereafter ADF) has superior sample properties compared to its alternatives, Karamustafa and Kucukkale (2003). Table 4.1 shows that all the variables were not stationary at level form but at their first differences, indicating here that they are all integrated of order 1 i.e. I(1). This is in confinement with other researches concerning economic variables, that economic variables are stationary at either at first or at their second differences.

➤ Co-integration Result

Table 4.2: Results from Johansen's Co-integration Test, (Trace and Maximum Eigenvalue Test)

Hypothesis No of CES	Eigenvalue	Trace statistics	0.05 critical value	Prob.**	Max-Eigen Statistics	0.05 critical value	Prob.**
None *	0.675294	75.21968	69.81889	0.0174	34.86990	33.87687	0.0380
At most 1	0.413143	40.34978	47.85613	0.2102	16.52222	27.58434	0.6211
At most 2	0.351748	23.82757	29.79707	0.2078	13.43773	21.13162	0.4128
At most 3	0.234230	10.38983	15.49471	0.2519	8.273062	14.26460	0.3516
At most 4	0.066004	2.116772	3.841466	0.1457	2.116772	3.841466	0.1457

Trace and Max-eigenvalue test indicate 1 co-integrating equation at the 0.05 level

*denotes rejection of the hypothesis at the 0.05 level

**Mackinnon-Haug-Michelis (1999) P-values

Source: Researcher computation from Eview Output 2017

Since all the variables were all stationary at first difference as showed in table 4.1, the researcher performed the Johansen multivariate co-integration test to examine the existence

of co-integrating relationship. The p-value of the trace statistics for the null hypothesis of no co-integrating relationship in Table 4.2, is less than 0.05, meaning that the null hypothesis can be rejected. In addition, the value trace statistic (75.21968) is greater than the 0.05 critical values of 69.81889, affirming that the null hypothesis that there is no co-integrating relationship among the variables cannot be accepted. However, the p-value of the trace statistic corresponding to ‘At most 1’ is 0.2102, which is greater than 0.05, meaning that the null hypothesis that there is at most one co-integrated equation or co-integrating relationship between the variables cannot be rejected (meaning it can be accepted).

Furthermore, the value of the trace statistic corresponding to ‘At most 1’, is 40.34978 which is lesser than the 0.05 critical value at that point (47.85613), indicating that the null hypothesis that “At most 1” co-integrating relationship exists between the variables could not be rejected (i.e. it can be accepted). This also conforms to the Max-Eigen statistic. In effect, there exists at most 1 co-integrating relationship among the variables GDP, CEX, PDB, PED and REC as confirmed by both co-integrating test. When only one co-integrating vector is established its parameters can be interpreted as estimates of long run co-integrating relationship between the variables (Hallam and Zanolli, 1993).

Tab.4.3: Vector Error Correction Estimates (Long-run Relationship Coefficients)

LGDP(-1)	LREC(-1)	LCEX(-1)	LPED(-1)	LPDB(-1)
1.000000	-1.184846	0.079484	0.113411	-0.045963
	(1.07598)	(2.52737)	(2.73403)	(1.53205)
	[-6.84913]	[7.16288]	[-7.31950]	[4.73649]

Source: Researcher computation from Eview Output 2017

Table 4.3: Long-run Relationship Coefficients

Having established the number of co-integrating equations, the coefficients of the variables are estimated from the result presented in the Table 4.2. From the result, it reveals that recurrent expenditure and public domestic debt exert negative relationship while the capital expenditure and external debt exert positive relationship in the long run on the economic growth (GDP). The public domestic debt and capital expenditure variables are significant at 5% while recurrent expenditure and public external debt are not significant at 5%. The explanation for this is that LREC (Recurrent expenditure) has a co-efficient of -1.184846 which means that a 1 unit increase in recurrent expenditure will result in decrease of 1.184846 in LGDP (economic growth). A unit change in capital expenditure with result in 0.079484 increases in economic growth. With regard to Public external debt, the results show that, an increase in LPED by 1% will lead to an increase in LGDP by 11.3411%. Furthermore, LPDB (public domestic debt) exerts a negative influence on the LGDP. A 1% rise in LPDB results in decrease of LGDP by about 4.60%.

Tab.4.4: Vector Error Correction Estimates (short-run Relationship Coefficients)

Regressor	Coefficient	Std Error	t-ststistic
Constant	0.102823	(0.07816)	[0.71690]
D(LGDP(-1))	0.047413	(0.19199)	[0.24695]
D(LGDP(-2))	-0.226742	(0.20039)	[-1.13147]
D(LREC(-1))	-0.324732	(0.17040)	[-1.90567]
D(LREC(-2))	0.086973	(0.16199)	[0.53689]
D(LCEX(-1))	0.271340	(0.12063)	[2.24928]
D(LCEX(-2))	0.115500	(0.11029)	[1.04723]

D(LPED(-1))	0.120192	(0.08081)	[1.48742]
D(LPED(-2))	0.007209	(0.07811)	[0.09229]
D(LPDB(-1))	0.341696	(0.22495)	[1.51902]
D(LPDB(-2))	0.238927	(0.24224)	[0.98633]
ECM(-1)	-0.191205	(0.10721)	[-1.78340]
R-squared	0.507797		
Adj. R-squared	0.222837		
F-statistic	1.781993		
Akaike AIC	-0.455435		

Source: Researcher computation from Eview Output 2017

Table 4.4: Short Run Relationship

The table shows that the coefficients of the lagged value of the entire variables are have positive influence except LREC (recurrent expenditure) on the economic growth (LGDP). The entire variables were significant at 5% except capital expenditure. The coefficient of the error in the model has (-0.191205) and it is significant at 0.05. This sign indicates that the economic growth will converge to its long run equilibrium when there is short-term relationship in between all the fiscal policy variables, this also means that the error will continue to be corrected in the long run at about 19.12%. The short term dynamic can be interpreted in the following manner.

A one unit increase in recurrent expenditure will immediately produces a 0.324732 unit decrease in economic growth. Also, a 1unit increase in capital expenditure will immediately cause economic growth to increase by 0.27134. A 1 unit change in public external debt on the other hand causes economic growth to increase by 0.007209. Also when public domestic debt increases by 1 unit, economic growth increases by 0.34169

Ordinary Least Square (OLS) Regression Result

Table 4.5: Ordinary least squares results

Dependant variable LGDP				
Explanatory variable	Coefficient	Std. Error	t-statistic	P-value
C	2.021707	0.212572	9.510698	0.0000
LREC	0.304057	0.112145	2.711273	0.0111
LCEX	0.122349	0.080351	1.522681	0.1387
LPED	-0.117582	0.031208	-3.767653	0.0007
LPDB	0.747198	0.129694	5.761219	0.0000
R-squared	0.992810			
AdjustedR-squared	0.991970			
F-statistic	1020.207			
Prob(F-statistic)	0.000000			
Durb-watson	1.211689			

Source: Researcher computation from Eview Output 2017

4.2.2 Statistical Criteria Interpretation

➤ Coefficient of determinant (R^2)

The R^2 is used to measure the degree to which changes in the dependent variable are being explained by the independent variables. It is used to measure the reliability of the model specified. From the regression analysis, the value of the R^2 is 0.992810, this suggests 99% of the changes in GDP is caused by the independent variables (recurrent expenditure, capital expenditure, public domestic debt and public external debt). The result implies that the independent variables are statistically significant in explaining the dependent variable.

Also, the co-efficient value of LREC implies that 1% increase in government recurrent expenditure will lead to a 30.41% increase in GDP, which indicates a positive relationship, while the value of LCEX implies that a 1% increase in government capital expenditure will generate a 12.23% increase in GDP which also indicates a positive relationship, while LPED shows that 1% increase in public external debt will generate 11.76% decrease in GDP which shows the negative relationship between public external debt and GDP. A 1% increase in public domestic debt leads to 74.72% increase in GDP which shows a positive relationship between public domestic debt and economic growth. The entire variables are statistically not significant at 5% except capital expenditure.

The intercept β_0 (2.021707) shows the value of GDP when the values of the independent variables are indeterminate or when they are zero, this means that when the independent variables (fiscal policy instrument) are zero GDP is 2.021707.

➤ Probability of the F-Statistics

It measures the overall significance of the explanatory variables in a specified model. The value of the F-stat, according to the result of the regression is given as 0.00000. The decision rule for the F-stat is that we reject the null hypothesis when the F-stat is less than 0.05 at 5% level of significance. Since the F-stat is less than the required value of the level of significance, it means that the explanatory variables are significant in explaining changes in the dependent variable and so therefore we reject our null hypothesis.

➤ Durbin Watson

The Durbin Watson is used to detect the presence of autocorrelation which is the relationship between values separated from each other by a given time lag. It tests for serial correlation in the residuals from a statistical regression analysis. The Durbin Watson is always between 0 and 4, a value of two (2) means that there is no serial correlation in the model. A value approaching zero (0) indicates positive autocorrelation and values approaching toward four (4) indicate negative autocorrelation. It is best for the value of the Durbin Watson to be two (2) or better still approaching two (2).

In the regression conducted, the value of the Durbin Watson is 1.211689 which means there is no positive but weak serial correlation in the model because the value is greater than 1 and approaching 2.

➤ Test for Heteroscedasticity

Heteroscedasticity is a term used to describe the situation when the variance of the residuals from a model is not constant. Breusch-Pagan-Godfrey test (B-P-G Test) was used to test for the presence of Heteroscedasticity. The result of this is shown below:

Table 4.5: Test for Heteroscedasticity

F-statistic	0.378363	Prob. F(4,29)	0.8222
Obs*R-squared	1.686382	Prob. Chi-Square(15)	0.7932
Scaled explained SS	1.568308	Prob. Chi-Square(15)	0.8145

Source: Researcher computation from Eview Output 2017

Since the p-value is $>5\%$, this means we accept H_0 meaning that there is no heteroskedaticity and this is desirable as it one of the assumption residual in the OLS regressions.

4.3 Discussion of Results

From the result, recurrent expenditure exert negative this was in contrary to the findings of Muritala and Taiwo (2011). The explanation for this is that most of the recurrent expenditure is diverted for other uses.

Public domestic debt exerts negative relationship with economic growth in the long-run. This is in contrary to the finding of Tajudeen (2010). The explanation for this was those loans obtained are not used for the development of the economy rather than channel the funds to their personal benefit. For instance, Nigeria has borrowed large amounts, often at highly concessional interest rates with the hope to put them on a faster route to development through higher investment, faster growth and poverty reduction but on the contrast economic growth and poverty situations are staggering at the back door amidst excess debt, albeit that was the initial intention.

The capital expenditure exert positive this conform to the findings of Nurudeen and Usman (2010). His explanation was that capital expenditure impact was felt in the area of transportation system in terms of road construction which enhances easy access of people and goods from one place to another.

Public external debt exerts positive relationship in the long run on the economic growth (GDP). This is not significant because there is a growing concern over the amount of borrowing indulged in, the servicing of such foreign debt, and the future strain on regional schemes and general sustainable development. Resources transferred abroad for debt servicing represents a reduction in what can be devoted to regional schemes and economic development. This conform with the finding of Yahya, Haruna and Mariam (2013)

4.4 Test of Hypotheses

From the regression analysis, the study accepts the H_{01} : recurrent expenditure has no significant impact on the Nigerian economic growth and this is in line with the economic a priori which was specified that recurrent expenditure has as positive relationship with economic growth. There is positive relationship but statistically, the relationship is not significant. This could be largely due to misappropriation of public funds and corruption that have resulted in channelling public funds to non-productive areas rather than investing in productive ventures, (such as infrastructure and other growth promoting activities).

The study reject the H_{02} : capital expenditure has no significant impact on the Nigerian economic growth but this in line with economic a priori that was stated that there is positive relationship between capital expenditure and the economic growth in Nigeria. The explanation for this is that Billions of dollars unaccounted for but claimed to have been spent on the power sector is a glaring example but little impact is only felt.

The study accept H_{03} : Public external debt has no significant impact on the growth of

Nigeria economy and this in contrary to economic a priori because it was expected to have a positive relationship with economic growth but the research show a contrary view. The explanation for this is that more resources will be needed to repay and service the debt and this would impair the positive effect of this debt on economic growth. This conform to the findings of Ajayi and Iyoha,(1998).

The study accept **H0₄**: Public domestic debt has no significant impact on the growth of Nigeria economy. This shows a positive relationship and also in line with the economic a priori that was stated. The explanation for this is that the repayment of the principal and interest on such internal debt is a reinvestment into the domestic which would usually have a chain investment effect on the domestic economy but its impact is not significant on the economic growth. This conforms to the findings of Amassoma, (2011).

From this analysis, it was revealed that three out of the four hypotheses were accepted and this seems not to validate the Keynesian postulation of the need for an active policy to stimulate economic activities. In Nigeria, Keynesian theory seem not hold due to some factors such as policy inconsistencies, high level of corruption, wasteful spending, poor policy implementation and lack of feedback mechanism for implemented policies which are indeed capable of hampering the effectiveness of fiscal policy and have made it impossible to come up with such a conclusion.

Conclusion and Recommendations

Based on the findings, the study concludes that fiscal policy instrument has significant impact on economic growth in Nigeria. Based on the findings and conclusion, the following suggested recommendations were made by the study and should be taken into action in order to achieve the macro-economic objectives of fiscal policy:

Government fiscal policy should refocus and redirect government expenditure towards production of goods and services so as to enhance GDP growth. This can be achieved by setting specific goals/targets for each state and for the Federal Government. Attention should focus on the real sector in Nigeria in other to attain the standard level of economic growth. Fiscal policy should give priority attention to capital and public investments by making them of higher proportion in gross government expenditure, thereby creating more jobs and enhancing the quality of public spending and the attainment of sustainable growth and development. Emphasis should be on the development of basic infrastructure (example. transportation, productivity, energy and communication). Human capital development should be a priority.

The government should ensure that policy consistencies and policy reversals are properly checked for both short and long run effects on the economy. Government should fight the problem of corruption because without a reduction of the level of corruption in the country, fiscal policy components will not achieve the required level of economic growth in Nigeria. There is need for an improvement in government expenditure on health, education and economic services, as components of productive expenditure, to boost economic growth. The government has to put in place effective debt management strategies. This is to ensure that all public debts are directed towards the purpose for which they are applied for.

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Appendix

year	GDP	REX	CEX	PED	PD
1981	94.32502	4.8467	6.567	2.3312	11.1926
1982	101.0112	5.506	6.4172	8.8194	15.0076
1983	110.064	4.7508	4.8857	10.5777	22.2214
1984	116.2722	5.8275	4.1001	14.8087	25.6721
1985	134.5856	7.5764	5.4647	17.3006	27.9491
1986	134.6033	7.6969	8.5268	41.4524	28.4387
1987	193.1262	15.6462	6.3725	100.7891	36.7891
1988	263.2945	19.4094	8.3401	133.9563	47.0296
1989	382.2615	25.9942	15.0341	240.3937	47.0496
1990	472.6487	36.2196	24.0486	298.6144	84.0931
1991	545.6724	38.2435	28.3409	328.4538	116.1987
1992	875.3425	53.0341	39.7633	544.2641	177.9617
1993	1089.68	136.7271	54.5018	633.1444	273.8364
1994	1399.703	89.9749	70.9183	648.813	407.5827
1995	2907.358	127.6298	121.1383	716.8656	477.7339
1996	4032.3	124.4913	212.9263	617.32	419.9756
1997	4189.25	158.5635	269.6517	595.9319	501.7511
1998	3989.45	178.0978	309.0156	633.017	560.8302
1999	4679.212	449.6624	498.0276	2577.374	794.8066
2000	6713.575	461.6	239.4509	3097.384	898.2539
2001	6895.198	579.3	438.6965	3176.291	1016.974
2002	7795.758	696.8	321.3781	3932.885	1166.001
2003	9913.518	984.3	241.6883	4478.329	1329.685
2004	11411.07	1032.7	351.3	4890.27	1370.325
2005	14610.88	1223.7	519.5	2695.072	1525.907
2006	18564.59	1290.202	552.3858	451.4617	1753.259
2007	20657.32	1589.27	759.323	438.8909	2169.638
2008	24296.33	2117.362	960.8901	523.2541	2320.307
2009	24794.24	2127.972	1152.797	590.4371	3228.029
2010	54612.26	3109.379	883.8745	689.8375	4551.822
2011	62980.4	3314.513	918.5489	896.8496	5622.843
2012	71713.94	3325.157	874.834	1026.904	6537.536
2013	80092.56	3689.061	1108.386	1373.58	7118.979
2014	89043.62	3417.578	783.1224	1631.52	7904.02

Source: CBN statistical bulletin 2015