

Budget Implementation and Output Growth in Nigeria (1986-2019) (An Empirical insight from FM-OLS and ECM Techniques)

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Abstract

This study investigates the effect of budget implementation on Output growth. Gross Domestic Product (GDP) was used as the explained variable proxy while Recurrent Expenditure (RECEX), Capital expenditure, (CAPEX), Budget implementation rate (BIR) and Public Debt Servicing (PDS) were used as the explanatory variables of the study. Data on these variables were sourced from the Central Bank of Nigeria statistical bulletin and various publications of the ministry of finance from 1986 to 2019. The study adopted Fully Modified Ordinary Least Square (FM-OLS), Co-integration and Error Correction Model (ECM) in analyzing respectively the short and long-run effect of budget implementation on Nigeria's economic growth. The data gotten were Normalized using Log transformation conversion method in order to standardize it and make it of the same unit of measurement (rate) with the budget implementation rate which is the major variable of the model. The findings from the study revealed that in the short run, LRECEX and LPDS have a Negative and significant relationship with GDP while LCAPEX and LBIR will have a significant and Positive relationship with GDP. In the long run, there was a complete turn of relationship as to what was obtained in the short run. Based on these it is recommended that government should try to put in place effective machineries that will ensure the strict adherence to due process and total implementation of annual budget provision and avoid diversion of public funds to personal uses

Keyword: Budget implementation, Economic growth, FM-OLS, ECM

1.0 INTRODUCTION

Over the years, the Nigerian economy has seen a succession of inconsistencies in the development and execution of economic policies. Budget planning and execution imbalances are the pattern and genesis of most Nigerian issues. In any contemporary state, the budget is a critical and important instrument of governance. It has the capability of assisting planning and helping to economic progress. It is considered as an essential instrument capable of stimulating economic growth and development since it is a full income statement of the government. According to Ogujiuba and Ehigiamusoe (2013), the national budget is a government's most important economic policy tool, reflecting the government's goals in social and economic policy better than any other document. In other words, the budget is the primary tool of fiscal policy. Ohanele (2010), who further emphasized the importance of a well-functioning budget system in the development of sustainable fiscal policy and the promotion of economic growth, supports the

aforementioned concept. In order to achieve the macroeconomic aims and objectives of full and steady employment, higher standard of living, balance of payment equilibrium among others, the federal government initiates several types of budget such as surplus, balanced, deficit, supplementary, development budget; and also include the line item or traditional budgeting system, performance budgeting system, planning budgeting system, programming schools and so on), the provision of employment opportunities, the reduction of poverty, and the supply of transport, health, and educational facilities. Hence this study seeks to analyze the effect of budget implementation on economic growth in Nigeria.

The level of budget implementation in Nigeria since the advent of democracy in 1999 has been low and that there has been wide disparity between budgeted capital expenditures and actual capital expenditures. This above assertion is true but the fact is that the problem with budget is traceable to as far back as

1986 (SAP period), this has been a recurring problem.

Recently, there have been a lot of controversies in Nigeria concerning budgeting as to the modality for preparation, administration and implementation in the country due to continuous change in government and consequential change in policy and ideology. Especially with the understanding of a geometric rise in the country population over the years, this has made them advocate the need to review the size of governance in Nigeria in order to push up the provisions available for more necessary projects. The controversy over the oil benchmark that has hindered the national assembly from the passage of the 2013 budget due to dispute over the price that must be used for budgeting purposes. It is important to state here that implementation cannot be discussed without appropriate planning and reassessing coupled with proper monitoring to facilitate it efficient implementation. The problem of budgeting in Nigeria is both in the aspect of preparation and implementation, hence, the need for adequate control aimed at improving effective resources utilization at the budget implementation stage. The annual budget of both the federal and state governments is a key to the growth and development process of the country. Both as an instrument of policy and as a vehicle for channeling resources to specific development projects and programmes, the potential of the budget to influence development is vital and enormous.

Statement of the Problem

Budgeting, as an essential economic policy tool at the government's disposal, is critical to achieving economic success for the people and the nation as a whole. Over the years, there have been a number of inconsistencies in the execution of planned budgets in Nigeria. However, academics and Nigerians alike are concerned about the time gap between its inception and complete execution in order to reach the intended effect. It's one thing to propose a budget; it's quite another to put it into action in order to fulfill the proposed budget's economic growth and development objectives.

In light of increased democratization and civil society participation, the focus on the budget has recently shifted. In light of growing

democratization, civil society engagement, and a desire to address poverty-related developmental issues, the attention on the budget has risen in recent years. Momoh (2017) observed that in many developed countries around the world, planned government expenditure as contained in their annual budget is rigorous, and that strict implementation of such budget has played a significant role in reducing disparities, creating infrastructure for economic growth in the areas of communication, transportation, increased production of goods and services, and job creation. Countries like the United States, China, Russia, and the United Kingdom enjoy enviable positions in the rating among nations for maintaining a reasonable/appreciable stable economic growth on account of their budget implementation and monitoring of performance (Ochadu and Omaye, 2017).

Similarly, countries such as Ghana, Rwanda and South Africa in sub-Saharan Africa have been recording impressive GDP hovering between 6-7% since 2014 on account of their budget implementation to effect positive changes especially in productive sectors (Lawal and Aduku, 2017). Unfortunately, Nigeria's situation is unique. Over the years, the government has budgeted vast sums of money in her yearly plans, dubbed "Budget for Growth," "Consolidation," and so on, and has assumed rising trends. For example, from 2014 and 2018, the sums in trillions were N3.53, N4.45, N5.06, N6.06, and N8.162, respectively (National Bureau of Statistics, 2018). The statistics are massive, and if carefully executed and maintained, they would have resulted in great economic development.

Moreover, the implementation of the national budget means a corresponding implementation of debt servicing, capital expenditure, recurrent expenditure, tax, subsidies among others in Nigeria since they are important component of the national budget. It is sad that despite the huge amount of Nigeria's budget, its impact has been evidenced by stunted/stagnant GDP growth. The question is, what have we to show for these trillions of naira budget in terms of critical infrastructure, employment opportunities, poverty reduction, and debt reduction amongst others? It is against this background that this study was conceived.

Based on the aforementioned, this research work will investigate the effect of budget implementation on economic growth and tries to proffer a diagnostic solution. This will greatly help government to rectify its short comings, reach its desired goals and maximize its productivity and proficiency to propel growth in the economy. The study will provide a clear insight for macroeconomic policy makers to know the implication of several policies that pertains specifically to debt service, capital budget and recurrent budget on the nation's economy through its findings.

LITERATURE REVIEW

The concept of Budget

The term budget has been defined by various scholars in different ways. From the layman perspective, budget is seen as an estimate of government income and expenditure for a given period of time usually one year. Olurankise (2012) defined budget as a framework for revenue and expenditure outlays over a specified period usually one year. Meigs and Meigs (2004) defined budget as a comprehensive financial plan, setting forth the expected route for achieving the financial and operational goals of an organization.

Omolehinwa (2003), viewed budget as the plan of dominant individuals in an organization expressed in monetary terms and subject to the constraints imposed by other participants and the environment indicating how the available resources may be utilized to achieve whatever the dominant individual agreed to be the organization's priorities. Budget could also be seen as an outlay which defines government expected income and anticipated expenditure within a given period of time usually one year.

Budget Process in Nigeria

Basically in Nigeria, budget process includes budget preparation by the executive, legislative approval and implementation by the different ministry, department and parastatal of the government. During the phase of budget

implementation, there are many possibilities for interventions and manipulations in view of the fact that officials have a great amount of discretionary power to decide which spending ministry or agency will be granted spending authorization. In Nigeria, before ministries and spending agencies of the government can incur an obligation to make expenditures, they must secure spending authorization from the Ministry of Finance through the use of warrants. This warrant will authorize officers controlling votes to incur expenditure in accordance with the approved estimates subject to any reserved items. In spite of the specific nature of appropriation laws, the commitment phase of the expenditure process is a fertile ground for corrupt activities. If the Appropriation Act has not come into operation at the beginning of the year, a provisional general warrant may be issued to ensure continuity of the services of government at a level not exceeding those of the previous year. The length of period of spending authorization is determined in functional cash flow forecast for the period when payments are anticipated

ECONOMIC GROWTH

Economic growth is the sustained increased in the amount of goods and services produced in an economy over time. According to Kuznets, it is defined as the long term increase in the capacity of an economy to supply increasingly diverse economic goods to its population, based on technological advancement, institutional and ideological adjustments to its demand. It can be referred to as the increase in the gross domestic product which can be measured in nominal or real terms, but conventionally, measured as the percent rate of increase in Real Gross Domestic Product (RGDP). In real terms means it's being adjusted for inflation. Economic growth means there is an increase in national output, expenditure and national income. Economic growth, in economics refers to growth of potential output, that is, production at full employment. Economic growth is one of the most important macroeconomic indicators of a healthy nation and economy at large.

Comparing Budgetary Process in Selected African Countries with Nigeria

Table 2.2: Assessment of Budgetary Process in Selected African Countries

Countries	Time to consider the budget	Designated and process to scrutinize budget	Independent research capacity	Public hearing held
Ghana	Budget tabled one month before end of financial year, four month provided for legislative scrutiny but budget normally approved within 2 weeks of presentation	Committee designated and process set out in parliamentary rules	None	Opportunity for submission or appearance provided but rarely takes up due to late availability of information and limited time.
Kenya	Budget tabled 10 days before end of financial year. Provisional approval needed before year ends. Budget approval is 6 month later	Committee designated and process set out in parliamentary rules	None	Hearing held but with limited effectiveness
Nigeria	Constitution does not provide deadline for legislative approval of the budget. The executive can spend up to 6 months of previous year's budget before approval is gained	Committee on appropriation exists. Parliamentary rules and set out clearly legislative budget process	Bill in place for the creation of legislative budget office	Hearing held where experts comment on the budget.
South Africa	Budget is tabled 6 weeks before start of the financial year. Legal framework provide for unlimited time to pass the budget. However, new types of expenditure may not begin without approval and spending limit before authorization is set	Committee designated but legislation set out new process in place	No capacity	Hearings held with proceedings widely reported. Effectiveness is limited due to dormant amendment power
Zambia	Budget is presented 2 months after the start of the financial year. Time for legislature phase is limited	Committee designated but no clear process	No capacity	No hearing held

Source: Review from various reports on selected African budgetary process (2019)

Theoretical Review

Theory of increasing State Activities

Wagner's law is a principle named after the German economist Adolph Wagner (1835-1917). Wagner advanced his 'law of rising public expenditures' by analyzing trends in the growth of public expenditure and in the size of public sector. Wagner's law postulates that: (i) the extension of the functions of the states leads to an increase in public expenditure on administration and regulation of the economy; (ii) the development of modern industrial society would give rise to increasing political pressure for social progress and call for increased allowance for social consideration in the conduct of industry (iii) the rise in public expenditure will be more than proportional increase in the national income (income elastic wants) and will thus result in a relative expansion of the public sector.

Keynesian Theory of Growth

Keynes theory on public expenditure and economic growth was among the most noted with his apparently contrasting view point on this relation. Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instruments promote economic growth. From the Keynesian's point of view, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand.

Review of Empirical Studies

Empirical evidences from Developed Countries

Loizides and Vamvouks (2005) employed the causality test to examine the relationship between public expenditure and economic growth, using data set on Greece, United Kingdom, and Ireland. The authors found that government size Granger causes economic growth in all the countries they studied. The results also indicated that economic growth Granger causes public expenditure for Greece and United KingdoVerma and Arora (2010) examined the validity of Wagner's law in India over the period from 1951 to 2008. Empirical evidences regarding short-run dynamics refuted the existence of any relationship between Developing Country Studies www.iiste.org economic growth and the size of the government expenditure. Afzal and Abbas (2012) reinvestigated the application of the Wagner's hypothesis to Pakistan over the period from 1960 to 2007 using time series econometrics techniques. The study found that Wagner's hypothesis does not hold for aggregate public spending and income for three periods (1961–2007, 1973–1990, and 1991–2007) while it holds only for the period from 1981 to 1991. However, when fiscal deficit is included, the results supported the existence of Keynesian views about public spending and growth.

Zheng (2010) studied the empirical analysis on the relationship between the sizes of Chinese government, as measured by its annual spending, and the growth rate of the economy. More specifically, it designed to examine the applicability of Wagner's law to the Chinese economy. The statistics used in this research is annual time series data on total government spending and gross domestic product covering the period from 1952 to 2007. Empirical results showed no strong evidence in support of the validity of Wagner's law for Chinese economy.

Evidences from Developing Countries

Dogan (2006) investigated the relationship between national income and public expenditures for Indonesia, Malaysia, Philippines, Singapore, and Thailand. Granger causality tests were used to investigate the causal links between the two variables. The result of Granger causality revealed that causality runs from public expenditures to national income only in the case of Philippines, and there was no evidence for other countries.

Komain and Brahasrene (2007) examined the relationship between public expenditure and economic growth in Thailand, by employing the Granger causality test. The results revealed that public expenditure and economic growth are not co-integrated, but there exists a significant positive effect of public expenditure on economic growth.

Bingxin, Fan and Saurkar, (2009) assessed the impact of the composition of public expenditure on economic growth in developing countries. They used a dynamic generalized method of moment (GMM) model and a panel data set for 44 developing countries between 1980 and 2004. The results indicated that the various types of government spending had different impact on economic growth. In Africa, human capital expenditure contributes to economic growth whereas, in Asia, capital formation, agriculture, and education expenditure had strong growth promoting effect.

Evidences from Nigeria

Abu and Abdullah (2010) investigates the relationship between government expenditure and economic growth in Nigeria from the period ranging from 1970 to 2008. They used disaggregated analysis in an attempt to unravel the impact of government expenditure on economic growth. Their results reveal that government total capital expenditure, total recurrent expenditure and Education have negative effect on economic growth. On the contrary, government expenditure on transport, communication and health result in an increase in economic growth. They recommend that government should increase both capital expenditure and recurrent expenditure including expenditure on education as well as ensure that funds meant for development on these sectors are properly utilized. They also recommend that government should encourage and increase the funding of anti-corruption agencies in order to tackle the high level of corruption found in public offices in Nigeria.

Nurudeen and Usman (2010) investigated the effect of government expenditure on economic growth with disaggregated expenditure data from 1979 to 2007. The results reveal that government total capital expenditure, total recurrent expenditures, and government expenditure on education have negative effect on economic growth. While the foregoing studies focused on the Keynesian model which stipulates that expansion of government expenditure accelerates economic growth.

Ighodaro, Clement and Dickson (2010). In addition to total government expenditure they used a disaggregated government expenditure data from 1961-2007, specifically; expenditure on general administration and that of community and social services to determine the specific government expenditure that economic growth may have significant impact on. Other variables reflecting fiscal policy changes and political freedom were also included in the model to augment the functional form of Wagner's law. All the variables used were found to be I(1) and long run relationship exist between the dependent and the independent variables except in the case where only GDP was used as the independent variable. Wagner's hypothesis did not hold in all the estimations rather Keynesian hypothesis was validated.

Oke (2013) conducted a study to theoretically and empirically explore the effect of budget implementation on the Nigerian economic growth and provides a panacea to the problem of budget allocation and its implementation. The study the adopted the econometric model of ordinary least square (OLS) regression test for analysis and time series data span from 1993 to 2010 was considered to capture the short run relationship between the proxies of budget implementation and economic growth. The study revealed that implementation has a positive effect impact on Nigeria economic growth. The study further showed a positive relationship between GDP and public total expenditure (PEX), public recurrent expenditure (PRE), public capital expenditure, external debt (EXD), while public capital expenditure (PCE) shows a negative relationship to GDP.

METHODOLOGY

3.1 Theoretical Framework

The study adopted the Adolf Wagner theory of increasing states activities as a theoretical framework. Wagner's law postulates that: (i) the extension of the functions of the states leads to an increase in public expenditure on administration and regulation of the economy; (ii) the development of modern industrial society would give rise

to increasing political pressure for social progress and call for increased allowance for social consideration in the conduct of industry (iii) the rise in public expenditure will be more than proportional increase in the national income (income elastic wants) and will thus result in a relative expansion of the public sector. Musgrave and Musgrave (1988), in support of Wagner's law, opined that as progressive nations industrialize, the share of the public sector in the national economy grows continually. After some years, new factors have been added, such as the increase in population density and urbanization, consequently that leads to increased state (public) expenditures and economic regulation.

3.2 Model Specification

The study adopts an econometric model in determining the effect budget implementation on economic growth in Nigeria. The study adopts a similar model used by Oke (2013) which is specified below as:

$$GDP = f(PEX, PRE, PCE, PDS) \text{ -----Eqn 3.1 where;}$$

GDP = Gross Domestic Product

PEX = Public Total Expenditure

PRE = Public Recurrent Expenditure

PCE = Public Capital Expenditure

PDS = Public Debt servicing

However, in specifying the model for this study, the above model will be modified to avoid Multicollinearity substituting some explanatory variables of the study for PCE, PRE, BIR and PDS. As a result, the new model adopted to underpin the research is specified below as:

$$GDP = f(PCE, PRE, BIR, PDS) \text{ ----- (3.2)}$$

Where GDP = Gross Domestic Product

PCE = Public Capital Expenditure

PRE = Public Recurrent Expenditure

BIR = Budget Implementation Rate

PDS = Public Debt Servicing

The above implicit function can be specified as explicitly as;

$$RGDP = \beta_0 + \beta_1 PCE_t + \beta_2 PRE_t + \beta_3 BIR_t + \beta_4 PDS_t + \mu_t$$

Where μ = Stochastic error term

β_0 = Constant term

$\beta_1, \beta_2, \beta_3$ are estimated parameter

3.4.1 Unit Root test

it is essential to test for the stationarity of each variable to ascertain the characteristics of the series. To test for stationarity, there are several techniques that are used for both formal and informal test. The informal test

approach includes the graphical inspection of the series, which gives a glimpse of the nature of the series. This test is carried out using the Augmented Dickey Fuller (ADF) technique of estimation. The rule is that if the ADF test statistic is less than the 5 percent critical value we reject the null hypothesis, that is, the variable is stationary but if the ADF test statistic is greater than the 5 percent critical value, we accept null hypothesis, that is, the variable is non-stationary, hence, we go ahead to difference in order to induce stationary. It is expected that the variable becomes stationary at first difference. The specification of ADF test is given as follows;

$$\Delta Y_t = \alpha + \beta_t + \rho Y_{t-1} + \Sigma \delta \Delta Y_{t-1} + \mu_t \dots \dots \dots (3.3)$$

Where Y_t is the level of the variable under consideration, t denotes time trend and μ_t is error term assumed to be normally and randomly distributed with zero mean and constant variance. The optimal lag length was chosen on the basis of Akaike Information Criterion (AIC). Before using the Fully Modified- Least Square (FM-OLS) approach model, the study would test the time series properties of the data to check whether the univariate series were either $I(0)$ but not $I(2)$, which is a precondition before one can employ the FM-OLS approach.

3.4.2 FMOLS

The FMOLS is an optimal single-equation method based on the use of OLS with semi parametric correction for serial correlation and endogeneity (Phillips & Loretan, 1991).

Suppose y_t be an n -vector $I(1)$ process and u_t be an n -vector stationary time series. The partition of these vectors can be seen as

$$y_t = \begin{bmatrix} y_{1t} \\ y_{2t} \end{bmatrix}_m, \quad u_t = \begin{bmatrix} u_{1t} \\ u_{2t} \end{bmatrix}_m, \quad n = m + 1$$

Assuming that the generating mechanism for y_t is the cointegrated system given as

$$\begin{aligned} y_{1t} &= \beta' y_{2t} + u_{1t} \\ \Delta y_{2t} &= u_{2t} \end{aligned}$$

The basic idea in this procedure is to modified the OLS estimator

$$\beta^* = (Y_2' Y_2)^{-1} Y_2' y_1 \quad (4) \quad (\text{Phillips \& Loretan, 1991}).$$

But $\sigma_{21} = \sum_{k=0}^{\infty} E(u_{20} u_{1k})$. If $\hat{\sigma}_{21}$ is consistent estimator of σ_{21} , then we have a modified OLS estimator

$$\beta^{**} = (Y_2' Y_2)^{-1} (Y_2' y_1^* - T \hat{\sigma}_{21})$$

Then the Fully Modified OLS (FMOLS) estimator employs both the serial correction and endogeneity corrections and is given as

$$\beta^+ = (Y_2'Y_2)^{-1}(Y_2'y_1^+ - T\delta^+)$$

where

$$y_{1t}^+ = y_{1t} - \hat{\sigma}'_{21}\hat{\Sigma}_{22}^{-1}\Delta y_{2t}$$

$$\hat{\delta}^+ = \hat{\Delta} \begin{bmatrix} 1 \\ -\Sigma_{22}^{-1}\hat{\sigma}_{21} \end{bmatrix}$$

where $\hat{\Delta}$ is a consistent estimate of $\Delta = \sum_{k=0}^{\infty} E(u_{20}u_{1k})$ and $\hat{\Sigma}$ is consistent for Σ

Fully modified test statistics that are based on β^+ may be constructed in the usual way. Thus, for t-ratios we defined as

$$t_i^+ = (\beta_i^+ - \beta_i) / s_i^+$$

where $(s_i^+)^2 = \hat{\sigma}_{11.2} \left[[Y_2'Y_2]^{-1} \right]_{ii}$
 here $\hat{\sigma}_{11.2} = \hat{\sigma}_{11} - \hat{\sigma}'_{21}\hat{\Sigma}_{22}^{-1}\hat{\sigma}_{21}$

And is based on components of $\hat{\Sigma}$ which is again an estimate of long-run covariance matrix Σ (Phillips & Hansen (1990); Phillips & Loretan (1991)). A detail of this method can be found in Kuhe (2016) and Adenomom et al. (2018).

3.4.3 The Error Correction Model Equation

The Error Correction Model (ECM) shows the speed of adjustment from short-run to long run equilibrium. If co-integration is proven to exist, then the third step requires the construction of error correction mechanism to model to check the dynamic relationship. The a priori expectation is that the ECM coefficient must be negative and significant for errors to be corrected in the long run. The purpose of the error correction model is to indicate the speed of adjustment of a departure from long-run equilibrium. However, the greater the co-efficient of the parameter (which is always significantly negative and less than one) the higher the speed of adjustment of a departure from long-run equilibrium. The Error Correction model is represented as follows:

$$\Delta Y_t = \alpha_0 + b_1\Delta X_t - \pi\hat{u}_{t-1} + Y_t \dots \dots \dots (3.4)$$

Results and Discussion

Result of unit root test

Variable	Level ADF Test Statistic	MacKinnon Critical Value at Level at 5% level	First Difference ADF Test Statistic	MacKinnon Critical Value at First Difference at 5% level	Decision
LRGDP	-0.789370	-2.957110	-3.140876	-2.957110	I(1)
LCAPEX	-1.624214	2.954021	-6.243065	-3.612199	I(1)
LRECEX	2.316594	-2.954021	8.107793	-2.971853	I(1)
LPDS	-1.232529	2.976263	5.291921	--3.587527	I(1)
LBIR	-3.946337	-2.957110	-8.699239	-2.960411	I(1)

*Significant at 5% level.

Source: Author’s Computation E-views (2019)

Table 4.3 above is used to present the result of the stationary test. The study used ADF Unit Root Test to determine the order of integration of the variables. The ADF was carried out at Level and at First-difference. The null hypotheses underlying the unit root testing is that the variables under investigation have a unit root and the alternate that there is no unit root. The ADF Unit Root results shows that LRGDP, LCAPEX LRECEX, LBIR and LPDS are stationary at first difference (i.e integrated at I(1)) these result support the findings of (Umaru, 2012).

Fully Modified Ordinary Least Square Model

Table 4.5: FM-OLS model for long run relationship

Dependent Variable: LRGDP

Method: Fully Modified Least Squares (FMOLS)

Date: 07/23/21 Time: 21:42

Sample (adjusted): 1988 2019

Included observations: 32 after adjustments

Cointegrating equation deterministics: C

Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LRECEX	0.501322	0.114174	4.390873	0.0002
LOGCAPEX	-0.251967	0.078599	-3.205737	0.0034
LPDS	-0.002562	0.081178	-0.031558	0.9751
LBIR	0.305386	0.161515	-1.890751	0.0694
C	10.00151	0.652724	15.32271	0.0000
R-squared	0.942832	Mean dependent var		10.44385
Adjusted R-squared	0.934363	S.D. dependent var		0.518705
S.E. of regression	0.132891	Sum squared resid		0.476817
Long-run variance	0.032065			

Source: Author's Computation E-views (2019)

The FMOLS obtained in Table 6 and the estimated model for the long run is given below:

$LRGDP = 10.00151 + 0.50132LRECEX - 0.251967LCAPEX - 0.002562LPDS + 0.305386LBIR \varepsilon_t$ The model above reveal that Real GDP becomes positive if there is no influence of all other variables. The model also show that recurrent expenditure is significant and positively related to Real GDP which implies that a one percent increase in recurrent expenditure will induce a 0.50 percent increase in gross domestic product. Also, budget implementation rate will result to an increase in Real GDP i.e. a one percent change in budget implementation rate will induce a 0.30 percent change in gross domestic product. While capital expenditure and public debt servicing are negatively related to output growth rate which implies that every unit increase in capital expenditure and public debt servicing will result to a decrease on Output growth rate. The model further revealed that Recurrent expenditure and capital expenditure are all significant since all the P-values are less than 0.05 level of significance, only public debt servicing and budget implementation rate is not significant since the P-value is greater than 0.05 level of significance

ERROR CORRECTION MODEL

Table 4.8 Result of the Restricted Error Correction Model

Dependent Variable: D(GRGP)			
Method: ARDL			
Proxy for Budget implementation			
Variable	Coefficient	t-Statistic	Prob.
C	0.011433	0.825420	0.4240

D(RGDP(-1))	0.978302	8.339133	0.0000
D(RECEX(-1))	-0.517223	-4.700530	0.0004
D(PDS(-1))	1.480327	4.604320	0.0005
D(CAPEX(-1))	0.378127	2.834811	0.0141
D(BIR(-1))	0.605989	-4.672174	0.0004
CointEq(-1)*	-1.436799	-9.670999	0.0000
R-squared	0.937369	F-statistic	29.93288
Adjusted R-squared	0.910998	Prob(F-statistic)	0.000000
Durbin-Watson Stat:	2.174435		
Breusch-Godfrey Correlation LM: F-Stat	Serial 0.134617	Prob(F-statistic)	0.8755

Source: Author's Computation (2021)

The Table above contains the ECM Coefficients and its respective short run coefficients as well as their t-statistic and p-value. The ECM (-1) is the coefficient of the error correction mechanism and it has the correct sign and it is significant, which implies that the speed it takes for the system to come to its equilibrium point is about 48.9%. The ECM model further revealed that there is significant short run effect of Exchange rate on unemployment rate in Nigeria.

The result for the error-correction term (*ECT*) provides further direct evidence on the co-integration (i.e long run) dynamics that exist between Real Gross Domestic Product growth rate and its regressors in our model. The error correction coefficient is estimated to be -1.436799 (0.0000), which is reasonably large (and highly significant). This suggests that 100% of any disequilibrium between Real Gross Domestic Products and the regressors are corrected in one period (a year).

Summary

An empirical investigation of the effectiveness of budget implementation on Nigeria's economy was conducted and the major findings of the study was found that overall Budget implementation rate play crucial role in influencing the level of economic growth in the country. This result gives weight to the place of federal ministry of budget and planning in the national development process of a nation. This study investigated the relationship that exists between budget implementation and real gross domestic product (a proxy for output growth). The study employed secondary data sourced from Central Bank statistical Bulletin. Data collected were analyzed using time series econometrics techniques such as, descriptive statistics, unit root test, FM-OLS Test, Error correction mechanism and Granger Causality Test.

Conclusions

This research examined the effect of budget implementation on the growth of Nigerian economy. Existing literature shows that researchers are yet to reach a consensus about the effect of budget implementation on economic growth in Nigeria. Therefore, the effect is yet to be well established. This study has contributed to the research effort at empirical measure of the effect of budget implementation on economic growth. The relationship between budget implementation and growth is especially important for developing countries (like Nigeria), most of which have experienced decreasing levels of budget implementation over time. There is evidence that, unlike in the case of developed countries, debt is not negatively related with economic growth. The analysis revealed that there is a significant relationship between budget implementation and economic growth, and that while capital expenditure exerted positive effect on growth, and the result shows a positive and significant relationship between recurrent expenditure and Gross Domestic Product. Debt on the other hand has negative but significant relationship with gross domestic product.

Recommendations

Based on the findings made in the course of this study, particularly the results of the FM-OLS models, it is clear that the development of the Nigerian economy is highly dependent on the conscious and full implementation of its budgeted projections, which will in no doubt encourage economic growth and development. The following recommendations are hereby made:

- i. Nigeria should endeavor to include more capital expenditure in its government spending plan in order to speed record a yearly increase in the value of growth process that is brought about by the future effect of capital investment.
- ii. It is advised that government debt should be strictly used for the reason why they are borrowed and not diverted to other unbudgeted projects, also the anti-graft agency should be encouraged to carry out their work faithfully and diligently so as to put all government officials on their toes and not to embezzle government money.
- iii. Apart from paper documentations, government should ensure effective implementation of budget by translating the budgeted amount into tangible assets such as good roads, infrastructures, electricity supply among others so that the ordinary citizen on the road can feel the impact of good governance. Finally, the government should also try to put in place effective machinery that will ensure the strict adherence to due process.

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