

FISCAL POLICY AND MACROECONOMIC PERFORMANCE IN NIGERIA

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Abstract

This paper empirically examined the effect of fiscal policy on macroeconomic performance in Nigeria from 1970 to 2017. Secondary data were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (various issues). The study adopts the ARDL, Engle-Granger Co-integration and Error Correction Modeling techniques for the analysis. Data for the empirical analysis were sourced from secondary sources like CBN Statistical Bulletin (Various- Issues). The results of analysis indicated that a long run relationship exists among the variables (i.e. fiscal policy and macroeconomic performance) based on the Bound co-integration test and Engle-Granger co-integration test. Furthermore, the paper revealed that CXP negatively impacted on EGR, RXP and DUM have negative insignificant effect on EGR while TGR has a positive impact on EGR; RXP has a negative insignificant impact on INF, CXP and TGR, DUM has a positive insignificant effect on INF while DUM negatively impacted on INF; the coefficient of past lag (1) of government capital expenditure (CXP) has a positive insignificant effect on UNE while the coefficient of past lag (2) of government capital expenditure (CXP) has a negative insignificant effect on UNE; the coefficient of past lag (1) of government recurrent expenditure (RXP) has a negative insignificant effect on UNE; the coefficient of past lag (2) of tax revenue (TGR) has a negative insignificant effect on UNE; while the coefficient of both current and past lag (2) of DUM has a negative insignificant effect on UNE. Based on the findings, the study recommended that strict adherence of the fiscal responsibility law will no doubt help in curbing most of the problems that militate against sound public sector resource management. Proper compliance is essential in promoting fiscal discipline, transparency, accountability and therefore foster macroeconomic stability. Also, appropriate policy mix, prudent public spending, setting of achievable fiscal policy targets and diversification of the nation's economic base, among others.

Keywords: Economic Growth, Inflation, Unemployment, Government Expenditure and Tax Revenue

1. Introduction

Theoretically, the Keynesians view fiscal policy as a tool to fine-tune aggregate expenditures and protect people from turbulent swing in their well-being (Gbanador, 2007). Fiscal policy entails the use of government expenditures and tax policies to stimulate or contract macroeconomic activities. Government intervention through fiscal policy is geared towards the achievement of macroeconomic stability and real growth.

For many developing countries, a large spectrum of public debate on macroeconomic fiscal policy has not only focused on the output growth outcomes of effective fiscal policy, but also on its effectiveness in business cycle stabilization as a fundamental aspect (Adegboye, 2012). Despite the lofty place of fiscal policy in the management of an economy, the Nigeria economy is yet to come on the path of sound growth and development and is still faced with chronic levels of unemployment, rising rate of inflation, dependence on foreign technology, mono cultural foreign exchange earnings from oil and more (Iyeli, 2012).

Particularly, experience in Nigeria illustrates the difficulties of implementing fiscal policy in an environment with high volatile revenue flows. Over the years, there have been a strong deficit bias and procyclicality in fiscal policy, driven largely by oil price development as pointed out in Akanniwo (2013). Over time, various oil price developments in the world oil market have led to instability in fiscal stance and has been transmitted to the rest of the economy, with negative implications for in particular the real exchange rate and growth performance.

In the last three decades Nigerians have contended with not only vanishing real incomes but also unbearable levels of unemployment and inflation, decay in social amenities and more (Ewetan, 2012). According to Ezeabasili (2013), public sector management in Nigeria since independence has failed to deliver the much expected macroeconomic stability.

Again, because Nigeria operates a federal system of government, each tier of government adopts its own fiscal policy without proper coordination or alignment and without caring about its systemic effect. The implication is that resources are not properly coordinated and purposefully deployed to projects with specific macro-economic goals. This, in turn, retards macroeconomic stability. Even with the progressive increase in revenue accruing to governments over the last three decades, there has been growing misplacement of fiscal priorities as resources have been increasingly frittered away or diverted to trivial macroeconomic pursuits. How long will this seeming fiscal irresponsibility continue to dwarf economic development? (Ezeabasili, 2013).

Overall evidence on the impact of fiscal policy on macroeconomic performance points to varying experiences. According to Philip (1997), fiscal policy in Nigeria has lost the desirable characteristics required for its effectiveness as a tool for aggregate demand management since the drastic oil price fall of 1980s.

Adeoye (2006) still observed that the debate on the usefulness of fiscal policy as a tool for economic growth and development remains inconclusive given the conflicting results of current research. The contrary findings from several studies suggest that empirical research on the average has had little success in establishing a strong and statistically significant relationship between fiscal policy and macroeconomic performance.

Despite the long history of fiscal operations in Nigeria, one is still saddled with the following issues: Has fiscal policy been able to achieve macro-stabilization in Nigeria? Could the nature of Nigerian fiscal federalism be responsible for poor macroeconomic performance? What fiscal policy rule option is best for the Nigerian economy? These questions and many more make it imperative to further investigate the effect of fiscal policy on macroeconomic performance in Nigeria.

2. Literature Review

2.1 Theoretical Review of Literature

(i) Keynesian View of Fiscal Policy

The English economist, John Maynard Keynes popularized the use of fiscal policy as a stabilization tool. Writing during the Great Depression of the 1930s, Keynes argued that output and employment were well below their potential because there was insufficient total demand. If demand could be increased, output and employment could be expanded and the economy would return to its full employment potential. Moreover, Keynes believed this could be achieved with expansionary fiscal policy.

During a recession, Keynes argued that, rather than balancing its budget, the government should increase its spending, reduce taxes, and shift its budget toward a deficit. According to Keynes, higher levels of government spending would directly increase total demand. Further, lower taxes would increase the after-tax incomes of households and they would spend most of that additional income, which would also stimulate total demand. Thus, the Keynesian prescription to cure a recession was a larger budget deficit.

In contrast, if the economy was experiencing a problem with inflation during an economic boom, Keynesian analysis called for restrictive fiscal policy to temper excessive demand. In this case, reductions in government spending, higher taxes, and a shift of the budget toward a surplus would reduce total demand and thereby help to fight an inflationary boom.

Thus, Keynes rejected the view that the government's budget should be balanced. He argued that appropriate budgetary policy was dependent on economic conditions. According to the Keynesian view, governments should run budget deficits during recessionary times and surpluses during periods when inflation was a problem because of excessive demand.

Can fiscal policy be used to reduce economic instability? The Keynesian view of fiscal policy swept the economics profession and, by the 1960s, it was also widely accepted by policy makers. During that era, most economists believed that fiscal policy exerted a powerful

impact on the economy and that it could be instituted in a manner that would smooth the ups and downs of the business cycle. However, this is more difficult than was initially perceived. If changes in fiscal policy are going to exert a stabilizing impact on the economy, they must be timed correctly. Proper timing of fiscal changes is difficult.

(ii) Austrian Economic Theory

Austrian Economic theory, the main rival of Keynesian theory, believes that government deficits do not grow the economy but that debt or deficits weigh down economic output. According to Ott (2003), Austrian theory suggests that government deficits have adverse effects on growth, and proposes a combination of spending cuts and tax cuts, arguing that government spending in the public sector does not create higher production, but that investment in the private sector does. Austrians see Keynesian theory as simply a ‘Boom-Bust’ model that does not create sustained economic growth, but only short turn economic bubbles, such as the sub-prime mortgage crisis which they blame in part on the excess availability of credit due to low interest rates from the Federal Reserve. Economists debate the effectiveness of fiscal stimulus. Austrians argue against almost any government distortion in the market economy (Ott, 2003).

(iii). Classical and Neoclassical Schools of Thought

The Classics believe that fiscal deficits incessantly financed by debt crowds-out private investment and by extension lowering the level of economic growth. As summarized by Tchokote (2001), "The classical economists believe that debt issued by the public has no effect on the private sector savings. To them, a deficit financed by increasing the supply of securities, *ceteris paribus* reduces its price and raises real interest rates and this crowds out private investment. In sum, excessive deficit can lead to poor economic performance.

In contrast, the Keynesian school of thought postulates a positive relationship between deficit financing and investment and consequently on economic growth. This school of thought sees fiscal policy as a tool of overcoming fluctuations in the economy. As put by Tchokote (2001), "This school regards deficit financing as an important tool to achieve a level of aggregate demand consistent with full employment. When debt is used to finance government expenditures, consumers' income will be increased. Given that resources are not fully utilized, crowding-out of private investment by high interest rates would not occur."

The position of the Keynesian school of thought on the possible effects of fiscal deficits on economic activities has been challenged by the Neo-classical school of thought on the premise that the former school ignores the significance of how fiscal deficits are financed on the effect of this policy variable on macroeconomic performance. The Neoclassical school postulates that the manner in which deficits are financed is capable of influencing the level of consumption and investment and by extension affect economic growth.

One of the labels attached to the Neoclassical argument is the Ricardian equivalence, which states consumers foresee that tax cut today paid for by deficit and borrowing, will lead to a tax increase in the future. In anticipation of the future tax increase, consumers save rather

than spend the income from tax cut. If the Ricardian equivalence holds, therefore, then reduction of fiscal deficit will not affect the level of consumption or balance of payments in the economy and the basis for deficit reduction, as part of stabilization programmes no longer exist.

2.2 Empirical Review of Literature

Ogbole, Sonny and Isaac (2011) focused on the comparative analysis of the impact of fiscal policy on economic activities in Nigeria during regulation and deregulation, using the econometric methods of co-integration and error correction model. The study indicates that there is a difference in the effectiveness of fiscal policy in stimulating economic growth during and after regulation period.

Medee and Nenbee (2011) adopted vector auto regression (VAR) and error correction mechanism techniques to ascertain impact of fiscal policy variables on Nigerian economic growth between 1970 and 2009. The study revealed that there is a long-run relationship between fiscal policy variables and economic growth in Nigeria. Nevertheless, the research fails to consider other variables, such as interest rate, exchange rate, in defining fiscal policy and its influence on economic growth.

Sikiru and Umaru (2011) studied the causal link between fiscal policy and economic growth in Nigeria, using Engle-Granger approach and error correction models which was estimated to take care of short-run dynamic. The result indicates that productive expenditure positively impacted on economic growth during the period covered.

Oseni and Onakoya (2012) investigated the fiscal policy variables that contributed to growth in Nigeria for the period of 1981 to 2010 in view of hypothesizing the fiscal policy variables-growth effect. Secondary annual time-series data were used. Data on Productive expenditure, Unproductive expenditure, distortionary taxes, non-distortionary taxes, fiscal deficit and real growth rate of GDP were analyzed using co-integration and ordinary least square techniques. Co-integration results show a long run relationship among the variables.

Nathan, (2012) evaluated the causal relationship between money supply, fiscal deficits and exports as a means of analyzing the impact of policy on the growth of the Nigerian economy between 1970 and 2010. The study employed the Co-integration Error Correction Mechanism (ECM), a two band recursive least square to test for the stability of the Nigerian economy as well as determine the effect of money supply, fiscal deficits, and exports on the relative effectiveness of fiscal policies in the Nigerian economy. The study found that there was a significant causal relationship between gross domestic product (GDP) and the variables used in this study. The study recommended that fiscal policies had a significant influence on the output growth of the Nigeria economy.

Onuorah and Akujuobi (2012) examined the trend and empirical analysis of public expenditure and its impact on the economic growth in Nigeria. The study employed Johansen Co-integration and VEC and found that RGPE established long run relationship with RGDP.

Finally, there is no statistical significance between public expenditure variables and the economic growth in Nigeria.

Nworji et al (2012) examined the effect of public expenditure on economic growth in Nigeria for the period 1970 to 2009 using OLS multiple regression on domestic product (GDP), and various components of government expenditure. The study showed that capital and recurrent expenditure on economic services had insignificant negative effect on economic growth during the study period. Also, capital expenditure on transfers had insignificant positive effect on growth. But capital and recurrent expenditures on social and community services and recurrent expenditure on transfers had significant positive effect on economic growth.

Iyeli et al (2012) investigated the impact of fiscal policy variables on Nigeria's growth between 1970 and 2011. In order to reduce the problem of non stationarity usually associated with time series data, we adopted the co-integration and error correction mechanism techniques. The result revealed that there exist a long run equilibrium relationship between economic growth and fiscal policy variables in Nigeria. 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 in Nigeria.

Olasunkanmi (2013) examined the impact of fiscal policy on sectoral output in Nigeria using a multivariate co-integration model over the period 1981 to 2011. Empirical evidence shows that the five subsectors and four fiscal policy variables are co-integrated and that the fiscal policy variables have significant impact on sectoral output. Also, the study reveals that the contribution of fiscal policy variables especially the productive expenditure to building & construction is below expectation despite huge amount allocated to the sector yearly. The paper recommends appropriate regulatory and pricing reforms in the all the sectors but most importantly building & construction.

Eze et al (2013) in his study of fiscal policy and the manufacturing sector found that the results of the study indicate that government expenditure significantly affect manufacturing sector output based on the magnitude and the level of significance of the coefficient and p-value and there is a long-run relationship between fiscal policy and manufacturing sector output.

Falade and Folorunso (2015) examined the relative effectiveness of fiscal and monetary policy instruments on economic growth sustainability in Nigeria from 1970 to 2013 using OLS and ECM. The result also showed that all the fiscal and monetary variables of interest cointegrated with the economic growth series in the country. This suggests that there is a long run relationship among fiscal and monetary variables and economic growth. The paper, however, found that the current level of exchange rate and its immediate past level, domestic interest rate, current level of government revenue and current level of money supply are the appropriate policy instrument mix in promoting economic growth both in the short and long run.

Shuaib, Augustine and Frank (2015) examined the impact of fiscal policy on the growth of the Nigerian economy from 1960 to 2012 using VAR and Pairwise-Granger Causality to

estimate the model. From the result of the empirical findings, it was discovered that fiscal policy has a direct relationship with growth. The paper however recommended that among others the government should ensure fiscal policy's effectiveness in such a way as achieving economic growth. Government should increase its aggregate expenditure such a way that the citizens will benefit from it.

Edame and Okoi (2015) employed Chow endogenous break test, unit root and cointegration tests to analyse the effect of fiscal deficits on economic growth in Nigeria. The results derived from the Chow test analysis reveal that there is a difference between the growth-impact of FSD in the two regimes. In particular, the study found that FSDs had a significant growth impact during the military regime, while it has not had a significant impact on economic growth during the democratic regime. On the other hand, the study's results indicated that the interest rate did not have a significant growth-impact during both regimes, while the gross fixed capital formation had a significant growth impact during both regimes in view of the findings, the study recommended the strengthening of the country's budgetary institutions so as to ensure the de-politicization of the budgetary process.

Alimi, Yinusa, Akintoye, and Aworinde (2016) examined the relationship between fiscal policy and macroeconomic performance in Nigeria using the vector autoregressive, granger causality and impulse response function. The findings indicate that the previous values of government revenue employed in financing government expenditure have impact on macroeconomic factors except for per capita income growth. However, only money supply to the size of the Nigerian economy reported a direct relationship with total expenditure growth, where others report an indirect relation. Also, the fiscal balance growth only enhances lending rate, total trade to economic size and exchange rate, and the other two variables report otherwise.

Cyril (2016) investigated the effect of fiscal policy on economic growth in Nigeria from 1985 to 2015 using descriptive statistics and the ordinary least square (OLS) multiple regression for the data analysis. The results from the analysis revealed that total government expenditures are 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.

Ugwuayi and Ugwunta (2017) studied the effect of fiscal policy variables on the economic growth of sub-Saharan African countries using the panel least squares. The result of the linearly modeled hypotheses tested using the panel data estimation technique under the fixed-effect assumptions revealed that Government productive and unproductive expenditures, distortionary tax (a proportional tax on output at rate) and non-distortionary taxes have significant effects on the economic growth of sub-Saharan African countries. Findings also revealed that budget balances of sub-Saharan African countries have a positive but insignificant effect on the economic growth of sub-Saharan African countries

3. Methodology

3.1 Model Specification and Estimation Technique

From the theoretical literature and the empirical literature reviewed, we specify our model in functional form as follows:

$$\text{EGR} = f(\text{CXP}, \text{RXP}, \text{TGR}, \text{DUM}) \quad (1)$$

$$\text{INF} = f(\text{CXP}, \text{RXP}, \text{TGR}, \text{DUM}) \quad (2)$$

$$\text{UNE} = f(\text{CXP}, \text{RXP}, \text{TGR}, \text{DUM}) \quad (3)$$

Where:

EGR = Gross domestic product growth rate a proxy for economic growth

INF = Inflation Rate

UNE = Unemployment Rate

CXP = government capital expenditure

RXP = government recurrent expenditure

TGR = Total Government revenue

DUM = Dummy

Accordingly, the econometric form of the models shall be:

$$\text{EGR} = \alpha_0 + \alpha_1\text{CXP} + \alpha_2\text{RXP} + \alpha_3\text{TGR} + \alpha_4\text{DUM} + U_1 \quad (4)$$

$$\text{INF} = \beta_0 + \beta_1\text{CXP} + \beta_2\text{RXP} + \beta_3\text{TGR} + \beta_4\text{DUM} + U_2 \quad (5)$$

$$\text{UNE} = \phi_0 + \phi_1\text{CXP} + \phi_2\text{RXP} + \phi_3\text{TGR} + \phi_4\text{DUM} + U_3 \quad (6)$$

A priori expectations are $\alpha_1 > 0$, $\alpha_2 < 0$, $\alpha_3 > 0$, $\beta_1 > 0$, $\beta_2 > 0$,

$\beta_3 > 0$, $\phi_1 < 0$, $\phi_2 < 0$, $\phi_3 < 0$.

4. Data Analysis and Interpretation of Results

The empirical analysis of data in this paper was conducted in five phases. It begins with the descriptive statistics analysis of the data and thereafter conducted the unit test. Furthermore, the analysis was done according to the models, that is, economic growth model, inflation model and lastly the unemployment model.

4.1 Descriptive Statistics

The result of the descriptive statistics is presented in Table 1 below.

Table 1: Descriptive Statistics

	EGR	INF	UNE	CXP	RXP	TGR	DUM
Mean	4.28	18.63	10.29	282717. 0	858602. 2	2293777 .	0.28
Median	4.40	12.88	8.50	54501.8 0	89974.9 0	192769. 4	0.00
Maximum	33.70	72.84	27.40	1152797 .	5762703 .	1111684 7	1.00
Minimum	-13.10	3.46	3.20	173.60	716.10	634.00	0.00
Std. Dev.	7.87	16.04	5.59	360395. 6	1391625 .	3425946 .	0.45
Skewness	1.01	1.85	1.39	1.02830 4	1.74	1.33	0.99
Kurtosis	6.70	5.54	4.49	2.66774 2	5.23	3.39	1.99
Jarque-Bera	34.78	39.47	19.48	8.49	33.40	14.08	9.78
Probability	0.00	0.00	0.00	0.014	0.00	0.00	0.00
Sum	200.99	875.71	483.50	1328769 7	4035430 5	1.08	13.00
Sum Sq. Dev.	2849.6 5	11834.9 2	1441.4 9	5.97	8.91	5.40	9.40
Observation s	47	47	47	47	47	47	47

Source: *Author's Computation (2018)*

From Table 1, it shows that, the standard deviation calculated for government capital expenditure (CXP) was the most volatile in the series with a value of 360395.6 while unemployment (UNE) was the least volatile variable with a value of 5.59. The calculated values for the skewness statistic for all the variables EGR, INF, UNE, CXP, RXP, TGR and DUM were positively skewed; suggesting that their distributions have a long right tail. Again, the kurtosis statistics of EGR, INF, UNE and RXP were leptokurtic, meaning that their distributions were peaked relative to normal distribution while CXP and DUM were platykurtic, meaning that their distributions were flat relative to normal distribution. Again, the Jarque-Bera statistic (J-B) for all the variables - EGR, INF, UNE, CXP, RXP, TGR and DUM rejected the null hypothesis for normal distribution at 5 percent level of significance. Based on these observations, it therefore means that there is unit root (non-stationarity) in the series. Thus, estimating these variables at level might not give good results, hence, the need to conduct the unit root test. The unit root test is conducted to test whether or not the variables were stationary. The study adopts the Augmented Dickey Fuller (ADF) unit root tests procedures.

4.2 Unit Root Test

Table 2 below details outcomes unit root analysis conducted with Intercept and Trend using Augmented Dickey-Fuller (ADF).

Table 2: ADF Unit Root Test Results of the Variables

Variables	Level	Critical Values	First Difference	Critical Values	Status
EGR	-5.952384	-2.925169	-	-	I(0)
LOG(INF)	-3.945308	-2.925169	-	-	I(0)
LOG(UNE)	-2.276119	-2.925169	-7.864159	-2.926622	I(1)
LOG(CXP)	-2.196137	-2.925169	-7.043564	-2.926622	I(1)
LOG(RXP)	-0.610875	-2.928142	-8.077636	-2.928142	I(1)
LOG(TGR)	-1.831521	-2.925169	-6.868434	-2.926622	I(1)
DUM	-1.589617	-2.925169	-6.633250	-2.926622	I(1)

Source: Author's Computation using E-view 9

The above presented in Table 2 reveal that EGR and INF were stationary at level, i.e., I(0) while UNE, CXP, RXP, TGR and DUM were stationary at 1st difference, i.e., I(1). Hence, the study concludes variables deployed in the models, i.e. models one and two were both order zero (0) and one (1) while that of model three were all I(1). Since the ADF outcomes of the series in models one and two are of a different order of integration, Engle-Granger and Johansen co-integration tests would not be appropriate rather the Bounds co-integration test while the Engle-Granger cointegration test would be appropriate for model three. According to Giles (1975), Perasan, Shin and Smith (2001), Jawaid and Waheed (2016) and Salisu (2016), when the series used is of a different order of integration, Bound co-integration test suffices while Engle-Granger cointegration test suffices when the series are I(1).

4.3 Bound Test Co-integration Result for model One

The decision of Bound Co-integration test is detailed here under in Table 3.

Table 3: ARDL Bound Test Co-integration Result for Model One (EGR, CXP, RXP, TGR and DUM)

F-Statistics	9.119242	
% Critical Levels	Critical Value for Bond Test	
Significance	1(0) Bond	1(1) Bond
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source: Author's Computation using E-view 9

Table 3 reveals the bound co-integration test demonstrate that determined F-statistics value of 9.119242 is higher than the theoretical, critical amount for upper bound I(1), this signifies co-integration. Hence, a long term association subsists amidst in model one (CXP, RXP, TGR, DUM and EGR).

Since a long term association exists, it becomes necessary to evaluate both the short and long-run estimation of the model using ARDL approach.

4.4 Short and Long Run Estimation Results for Model One (EGR Model) Based on ARDL

The results of the short and long run dynamics estimation of model one are presented in table 4 below.

Table 4: Short and Long Run Results for Model One (EGR Model) Based on ARDL

Short Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(CXP)	-0.308823	3.254217	-0.094899	0.9249
DLOG(RXP)	-3.104876	3.062373	-1.013879	0.3169
DLOG(TGR)	9.917045	3.699582	2.680585	0.0107
D(DUM)	-1.943844	2.273155	-0.855130	0.3977
ECM(-1)	-0.658196	0.223038	2.951046	0.0050
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(CXP)	-6.742294	1.976771	-3.410761	0.0015
LOG(RXP)	-2.819175	2.776593	-1.015336	0.3162
LOG(TGR)	9.004509	3.246110	2.773938	0.0085
DUM	-1.764977	2.037012	-0.866454	0.3915
C	-1.949158	4.040393	-0.482418	0.6322

$R^2 = 0.544$; $Adj-R^2 = 0.473$; $F-stat. = 7.752$; $DW = 1.959$

Source: Author's Computation using E-view 9

In Table 4 above, the result shows that the ECM included in this model has the right sign (i.e., negative) and is statistically significant at 5 percent level. The coefficient indicates adjustment of about 67percent from actual adjustments in previous year. Furthermore, the calculated R^2 is 0.544 affirming that about 54 percent of all variations in EGR is traceable to CXP, RXP TGR and DUM. Thus, the remaining 46percent of variations are attributable to other exogenous factors not included in the model but captured by error term. This observation is strengthened by adjusted R^2 of about 47 percent. Also, the F-statistics determined value of 7.752 is higher than $F_{0.05, v_1, v_2}$ of 2.61, which indicates that EGR model is significant at 5 percent level. The D.W is 1.959 suggests absence of serial auto correlation in the model. Also, the coefficient of CXP, RXP and DUM has a negative insignificant effect on EGR while TGR has a positive impact on EGR.

In Table 4 the outcome of long run results display that the coefficient of CXP negatively impacted on EGR, RXP and DUM has a negative insignificant effect on EGR while TGR has a positive impact on EGR.

4.5 Bound Test Co-integration Result for model Two (INF Model)

Outcomes, Bound Co-integration test as detailed, Table 5 below.

Table 5: ARDL Bound Test Co-integration Result for Model Two (INF, CXP, RXP, TGR and DUM)

F-Statistics	7.603647	
% Critical Levels Significance	Critical Value for Bond Test	
	1(0) Bond	1(1) Bond
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source: *Author's Computation using E-view 9*

Table 5 presents bound co-integration test affirming analytical F-statistics analytical value of 7.603647 is above theoretical, critical rate for the uppermost constrain I(1) indicating co-integration, hence, a long term association subsist amongst the variables in model two (CXP, RXP, TGR, DUM and UNE, 1970-2017). Since long term association exists, it becomes expedient to evaluate for short term and long-run dynamics of UNE model.

4.6 Short and Long Run Estimation Results for Model Two (INF Model) Based on ARDL

The determined short and long term dynamics estimation of model one are arrayed in table 6 below.

Table 6: ARDL Short and Long Run Results for Model Two (INF model)

Short Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF)	0.464313	0.160618	2.890801	0.0063
DLOG(CXP)	0.037662	0.225149	0.167276	0.8680
DLOG(RXP)	-0.208197	0.292533	-0.711705	0.4810
DLOG(TGR)	0.164303	0.330974	0.496421	0.6225
D(DUM)	0.640082	0.226289	2.828603	0.0074
ECM(-1)	-0.933409	0.175825	-5.308743	0.0000
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(CXP)	0.040349	0.239516	0.168460	0.8671
LOG(RXP)	-0.223050	0.304394	-0.732768	0.4682
LOG(TGR)	0.176024	0.352800	0.498935	0.6207
DUM	0.685746	0.216100	3.173288	0.0030
C	2.397236	0.476488	5.031050	0.0000

$R^2 = 0.611$; $Adj-R^2 = 0.600$; $F-stat. = 5.283$; $DW = 1.548$

Source: Author's Computation using E-view 9

In Table 6 above, the result shows that the ECM included in this model has the right sign (i.e., negative) and is statistically significant at 5 percent level. The coefficient indicates adjustment of about 93percent from actual adjustments in previous year. Furthermore, the calculated R^2 is 0.611 affirming that about 61 percent of all variations in INF is traceable to CXP, RXP TGR and DUM. Thus, the remaining 39percent of variations are attributable to other exogenous factors not included in the model but captured by error term. This observation is strengthened by adjusted R^2 of about 60percent. Also, the F-statistics determined value of 5.283 is higher than $F_{0.05, v_1, v_2}$ of 2.61, which indicates that INF model is significant at 5 percent level. The D.W is 1.413 suggests absence of serial auto correlation in the model. Also, the coefficient of CXP, TGR and DUM has a positive relationship with INF while RXP has a positive insignificant impact on INF. Again, it is only DUM that impacts significantly on INF, CXP and TGR do not impact significantly on INF.

In Table 6 the outcome of long run results display that the coefficient of RXP has a negative insignificant impact on INF, CXP and TGR DUM has a positive insignificant effect on INF while DUM negatively impacted on INF.

4.7 Co-integration Test Result for Model Three (UNE Model)

Since the series are integration of order one, that is, I(1) we then proceed to conduct the co-integration using the Engle-Granger two step procedure. The result of the Engle-Granger Co-integration test is presented in Table 7 below.

Table 7: Engle and Granger Co-integration Test Result

Variable	Level	5% Critical Values	Order of Integration	Remarks
RESID(ECM)	-5.935873	-2.926622	I(0)	Co-integrated
Stationary at both 1%, 5% and 10% Level of Significance				

Source: *Author's Computation (2018)*

From Table 7, the Engle and Granger (1987) two stage co-integration procedure of the model depicts that the residual from the regression result are stationary at 5 percent level of significance. This means that all the explanatory variables (CXP, RXP, TGR and DUM) are co-integrated with unemployment (UNE) in Nigeria within the period under consideration (1970-2017). In order words, there is a long run relationship between the dependent and independent variables.

4.8 Parsimonious ECM test result and Analysis

In order to confirm the existence of a co-integrating vector among the variables, the ECM is employed. This is based on the general-to-specific rule and the results are presented on table 8 below.

Table 8: Parsimonious ECM Result for Model Three

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.078331	0.055366	1.414796	0.1657
DLOG(UNE(-1))	0.268009	0.146602	1.828142	0.0758
DLOG(CXP(-1))	0.168900	0.123863	1.363605	0.1812
DLOG(CXP(-2))	-0.117634	0.106113	-1.108574	0.2750
DLOG(RXP(-1))	-0.202682	0.156379	-1.296094	0.2032
DLOG(TGR(-2))	-0.195843	0.144482	-1.355489	0.1837
D(DUM)	-0.240442	0.181998	-1.321125	0.1948
D(DUM(-2))	-0.327181	0.206356	-1.585514	0.1216
ECM(-1)	-0.849364	0.175244	-4.846755	0.0000
R2 = 0.515229; Adj-R2 = 0.407502; DW = 1.976903; F-Stat = 4.782731				

Source: *Author's Computation using E-view 9*

Table 8 shows that the calculated Adjusted-R square is 0.515229, suggesting the regressors in the model account for about 52 percent of the total variation in the UNE. The remaining 48 percent are due to factors exogenous to the model but covered by the error term. Also, the overall regression result of the dynamic model is significant at 5 percent level as shown by

the F-calculated of 4.782731 which is greater than the table value of 2.61. The ECM is rightly signed and is also significant. It shows about 84 percent disequilibrium in UNE in the previous year is corrected in the current year since the data used are annual. Also, the Durbin-Watson (D-W) statistics value is 1.9769, meaning that there is absence of serial autocorrelation in the model.

Furthermore, Table 8 shows that the coefficient of past lag (1) of government capital expenditure (CXP) has a positive insignificant effect on UNE while the coefficient of past lag (2) of government capital expenditure (CXP) has a negative insignificant effect on UNE; the coefficient of past lag (1) of government recurrent expenditure (RXP) has a negative insignificantly effect on UNE; the coefficient of past lag (2) of tax revenue (TGR) has a negative insignificant effect on UNE; while the coefficient of both current and past lag (2) of DUM has a negative insignificant effect on UNE.

5. Conclusion and Policy Recommendation

This paper empirically examined the effect of fiscal policy on macroeconomic performance in Nigeria from 1970 to 2017. The study adopts the ARDL, Engle-Granger Co-integration and Error Correction Modeling techniques for the analysis. Data for the empirical analysis were sourced from secondary sources like CBN Statistical Bulletin (Various- Issues). The results of analysis indicated that a long run relationship exists among the variables (i.e. fiscal policy and macroeconomic performance) based on the Bound co-integration test and Engle-Granger co-integration test. Furthermore, the paper revealed that CXP negatively impacted on EGR, RXP and DUM has a negative insignificant effect on EGR while TGR has a positive impact on EGR; RXP has a negative insignificant impact on INF, CXP and TGR DUM has a positive insignificant effect on INF while DUM negatively impacted on INF; the coefficient of past lag (1) of government capital expenditure (CXP) has a positive insignificant effect on UNE while the coefficient of past lag (2) of government capital expenditure (CXP) has a negative insignificant effect on UNE; the coefficient of past lag (1) of government recurrent expenditure (RXP) has a negative insignificant effect on UNE; the coefficient of past lag (2) of tax revenue (TGR) has a negative insignificant effect on UNE; while the coefficient of both current and past lag (2) of DUM has a negative insignificant effect on UNE.

Based on the above findings, the paper recommends as follows:

1. Government should as a matter of urgency and priority adopt fiscal management actions that aim at minimizing borrowing and capable of reducing fiscal deficits that often result in large chunk of transfer payment, and extra budgetary expenses of questionable viability. For instance, government should ensure that unjustifiable frivolous expenditure proposals do not find their way into the overall budget proposals of the government.
2. Government must adopt fiscal adjustment mechanism that increases revenue through improved taxes rather than borrowing to finance deficit.

3. There is great need by the government to evolve a new fiscal policy framework that will be insulated from oil dependence and volatility which usually get transmitted to the rest of the economy.
4. Government has to checkmate the level of deficits for effective control of the economy to enhance sustainable economic growth in the country. This can be done by ensuring that policies to address deficit have an inbuilt ability to increase the productive capacity of the country.
5. Strict adherence of the fiscal responsibility law will no doubt help in curbing most of the problems that militate against sound public sector resource management. Proper compliance is essential in promoting fiscal discipline, transparency, accountability and therefore foster macroeconomic stability. It is therefore imperative that States and Local governments in Nigeria should also embrace this law in other to enhance their fiscal prudence.
6. Appropriate policy mix, prudent public spending, setting of achievable fiscal policy targets and diversification of the nation's economic base, among others.

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