

AN ASSESSMENT OF THE DETERMINANTS OF FISCAL POLICY BEHAVIOUR IN NIGERIA: 1980-2014

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ABSTRACT

The study assessed the determinants of fiscal behaviour in Nigeria between 1980 and 2014. Literatures have shown that past empirical work are more on effect rather than causes of fiscal policy behavior consequently this study contributes to the existing literature by focusing on factors responsible for fiscal policy behavior in Nigeria, thereby providing the policy makers avenue to tackle Nigeria fiscal problem from the causes. Government expenditure, government revenue, external reserve, exchange rate and regime of administration in the country have been adjudged to be important factors that affect the behavior of fiscal policy. Fiscal balance is used to capture fiscal behavior and it is the dependent variable of the model. Auto-regressive distributed lags ARDL bound test is used to examine the existence of long run relationship between the fiscal variables and fiscal balance. The descriptive results show that the major feature of fiscal behavior in Nigeria is deficit that is fiscal deficit. Cointegration is confirmed between the fiscal variables which are the determinants and the fiscal behavior. The short run analysis also confirms significant short run impact. The implication is that government revenue, government expenditure, external reserve and regime of administration have both permanent and transitory significant impacts on fiscal behavior in Nigeria.

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KEYWORDS: Fiscal Policy, Determinants, Fiscal Behavior, Government Expenditure, Government Revenue

INTRODUCTION

The fiscal policies in Nigeria have been largely determined by oil revenue and Wind falls. Nigeria is an oil-rich country and her fiscal revenues largely coincides with oil revenue. Oil revenue accounts for nearly 80 percent of government revenues, which implies that the economy is highly exposed to price fluctuations in the world oil markets. Naturally, oil revenue is very volatile due to world oscillation in oil prices and to unpredictable changes in OPEC assigned oil quota – of which Nigeria has been a member since 1958 (Obinyeluaku 2009).

It has been observed that despite the huge fiscal deficit that characterize fiscal behaviour in Nigeria, the overall economy appears not to have fared very well during these periods and this has constituted a major concern to the policy makers (Olasunkanmi 2013). For instance domestic fiscal deficit worsened from an average of 2.6 percent of GDP in 1980s to one of 6.2 percent in 1990s. In 2010 alone, domestic deficit increased to 5 percent of GDP from 2 percent in 2009. This increase in deficits results in a mounting stock of debt, ranging from 88 percent of GDP in 1980s to 96 percent of GDP in 1990s. In 2010 alone, the stock of debt increased to 91 per cent of GDP from 45 per cent in 2009. Around the same

periods precisely in 2007 the real GDP growth rate fell from -3.1% to -7.6% in 2009 (World Bank 2011). The implication of this is that the accumulated fiscal deficit has not reflected in growth of Nigeria during these periods.

Despite government effort to instill discipline on the Nigeria fiscal behaviours by way of diversification and implementation of other fiscal variables like taxation, the economy still remains in Comatose due to the consequences of fiscal irresponsibility

Furthermore, vulnerability of many resource endowed countries to external cyclical influence has been identified as a major cog in the wheel of progress of these countries in that, it inhibits positive synergy between policies and economic development. Consequently, World Bank Economic Reports on Nigeria in 2013 precisely in the appraisal of Nigeria economic overview and performance, 2013 among others have clearly stated that identification of factors that affects domestic policies as well as examination of the behaviours of such policies to these factors might lead to evolvement of framework that will create enabling environment for these domestic policies to begin to yield positive impact on economic development (see Capistran and

Cuadra, 2011; Ball, 2000; Clements, Flores and Leigh, 2009)

For instance Nigeria which is an oil-rich country has her fiscal revenues to be largely coincided with oil revenue. Oil revenue accounts for nearly 80 percent of government revenues, which implies that the economy is highly exposed to price fluctuations in the world oil markets. Naturally, oil revenue is very volatile due to world oscillation in oil prices and to unpredictable changes in OPEC assigned oil quota – of which Nigeria has been a member since 1958 (Obinyeluaku 2009). However, apart from oil related variables, some other factors which are mostly macroeconomic variables which might vary from country to country have been identified by quite a number of researchers as external factors that might likely cause perturbation of fiscal policy variables and which can affect fiscal policy behaviours in a particular country (Kinnunen, Sulla and Merotto, 2013; Gosse and Guillamin, 2012).

However, it has been observed that most of the empirical works on fiscal policy are more on its effects on one macroeconomic variable or the other especially growth variables. This trend is like placing the cart before the horse. Because there is the need to examine causes before the effect. Consequently, this study hopes to contribute to the existing literatures on fiscal policy by examining those factors that are responsible for its behavior in a particular manner, this will pave way for evolvement of framework that will reposition fiscal policy to have the expected effect on the economic growth

Based, on the foregoing, it appears that making the effect of fiscal policy felt positively on Nigerian economic development can be facilitated by an examination of the factors that influence fiscal policy behavior. This, according to the World Bank and other researchers, may lead to re-structuring in both formulation and implementation of fiscal policy so as to improve its contributions to the economic development of Nigeria. The major objective of the study is to examine the determinants of fiscal policy behavior in Nigeria.

LITERATURE REVIEW

Kalu, Amaka and Athan (2012) studied the behavior of the bilateral real exchange rate and fiscal variables in Nigeria from the period 1970 – 2012 to address the linkage between these variables. They employed Ordinary Least Square and Instrumental Variable (OLS, IV) method using the Hildreth – Lu grid search method and by expanding the previously given list of the Instrumental Variable to include the once-lagged values and the relevant variables in establishing the relationship. The empirical result suggests that: Real devaluation improves fiscal balance and that budget deficit influences the

behavior of real exchange rate. Again the increase in income associated with exchange rate depreciation increases import and depreciates the balance of payments. Hence they recommended that the monetary authorities should adopt anti-inflationary measures (Fiscal and monetary restraints) to achieve real depreciation, and the production of import competing goods be encouraged so that a large proportion of increase in income arising from exchange rate depreciation is not spent on imports.

Abata, Kehinde and Bolarinwa (2012) assessed how fiscal and monetary policies influence economic growth and development in Nigeria. They argued that curbing the fiscal indiscipline of Government will take much more than enshrining fiscal policy rules in our statute books. This is because the statute books are replete with dormant rules and regulation. It notes that there exist a mild long-run equilibrium relationship between economic growth and fiscal policy variables in Nigeria. They suggested that for any meaningful progress towards fiscal prudence on the part of Government to occur, some powerful pro-stability stakeholders strong enough to challenge government fiscal recklessness will need to emerge.

Peter and Semion (2011) investigated the impact of fiscal policy variables on Nigeria's economic growth between 1970 and 2009. In order to reduce the problem of stationarity usually associated with time series data, they adopted the arcane method of Vector Auto Regression (VAR) 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. Also, own shocks constitute a significant source of variations in economic growth, the forecasted errors in the short-run, range from 76 percent to 100 percent over a 10 years horizon while the response of the GDP to one standard innovation in government expenditure is negative in the short-run except in period 2. Furthermore, tax revenue shocks have effect on the GDP in the short and long run. Above all, the response of GDP to one standard innovation in capital inflow is positive in the short-run. Consequently, they recommended that government should formulate and implement viable fiscal policy options that will stabilize the economy such as the practice of true fiscal federalism and the decentralization of the various levels of government in Nigeria. It further suggested that there should be consistency in macroeconomic policies implementation in the non-oil sectors of the economy by providing relevant incentives to foreigners wishing to invest in the agricultural sector and manufacturing sectors in Nigeria. More importantly, there should be appropriate macroeconomic policy mix in managing the economy.

Vincent and Wilson (2013) analyzed the imperatives of Fiscal responsibility law. They draws some lessons from Brazil, situating these lessons in Nigeria. The paper explores some theoretical issues surrounding fiscal responsibility in an economy. Major features and similarities of the fiscal responsibility laws in Nigeria and Brazil are highlighted. Some of the fundamental flaws in Nigeria's democracy that impede economic development as well as the imperatives of the fiscal responsibly law in Nigeria are analyzed. They concluded advisedly that strict adherence to the new fiscal policy law is bound to promote macroeconomic stability in Nigeria. The Vincent and Wilson (2012) examined the relationship between fiscal deficits and inflation. They reexamined the issue in the context of a developing country, Nigeria, using data over 1970–2006, a period of persistent inflationary trends. They adopted a modeling approach that incorporates cointegration techniques and structural analysis. The results revealed a positive but insignificant relationship between inflation and fiscal deficits in Nigeria. They did not also find any strong evidence linking past levels of fiscal deficits with inflation in Nigeria during the period. Rather, they reported a positive long run relationship between money supply and inflation in the Nigerian economy, suggesting that money supply is pro-cyclical and tends to grow at a faster rate than inflation

Eze and Ogiji (2013) examined the impact of fiscal policy on the manufacturing sector output in Nigeria. According to them, Empirical evidence from the developed and developing economies has shown that fiscal and monetary policies have the capacity to influence the entire economy if it is well managed. An ex-post facto design (quantitative research design) was used to carryout this study. The results of the study indicated 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. They deduced from their findings that if government did not increase public expenditure and its implementation, Nigerian manufacturing sector output will not generate a corresponding increase in the growth of Nigerian economy. Hence, they recommended that the expansionary fiscal policies should be encouraged as they play vital role for the growth of the manufacturing sector output in Nigeria; that fiscal policy should be given more priority attention towards the manufacturing sector by increasing the level of budget implementation, which will enhance aggregate spending in the economy; and consistent government implementation will contribute to the increase performance of manufacturing sector.

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 cointegration and ordinary least square techniques. Cointegration results show a long run relationship among the variables. Results of fiscal-growth effect model invalidate the claim that only productive expenditure, distortionary taxes and fiscal deficit contribute to growth in case of Nigeria. They also drew attention towards the significance of non-distortionary taxes as addition to three fiscal policy variables that contribute to growth and they recommended that government should reduce expenditure on recreational-cultural-religious affairs and other functions like political administrative expenses in order to achieve stabilization policies in Nigeria.

Adeleke, Monica and Moses (2012) examined the effect of oil price shock on fiscal policy in the country. Using structural vector auto regression (SVAR) methodology, the effects of crude oil price fluctuations on two major key fiscal policy variables (government expenditure (GEXP) and government revenue (GREV), money supply (MS2) and GDP were examined. The results showed that oil prices have significant effect on fiscal policy in Nigeria within the study period of 1980:1 to 2009:4. The study also revealed that oil price shock affects GREV and GDP first before reflecting on fiscal expenditure. The study suggested strongly that diversification of the economy is necessary in order to minimize the consequences of oil price fluctuations on government revenue, by implication government expenditure planning in the country

METHODOLOGY

This aspect of the research work discusses the research method adopted for the purpose of examining the determinants of fiscal behavior in Nigeria. This aspect includes the model specification, estimating technique as well as the sources of data.

Model Specification

Barro and Sala-i-Martin (1992, 1995) have developed a series of models, in which investment in infrastructure affects output through the production function, as a factor along with capital and labour, in order to study the influence of the supply of public goods on growth rates. Clearly, the rate of output growth can be positively related to the share of government purchases, in the form of public services, while examining various policy implications under alternative schemes of the production function. Consequently, government expenditure in the form of

public investment plays a decisive role for the performance of the economy through its influence on gross national output. Several empirical studies have also established a strong positive link between investment and output growth rates; Aschauer (1989), Baxter and King (1993), Easterly and Rebelo (1993), Dollar and Svensson (2000), and Bekaert et al. (2005).

According to Barro (1995) and Lucas (1988) in an economy that embraces a large number of competitive firms without loss of generality and aggregating across firms, the production function may be given in the following expression;

$$Y = AK^{\alpha} (hL)^{1-\alpha} \quad (1)$$

where: Y denotes output, K is capital, and L stands for labour, with α and $1-\alpha$ being the shares of capital and labour, respectively. Parameter A reflects the constant technology level, with $A > 0$.

According to Lucas (1988) the assumption of constant returns becomes more plausible whenever, as in our case, capital is broadly viewed to encompass both human and physical capital. Indeed, parameter h represents human capital and is considered to be a function of the existing total (private and public) capital of the economy, denoted by K and G respectively, so that;

$$h = \psi \frac{K^{\beta} G^{1-\beta}}{L} \quad (2)$$

where: $\psi > 0$ stands for an efficiency parameter that captures the degree of the economy's efficiently used total capital. G represents the aspect of supply of capital through the government expenditure. Substituting equation 3.2 into 3.1 we have:

$$Y = AK^{\alpha} \left(\psi \frac{K^{\beta} G^{1-\beta}}{L} \right) \quad (3)$$

Note that both α and β are the same being elasticities of the respective inputs. Through factorization we can rewrite equation 3.3 as follows;

$$Y = AK^{\alpha} \left(\psi \frac{G^{1-\alpha}}{L} \right) \quad (4)$$

Where $\frac{G^{1-\alpha}}{L}$ denotes governments expenditure adjusted to the workforce population.

Re-arranging equation 3.4 we have the following;

$$Y = A\psi K^{\alpha} \left(\frac{G^{1-\alpha}}{L} \right) \quad (5)$$

Since both A and ψ are efficiency parameters we denote the product by σ giving rise to;

$$Y = \sigma K^{\alpha} \left(\frac{G^{1-\alpha}}{L} \right) \quad (6)$$

Equation 3.6 can be re-arranged as;

$$Y = \sigma K^{\alpha} \left(\frac{1}{L} G^{1-\alpha} \right) \quad (7)$$

Linearising equation 3.7 through log we have;

$$\log Y = \log \sigma + \alpha \log K + (1-\alpha) \log \frac{1}{L} G \quad (8)$$

Making $\log \frac{1}{L} G$ subject of the formular we have

$$\log \frac{1}{L} G = \frac{1}{(1-\alpha)} (\log \sigma + \alpha \log K + \log Y) \quad (9)$$

Equation 3.9 is adopted in this study to examine the determinants of fiscal behaviour in Nigeria. The components of the equation are GDP which is Y, K is the gross capital formation and the fiscal component is represented with G i.e government expenditure. However, since government expenditure is strongly linked with Fiscal deficit/surplus, G is proxy by Fd/Fs that is fiscal balance which represents fiscal behavior

However, equation 3.9 is modified to involve those fiscal policy determinants extracted from the literature such as government revenue, government expenditure, external reserve, exchange rate and regime of administration. Consequently the model is stated thus:

$$FB = f(GE, GR, ER, EXR, DUMR) \quad (10)$$

Where FB is the fiscal behavior proxied by fiscal balance

GE is government expenditure

GR is government revenue

ER is external reserve

EXR is exchange rate

DUMR is the dummy variable for regime of administration. Military regime takes 0 while civilian regime takes 1

Estimating Techniques

Unit Root Test

Testing for the existence of unit roots is a key pre-occupation in the study of time series models and co-integration. What are unit roots? Let us begin with a definition. A stochastic process with a unit root is itself non-stationary. Another way of looking at it is that testing for the presence of unit roots is equivalent to testing whether a stochastic process is a stationary or non-stationary process. In sum, the presence of a unit root implies that the time series under scrutiny is non-stationary while the absence of a unit root means that the stochastic process is stationary, Maddala (1992) has offered an interesting perspective and interpretation on the testing for unit roots.

According to him (1992:578), testing for unit roots is a formalization of the Box-Jenkins method of differencing the time series after a visual inspection of the correlogram. No wonder then that testing for units roots plays a central role in the theory and technique of co-integration.

Currently, there are some commonly accepted methods of testing for unit roots. These are the

Dickey-Fuller (DF), Augmented Dickey-Fuller (ADF) test and the Philip Peron (PP) test.

The Augmented Dickey-Fuller (ADF) test is considered superior to the Dickey-Fuller (DF) test because it adjusts appropriately for the occurrence of serial correlation.

$$X_t = b_0 + b_1 X_{t-1} + b_2 X_{t-2} + b_n X_{t-n} + U$$

Where U is a stationary error term. The null hypothesis that X_t is non stationary is rejected if b_1 is significantly negative.

The number of lag (n) of X_t is usually chosen to ensure that the regression is approximately white noise. It is simply referred to as the DF test if no such lags are required in which case $b_i = 0$ ($i = 1, \dots, n$). However, the t-ratio from the regression does not have a limiting normal distribution.

An important assumption of the DF test is that the error term are independently and identically distributed. The ADF test adjust the DF test to take care of possible serial correlation in the error term by adding the lag difference terms of the regress and. Phillip and Perron use non-parametric methods to take care of the serial correlation in the error term without adding lagged difference terms. Since the asymptotic distribution of PP test is the same as the ADF test statistic, the PP test is preferred for this study.

Co-integration is based on the properties of the residuals from regression analysis when the series are individually non stationary.

A series is stationary if it has a constant mean and constant finite variance.

Thus, a time series X_t is stationary if its mean $E(X_t)$ is independent of time and its variance $E\{X_t - E(X_t)\}^2$ is bounded by some finite number and does not vary systematically with time. It tends to return to its mean with the fluctuations around this mean having constant amplitude.

(B) Estimating technique: ARDL MODEL

The choice of this estimation procedure is primarily informed by the fact that it passes the fitness-for-the-purpose-test. For instance, one option available to perform the co-integration test is the Engle-Granger approach (1987), but its weakness lies in the fact that it is only able to use two variables. A multivariate analysis, such as that considered in this study, leads

to the use of the Johansen and Joselius co-integration analysis or ARDL model. The statistical equivalence of the economic theoretical notion of a stable long-run equilibrium is provided by these two models, but the choice will depend on the characteristics of the data.

This study is unable to use the Johansen procedure (an option) as all the variables are not completely $I(1)$, that is, integration of order one. This assumption is a pre-condition for the validity of the Johansen procedure. Alternatively, the ARDL model is appropriate to run the short-run and long-run relationships (Shin *et al.*, 2014).

The guide that will be followed in this study is that if all variables are stationary, $I(0)$, an ordinary least square (OLS) model is appropriate and for all variables integrated of same order, say $I(1)$, Johansen's method is very suitable when we have fractionally integrated variables, variables at different levels of integration (but not at $I(2)$ level) or cointegration amongst $I(1)$ variables.

The ARDL model will then be performed with the formulation of a conditional error correction model (Pesaran *et al.*, 2001) as below:

$$\Delta fb = \beta_0 + \sum_{i=1}^p \beta_i \Delta g e_{t-i} + \sum_{j=0}^{q_1} \alpha_j \Delta gr + \sum_{k=0}^{q_2} \theta_k er + \sum_{l=0}^{q_3} \varepsilon_l \Delta exr + \sum_{m=0}^{q_4} \epsilon_m \Delta dumr_{t-m} + \sum_{v=0}^{q_5} e_v \Delta g e_{t-v} + \theta_0 gr_{t-1} + \theta_1 er_{t-1} + \theta_2 exr_{t-1} + \theta_3 dumr_{t-1} + e_t$$

where p, q_1, \dots, q_5 represents appropriate maximum lags.

Sources of Data

In the process of collecting data for this study, all the variables used are sourced from the Central Bank statistical bulletin 2014 edition.

Data Analysis

The analysis begins with the descriptive analysis and exploration of the time series properties of the variables using the unit root test this is a pre-condition for cointegration test. The result of the unit root test will show if will can proceed to cointegration test which will enable us assess the long run relationship between fiscal behaviour and the identified determinants. In addition it will us guide us on method of cointegration test to be adopted depending on the orders of integration of the variables. The augmented dickey fuller test is adopted for the purpose of the stationarity test

Descriptive Statistics

Table 1: Summary of statistics

Variables	Observations	Mean	Standard deviation	Min	Max
GR	35	114998.8	218169.9	1168.8	949187.9
GE	35	92876.55	193722.1	701.1	947690
FB	35	-20888.22	55654.94	-285104.7	32049.4
ER	35	340975.7	784452.2	132.3	3835433
EXR	35	65.80827	63.59394	.5467809	156.8097
DUMR	35	.4571429	.5054327	0	1

Source: Author's computation

The summary of statistics is necessary to explore the time series distribution of the data collected on each of the variables. Of great importance is our dependent variable which is fiscal balance a proxy for fiscal behavior. The table show that out of all the variables used as determinants of fiscal behavior only fiscal balance has negative mean. Precisely the mean value is -20888.22, this shows that on the average the data collected on fiscal balance are mostly negative. The implication of this is that the behavior of fiscal balance in Nigeria is more of negative than positive. This is a pointer to the fact that Nigeria fiscal balance is more of fiscal deficit during the periods under review. Consequently, fiscal balance in this study can be referred to as fiscal deficit.

Table 2: Unit root test

Variables	ADF Statistics	Order of integration
FB	-3.889***	I(1)
GR	-8.570***	I(1)
GE	-3.062**	I(0)
ER	-3.452**	I(1)
EXR	-5.447***	I(1)
DUMR	-5.745***	I(1)

(*) Statistical significance at 10%, (**) Statistical significance at 5%, (***) Statistical significance at 1%

Source: Authors computation

The results of the unit root test show that all the variables are integration of order one that is I(1) except government expenditure which is stationary at levels that is I(0). The implication is that five out of the six variables in the model are non-stationary and thus a linear combination of them can be stationary. This is the essence of cointegration. However, the choice of the cointegration techniques depends on the order of integration of the variables. Since not all the variables are I(1) then, Johansen cointegration technique cannot be applied hence Autoregressive distributed lags ARDL bound test is used. The results are presented in Tables 2.

Tables 2 is the ARDL bound test results. Firstly, the result shows that there is a long run relationship between fiscal balance which is a proxy for fiscal behavior and the identified determinants. This is shown through the bound test in Table 3, the F statistics is 70.752897. This value is greater than the critical values at both the lower and upper bounds.

Thus, indicating the existence of long run relationship among the variables. In other words, the result of the bound test has shown that all the determinants of together have permanent effect on fiscal behavior in Nigeria. After the confirmation of the conintegration or co-movement, the next is the cointegration regression which will show the long run form of the model.

Table 3 ARDL bound test

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	70.13634	5

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	1.99	2.94
5%	2.27	3.28
2.5%	2.55	3.61
1%	2.88	3.99

INTERPRETATION OF RESULTS AND DISCUSSION OF FINDINGS

Considering the individual variable long run relationship and impact on fiscal behavior as shown on table 4, the result is an indication that government revenue exhibits an inverse long run relationship with fiscal balance which is a proxy for fiscal behavior. The long run coefficient of government revenue is -0.381673 and it is statistically significant at 5% level. The implication of this is that government revenue as government revenue rises it can significantly reduce fiscal balance. It should be noted that fiscal behavior in Nigeria is more of fiscal deficit. Therefore according to the result, a unit rise in government revenue will reduce fiscal deficit by about 38%.

Another, variable used in the model is government expenditure. The long run coefficient is positive and significant. The implication of this result is that government expenditure also has significant impact on fiscal behavior in Nigeria. The coefficient of government expenditure is 0.470899. The implication is that a unit rise in government expenditure will lead

to about 47% rise in the fiscal behavior which is more of fiscal deficit.

Exchange rate long run coefficient is -0.29956764. The implication of this result is that there is a significant inverse relationship between exchange rate and fiscal behavior in Nigeria. According to the result, a unit increase in exchange rate that is currency devaluation will lead to about 29% fall in the fiscal deficit (fiscal behavior).

External reserve also shows a significant positive relationship with fiscal behavior in Nigeria since the fiscal behavior in Nigeria is more of a deficit. The long run coefficient of external reserve is 0.298387. The implication of this result is that a unit rise in external reserve will lead to about 29% rise in fiscal deficit (fiscal behavior). This shows that as the country strive to increase her external reserve, there will be increase in fiscal deficit (fiscal behavior) in Nigeria.

Table 4: ARDL COINTEGRATION REGRESSION

ARDL Cointegrating And Long Run Form

Dependent Variable: FB

Selected Model: ARDL(3, 1, 4, 4, 3, 4)

Date: 10/19/15 Time: 19:58

Sample: 1980 2014

Included observations: 31

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FB(-1))	-1.216389	0.055458	-21.933458	0.0000
D(FB(-2))	-0.925848	0.024112	-38.397870	0.0000
D(GR)	0.770804	0.012328	62.526950	0.0000
D(EXR)	-184.768124	106.243793	-1.739096	0.1327
D(EXR(-1))	202.473593	117.455412	1.723834	0.1355
D(EXR(-2))	-427.598833	129.146846	-3.310951	0.0162
D(EXR(-3))	-186.358390	83.099369	-2.242597	0.0661
D(ER)	0.166412	0.006879	24.192488	0.0000
D(ER(-1))	0.466163	0.012428	37.509885	0.0000
D(ER(-2))	0.044116	0.008316	5.304725	0.0018
D(ER(-3))	0.589363	0.015238	38.676025	0.0000
D(GE)	-1.262031	0.020754	-60.809885	0.0000
D(GE(-1))	-0.413418	0.019854	-20.823118	0.0000
D(GE(-2))	-0.383519	0.011950	-32.092545	0.0000
D(DUMR)	-1994.427807	7515.245018	-0.265384	0.7996
D(DUMR(-1))	-111744.216446	7881.987070	-14.177163	0.0000
D(DUMR(-2))	-91201.329442	7450.943558	-12.240239	0.0000
D(DUMR(-3))	-40882.822894	6265.003491	-6.525587	0.0006
CointEq(-1)	1.271215	0.040568	31.335423	0.0000

$$\text{Cointeq} = \text{FB} - (-0.3817 * \text{GR} - 0.299568 * \text{EXR} + 0.2984 * \text{ER} + 0.4709 * \text{GE} - 58659.5067 * \text{DUMR} - 1593.7218)$$

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GR	-0.381673**	0.178573	-2.137353	0.0464
EXR	-0.29956764	78.364009	-3.822734	0.0087
ER	0.298387	0.091121	3.274632	0.0169
GE	0.470899	0.162970	2.889477	0.0277
DUMR	-0.58659506677	17237.803878	-3.402957	0.0144
C	-1593.721831	582.983898	-2.733732	0.0340

The dummy variable for regime of administration in Nigeria during the periods under review has

significant positive impact on fiscal behavior in Nigeria. The study used military and civilian regimes

as the two regimes prominent in Nigeria during the period under review and the result has shown that this also has significant impact on fiscal behavior in Nigeria.

Under the short run aspect of the cointegration regression, the result indicates that all the variables used as determinants of fiscal behavior in Nigeria have significant impact on fiscal behavior during the period under review. The results show that the lagged

values of fiscal balance, government revenue, government expenditure, external reserve, exchange rate and regime of administration all have short run significant impact on fiscal behavior in Nigeria.

Diagnostic Tests

As robust tests to our estimations, some diagnostics tests are conducted. The tests are heteroskedasticity and serial correlation tests.

Test for heteroskedasticity

Table 5: ARDL HETEROSKEDASTICITY TEST
Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.500027	Prob. F(24,6)	0.8946
Obs*R-squared	20.66703	Prob. Chi-Square(24)	0.6583
Scaled explained SS	2.134677	Prob. Chi-Square(24)	1.0000

The results of the heteroskedasticity test is presented in table 5. The null hypothesis is that there is no heteroskedasticity. Using the F statistics, it is discovered that the probability of F shows that the null hypothesis is to be accepted. Therefore we conclude that our model is not having the problem of heteroskedasticity which may affect the validity of our results.

Test for Serial Correlation

Table 6: ARDL SERIAL CORRELATION LM TEST

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.296767	Prob. F(2,4)	0.3680
		Prob. Chi-Square(2)	
Obs*R-squared	12.19369	Prob. Chi-Square(2)	0.0022

The null hypothesis here is that there is no serial correlation. Considering the F statistics and the probability, it is obvious that the null hypothesis is to be accepted while we reject the alternative hypothesis that there is serial correlation. Consequently the estimates from our model are valid and can be used for forecasting

CONCLUSIONS

The study has shown that both the nature and behavior of fiscal policy in Nigeria during the periods under review is deficit. In other words, fiscal balance in Nigeria which clearly shows the fiscal policy behavior has been more of deficit than surplus. Again, the study has confirmed government revenue, government expenditure, external reserve, exchange rate and regime of administration as major determinants of fiscal policy behavior in Nigeria.

Furthermore, it can be concluded from the study also that these determinants have both permanent and transitory effects on fiscal policy behavior. The

implication is that their individual effect on fiscal policy behavior is sustained from the short run through the long run significantly. Therefore any government action meant to influence fiscal policy in Nigeria must take into consideration these variables.

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