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# Nexus of Fiscal Instability and Developmental Outcomes in Nigeria

Hammed Adetola Adefeso[1] & Olukemi Ajibike Aluko[1]

[1] Department of Local Government and Development Studies, Obafemi Awolowo University, Ile-Ife, Nigeria

Correspondence: H. A. Adefeso, Department of Local Government and Development Studies, Obafemi Awolowo University, Ile-Ife, Nigeria. E-mail: adefesoha@gmail.com

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**Abstract**

This paper examines the effect of fiscal instability component on the fluctuation in welfare indicator for 45 years. Descriptive statistics reveals that fiscal component and real GDP per capital are largely unstable and Hodrick-Prescott filter (HPF) is employed as a smoothing measure of the long-term component. Descriptive statistics reveals that lesser government revenue had been committed to the development purposes compared with recurrent expenditure since the beginning of the fourth republic in Nigeria. Using ARDL model, the study found that, there exist a long-run association among the variable of interest as one percent increase in the rate of instability in recurrent expenditure led to an approximate of 30% reduction in the fluctuation of the welfare indicator while instability in the capital expenditure led to 36% increase in the fluctuation of the GDP per capital. In the short-run however, 1% increase in the immediate lagged value of cyclical capital expenditure had significantly increase the fluctuation in the current welfare index by 54% but such effect is reduced to 43% in two-year lagged. Also, one percent increase in the immediate lagged value of instability in the recurrent government expenditure had significantly reduced the fluctuation in the GDP per capital by 21% but only 9% of such reduction was off set in the two-year lagged. The study therefore, recommended greater control of instability in the fiscal components through diversification revenue base should be emphasized in other to stabilize the fluctuation of the welfare indicator in the short-run and long-run.

**Keywords:** Fiscal instability, welfare indicator, economic development, ARDL

## 1. Introduction

The level of economic development and fiscal instability are deeply connected. The uncertainty associated with an unstable fiscal stance of the government may reduce investment and the speed of economic development while poor economic development may lead to government collapse and fiscal imbalance. The fiscal instability in Nigeria has continued for a long time and it has not been adequately explored. From historical perspective, the revenue of the country is largely gotten from the exportation of the primary products. For example, from the year 1960 to the early 1970s, revenue derived from the exportation of agricultural products dominated the sources of revenue to the government, while other sources of revenue were considered as residual. The oil boom of 1973/74 to date has only made the economy to transit to another primary product and since then oil and gas exportation has accounted for 75 percent of total revenue, 90 percent of foreign currency and 35 percent of GDP.

Over the years, the Nigerian experience has shown its inabilities to implement fiscal policy in a country that is characterised with highly volatile income. The Nigerian economy has witnessed a strong deficit bias and pro-cyclicality in its fiscal policy which is driven greatly by high oil prices experienced in 1979-1982, 1991-1992 and 2000-2002 followed by the sharp increase in revenue and expenditures. Subsequent reduction in oil price has being the major challenge of the federal government and the resulted frequent fiscal deficit has grown in manifold. Out of 43 years from 1965, 32 years which represent 74 percent, the overall fiscal balance has been in deficit. The implication of this boom-burst fiscal policy includes the transmission of the revenue from oil price which is highly volatile to a stable and sustainable provision of basic amenities, infrastructures and other public services has over the years added to the failure of public spending. Without an iota of doubt, the failure of fiscal policies management, and not the failure of monetary policies, responsible for the failure of the past developmental agenda implemented by the federal government.

The sole aim of this study therefore, is not to add to the numerous literature on fiscal policy and growth nexus but to assess the cyclical impact of fiscal instability measured by Hodrick-Prescott Filter (HPF) on the welfare indicator over the period of 1970-2015. The choice of the base year is guided by the time economy relies heavily on oil revenue and the current year is specifically chosen because the year afterward witnessed an unprecedented reduction in the crude oil price in the international market. The study employs Autoregressive Distributed Lagged model (ARDL) technique of analysis for the long-run and short-run effect of components of government expenditure on the GDP per capital in Nigeria. Undoubtedly, findings from this study would be of immense values in suggesting the way forward to minimise the destabilizing impact of pro-cyclical nature of public finance on the Nigerian economy that derived his lion share of its per capital income from crude oil exportation.

## 2. Review of Related Literature

This study defines fiscal policy as the use of government revenue and expenditure level to influence the macroeconomic variables towards achieving the macroeconomics goals. These goals maybe achieved either through either expansionary or contractionary fiscal policies. Acknowledging the fact that empirical literature on growth and developmental effect of fiscal instability are scanty as evidenced in the literature. The study of Titus, Yusuf and Tari (2014) submits for Nigerian economy that before government can stabilize fiscal deficit, the government has to reduce its spending particularly on unproductive sectors of the economy and increase revenue collection by broadening the tax base. The study of Boroaca (2012) is conducted for European countries from 1996 to 2009 and the study finds that fiscal policy has been a major component of the policy of the country which counteract the negative impacts of economic factors and that state could adopt series of countercyclical policies. The study also discovers one of the most short-term policies is fiscal policy which can affect macroeconomic goals.

Adeoye (2011) discovers that, the public investment indirectly affects the growth of output implying that it has a crowding out effect on private investment in Nigeria over a period of 1970-2002. The study of Joharji and Star (2010) as well is carried out in Saudi Arabia from 1969 to 2005 and finds that there is a direct and significant association between increase in government spending and growth rate in the long-run. Ocran (2009) provides evidence that government consumption expenditure has a direct and significant effect on growth in South Africa from1990-2004. Mansouri (2008) focuses his research on Morocco, Tunisia and Egypt for the periods 1970-2002; 1972-2002 and 1975-2002 respectively. The study establishes long run relationship in all the countries. The study reveals that 1% increase in public expenditure increased the real Gross Domestic Product by 1.26% in morocco, 1.15% in Tunisia and 56% in Egypt. Amanja and Morrissey (2005) is carried for kenyan economy for a period of 1964-2004 and finds contrary to the prediction of endogenous growth model that distortionary taxation elevates growth and productive spending stifle it. Also, the study finds that non-productive and non-distortionary taxation has zero impact on growth, this is consistent with the prediction of Barro model. Poot (2000) also, finds a positive association between education expenditure and growth, non-robust positive relationship between infrastructure expenditure and growth and moderately strong negative association between defence spending and growth for a period of 1983-1998.

The study of Albala and Mamatzakis (2001) on Chile for a period of 1960-1995 discovers direct and significant association between public infrastructure and growth. Bleaney et al. (2001) for a period of 1970-1995 on 5 years average panel data model and finds the results completely in support of Barro's prediction. Ajisafe and Folorunso (2002) submits that, monetary policy rather than fiscal exerts a greater effect on the Nigerian economy and that the grater distortion in the economy is as a result of the emphasis on fiscal action of the government. Phillips (1997) observes that budget deficits have characterised the Nigerian economy for decades. The study finds that borrowing towards financing deficit has led to excessive money supply in the economy which has worsened inflationary pressures and complicated macroeconomic instability resulting in negative impact on external balance, investment, employment and growth. The study posits that fiscal policy will only be effective and move Nigeria towards the desired state in 2010 if and only if it has substantially reduce the budget deficit syndrome it has suffered for decades.

Babangida (1993) discovers that lack of fiscal discipline is the root cause of Nigerian economic problem. Despite that the country has its revenue above the budget yet extra budgetary spending has been on the increase so fast and resulting in even bigger deficit. The Central Bank's Ways and Means facility as way of financing the fiscal deficit has resulted in rapid growth of domestic liquidity, which has also led to pressures on domestic prices, exchange rate as well as interest rate. Baunsgard (2003) concludes that the Nigeria's experience explains how it is difficult to implement fiscal policy in a country with volatile revenue inflows. The country has witness over the years, a strong deficit bias and pro-cyclically in fiscal policy, which is largely driven by oil prices of 1991-1992, 2000-2002 revenue and these led to sharp increase in expenditures which has been rigidly downward as oil prices substantially decline, the boom-burst

fiscal policies should have transmitted the oil-price volatility to stabilise the provision of public service delivery. This has contributed to the failure of public spending over the years towards facilitating the diversification and economic growth in Nigeria.

Benos (2004) covers 16 OECD countries in a panel data analysis from 1990 to 1997 and finds an inverted U-shaped relationship with expenditures on health, education and fuel energy with growth. There is a strong positive relationship between education and growth for poor countries. While expenditures on health have a negative relationship with growth, expenditures on housing, transport, communication, social security have a U-Shaped relationship of with growth. Gupta et al. (2005) focuses on the 39 lower income countries from 1990 to 2002 in a panel data model and finds that the structure of the government expenditures comprises of more productive expenditure than unproductive and then has direct impact on growth. Kukk (2007) finds in a cross-sectional analysis that productive and unproductive have direct and indirect impact on growth respectively.

Omitogun and Ayinla (2007) finds that though there has been substantial increases in government expenditure over the years, but the rate of growth has been very low and crawling in Nigeria and that poor performance of fiscal policy is caused by inconsistencies of policies, high rate of corruption, wasteful government spending, poor policy implementation and absence of feedback mechanism on policies implemented. Olawunmi and Ayinla (2007) also, finds for Nigeria on a period of 1980-2004 that sustainable growth has not effectively affected by fiscal policy. Ogbole et al. (2011) considers Nigerian economy over a period of 1970-2006 and finds that fiscal policy differs in its effectiveness in stimulating growth during and after period of regulation. The study advocates for appropriate policy mix, prudent government expenditure, achievable target setting for fiscal policy.

## 3. Model Specifications and Techniques of Estimation

### 3.1 Model Specifications

The fiscal instability can influence the economic welfare and can also have impact on the long-term growth (Ariyo, 1993). Therefore, the appropriate model is the one developed by Barro (1990) which replaces labour factor input in the popular Cobb Douglas production function with public capital to show how the fiscal action of government complement the private capital in the production process. It is this complementarity between the private capital and government fiscal action in term of its spending that ensures growth rates of macroeconomic variables.

$$Y_t = AK_t^a G_t^b \quad (1)$$

Where a, b $> 0$ and a + b = 1, $Y_t$ is welfare indicator proxied by GDP per capital, $K_t$ and $G_t$ represent private capital and government fiscal action. $A$ is the technological level, both a and b are parameters which capture growth elasticity of factor inputs. Obtaining the double logarithmic transformation of equation 1 above yield:

$$y_t = \alpha + ak_t + bg_t + cx_t' + e_t \quad (2)$$

Where $y_t$, $k_t$, $g_t$, $e_t$ are growth rate, log of private capital, log of government spending, error term respectively while $x_t'$is log of control variables. According to Hodrick and Prescott Filter (1997), given the time series data, $Y_t$, is the sum of a growth, $y_t^g$, and a cyclical, $y_t^c$, components and thus:

$$Y_t = y_t^c + y_t^g \quad (3)$$

The main variable in this study is the cyclical components of growth represented by GDP per capital ($y_t^c$) and hence equation 3 becomes:

$$y_t^c = Y_t - y_t^g \quad (4)$$

The process of generation cyclical series is called the Hodrick and Prescott (HP) Filter. The HP Filter is a method of smoothing data to obtain a smooth estimate of the long-term trend component of the series. The HP is a two-sided linear filter that computes the smoothed series $y_t$ of $Y_t$ by minimizing the variance of around $y_t$ subject to a penalty that constrains the second difference of $y_t$. HP chooses to minimize the following objective function:

$$\text{Min } (y_t): \sum_{t=1}^{T} (Y_t - y_t)^2 + \gamma \sum_{t=2}^{T-1} \{(y_{t+1} - y_t) - (y_t - y_{t-1})\}^2 \quad (5)$$

The cyclical component $(y_t^c)$ is the deviation from the mean of growth path $(y_t^g)$ and it can be obtained from equation (5). $\gamma$ is the smoothness parameter which equals 100 for annual data series. The equation (4) therefore becomes:

$$y_t^c = b_0 + b_1 k_t + b_2 g_t + b_3 x_t' + v_t \quad (6)$$

If the fluctuation in the GDP per capital is $CGDPK_t$ and cyclical component of total government fiscal expenditure is $CTGFS_t$ then the equation (6) becomes:

$$CGDPK_t = \alpha + \beta CTGFS_t + b_1 k_t + b_3 x_t' + e_t \quad (7)$$

The parameter of interest is $\beta$. Disaggregating $CTGFS_t$ into capital government expenditure ($CCGS_t$) and recurrent government expenditures ($CRGS_t$) and taken into consideration the control variables as employed in the relevant

literature such as the works of De Haan and Sturn (1994), Foye (2008), Blanchard and Simon (2001) Ayadi (2009), Bejan (2006), Osinowo and Akanni (2013) among others equation (7) becomes:

$$CGDPK_t = \alpha + \beta_1 CCGS_t + \beta_2 CRGS_t + \beta_3 PC_t + \beta_4 HC_t + \beta_5 POP_t + \beta_6 OPN_t + \beta_7 CPI_t + e_t \quad (8)$$

Where $PC_t$= private capital, $HC_t$= human capital, $POP_t$= population, $OPN_t$ = Trade openness, $CPI_t$= Consumer Price Index and $e_t$ = error term . The sole objective of this study is achieved by estimating the model specified in equation (8) through the approach of Autoregressive Distributed Lag (ARDL) model to cointegration which involved movement from general to specific. This had enabled the study to capture the dynamism of the data. Specifically, this work adopted ARDL approach because of its additional merit of supplying consistent estimates of long-run coefficients, which are normal asymptotically regardless of whether the regressors are I(0) or I(1) (Peseran and Shin, 1997). Expressing long run relationship in an ARDL framework in a double-log equation yield equation (9).

$$LCGDPK_t = a + \sum_{i=1}^{n} \delta_i LCGDPK_{t-i} + \sum_{i=1}^{n} \alpha_i LCCGS_{t-i} + \sum_{i=1}^{n} \beta_i LCRGS_{t-i} + \sum_{i=1}^{n} \rho_i LOPN_{t-i} \sum_{i=1}^{n} \varphi_i LCPI_{t-i} + \sum_{p=1}^{n} \vartheta_i LPC_{t-i} + \sum_{k=1}^{n} \pi_i LHC_{t-i} + \sum_{z=1}^{n} \sigma_i LPOP_{t-i} + \varepsilon_t \quad (9)$$

Where i = 1,2 ..... n, and $a$ $\delta_i$, $\alpha_i$, $\beta_i$, $\rho_i$ $\varphi_i$ $\vartheta_i$, $\pi_i$, $\sigma_i$ are scalar parameters to be estimated.

*3.2 Estimation Technique through ARDL Method to Cointegration*

These are the three reasons this procedure is adopted. Firstly, apart from the fact that the bound test procedure is very simple as it opposes to multivariate cointegration techniques such as Johansen and Juselius (1990), it gives room for the cointegration relationship to be estimated by OLS once the study identified the lag order in the model. Another reason is that, the pre-testing of the variable in the equation is not necessary in bound testing method. These pre-testing includes unit roots unlike other techniques such as the Johansen approach. Bound testing is applicable regardless of stationarity properties of Integration of order zero or one of the variables in the model or even mutually cointegrated. Also, the bound test procedure is more efficient in a small or finite sample data sizes as in the case of the study. This bound test procedure will however crash if any variable is integrated of order 2.

This paper adopts Pesaran *et al* (2001) as cited in Choong *et al* (2005), by using the bounds test approach that modelling the long-run equation (8) in a general VAR model of order (p,q,r,) as presented in equation (9). Incorporating the short run dynamics into the adjustment process of the long run equation, the model is then transformed into bound testing approach in equation (10):

$$\Delta LCGDPK_t = a + \sum_{i=1}^{n} \delta_i \Delta LCGDPK_{t-i} + \sum_{i=1}^{n} \alpha_i \Delta LCCGS_{t-i} + \sum_{i=1}^{n} \beta_i \Delta LCRGS_{t-i} + \sum_{i=1}^{n} \rho_i \Delta LOPN_{t-i} \sum_{i=1}^{n} \varphi_i \Delta LCPI_{t-i} + \sum_{p=1}^{n} \vartheta_i \Delta LPC_{t-i} + \sum_{k=1}^{n} \pi_i \Delta LHC_{t-i} + \sum_{z=1}^{n} \sigma_i \Delta LPOP_{t-i} + \pi \mathrm{ECT}_{t-1} + \varepsilon_t \quad (10)$$

Where $\alpha$ is the intercept, Δ is the first-difference operator, $\varepsilon_t$ is a white-noise disturbance term and all variables are expressed in natural logarithms with the symbol of L. $\pi$ is the adjustment speed parameter and ECT is the residual obtained from equation (9). The equation (10) is the final equation which can be viewed in ARDL framework of order, (p, q, r).

3.2.1 The Bounds Testing Procedure

The equation (10) indicated that $LCGDPK_t$ to be determined by its past values besides the other explanatory variables. The first stage of the ARDL bound testing method carried out by this work is to estimate equation (10) by OLS in order to determine the existence of a long run association among the variables of interest by conducting a Wald test (F-statistics) for the joint significance of the coefficients of the lagged levels of the variables, i.e. $H_0 : \vartheta_1 = \vartheta_2 = \vartheta_3 = 0$ against the alternative $H_1 : \vartheta_1 \neq \vartheta_2 \neq \vartheta_3 \neq 0$ along with serial correlation test and test of stability. The second step which was to determine the optimum and structural lags by estimating model 10 excluding trend value i.e. γ using minimum Akaike's information criteria (AIC) and Schwarz criterion (SC). Both the AIC and SC revealed that optimum lag is two (2), as the lowest value of AIC and SC are better for the model. Lag of two (2) yielded best model.

**4. Empirical Result and Discussion**

The result of the unit root test, as depicted in Table 1, shows that the series were integrated at I(0) and I(1). Specifically all variables employed are I(1) series except Trade Openess (OPNES) which is I(0). The I(1) and I(0) nature of the series necessarily confirmed the relevance and justification for the use of the ARDL cointegration approach.

Table 1. Stationarity test

| | ADF | | | | PP | | |
|---|---|---|---|---|---|---|---|
| Series | Level | 1st Diff | 2nd Diff | Status | Level | 1st Diff | Status |
| LGDPK | -0.3294 | -6.2153*** | --------- | I(1) | -0.3278 | -6.2144*** | I(1) |
| LCPI | -0.8415 | -3.28518** | ---------- | I(1) | -0.7617 | -3.1234** | I(1) |
| LGFCF | -1.1300 | -2.9789** | | I(1) | -1.2976 | -4.3990* | I(1) |
| LCEXP | 0.7064 | -7.3693*** | --------- | I(1) | -1.1039 | -7.36938*** | I(1) |
| LREXP | 0.1391 | -7.25565*** | --------- | I(1) | 0.48691* | -7.3036*** | I(1) |
| LPOP | -0.4281 | -1.979664 | -3.0458** | I(2) | -0.38681 | -2.96913** | I(1) |
| OPNX | -2.8570* | ---------- | ---------- | I(0) | -2.8570* | ---------- | I(0) |
| HC | -0.5892 | -5.58119*** | -------- | I(1) | -0.65838 | -5.5623*** | I(1) |
| MacKinnon Critical Values for rejection of unit root hypothesis | | | | | | | |
| 1% critical value | -3.6228 | -3.6289 | | | -3.6171 | -3.6228 | |
| 5% critical value | -2.9446 | -2.9472 | | | -2.9422 | -2.9446 | |
| 10% critical value | -2.6105 | -2.6118 | | | -2.6092 | -2.6105 | |

NB: ***(**)* denote significance levels at 1% (5%) 10% level respectively.

The graphical presentation of results of trend analysis of the GDP per capital, recurrent expenditure as well as capital expenditure showed the changing contours in the behaviours and patterns of how the variables changed over the years were depicted in fig 1. For all the variables over a period of 1970-2015, a positive upward movement was recorded for both recurrent and capital expenditure. This study showed that from 1974 to 1980 and in 1998 capital expenditure was remarkably greater than recurrent expenditure while in other period of study recurrent expenditure is relatively higher but became manifest from 1999 to 2015. This indicated that less government revenue had been committed to the development purposes sincey 55432 the beginning of the fourth republic in Nigeria. Figure 2 also revealed that trend and pattern of the GDP per capital had increased over the years and relatively unstable.

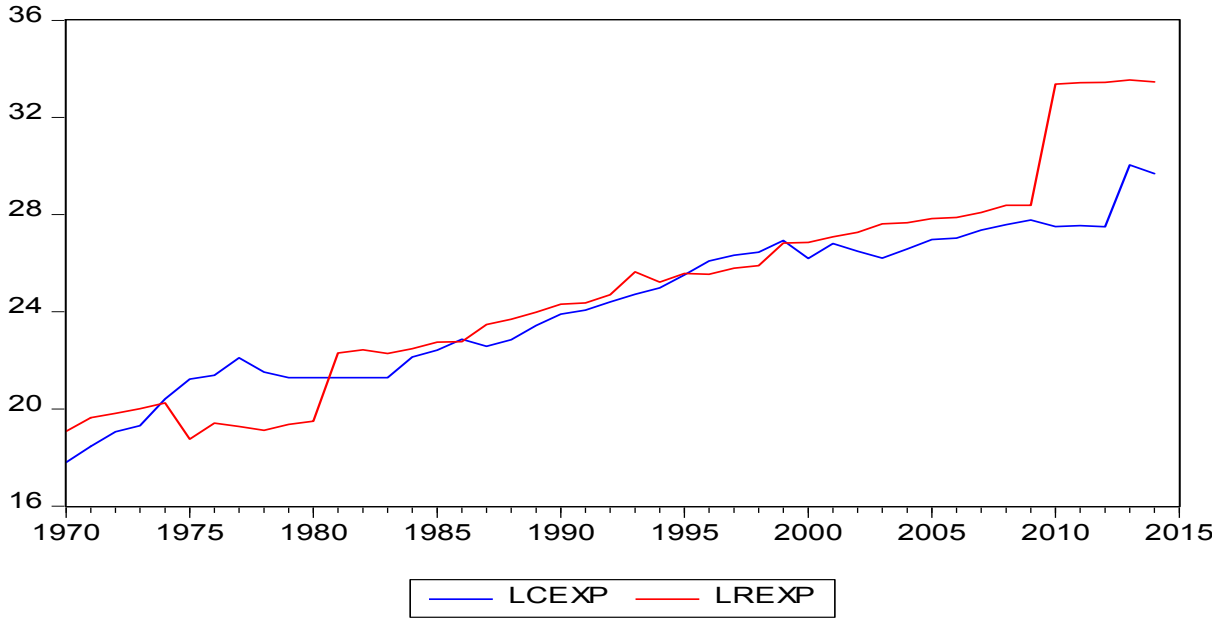


Figure 1. Trend and pattern of recurrent and capital expenditure in Nigeria

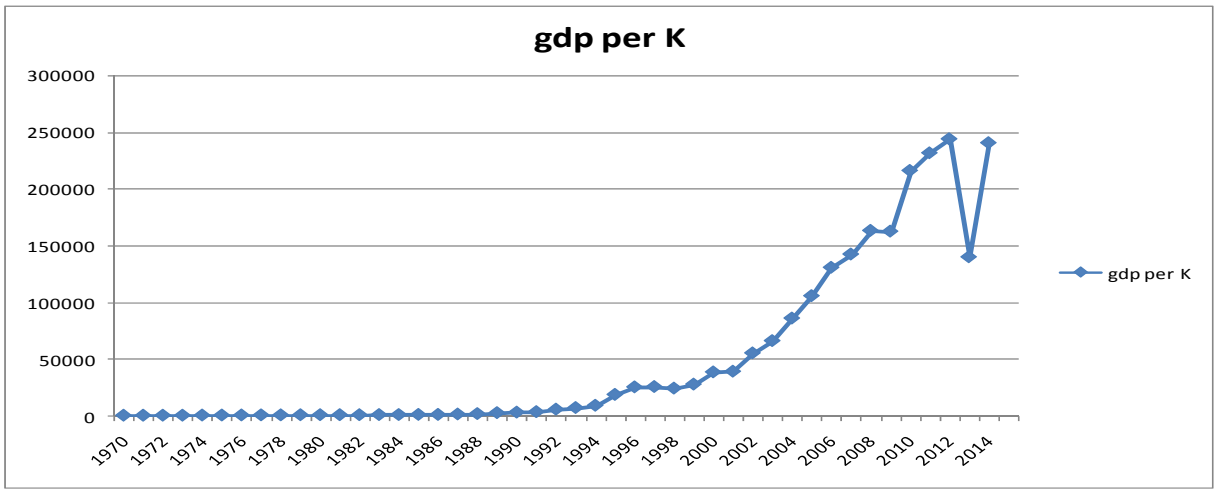


Figure 2. Trend and pattern of GDP per capital in Nigeria

The general ARDL estimation was conducted and the coefficient restriction wald test was derived from the general ARDL estimate as shown in the Table 2.

Table 2. Coefficient Restriction Wald Test

| Test Stat. | Value | Df | Probability |
|---|---|---|---|
| F-statistic | 6.290875 | (3, 31) | 0.0018 |
| Chi-square | 18.87263 | 3 | 0.0003 |

The computed F-statistic value which is 6.290875 from Table 2 was evaluated with the critical values tabulated by Pesaran et al. (2001). The lower bound critical value assumed that the explanatory variables $x_t$ are integrated of order zero i.e. I(0) and the upper bound critical values assumed that $x_t$ are integrated of order one i.e. I(1). Therefore, if the computed F-statistic is smaller than the lower bound value, then the null hypothesis of no cointegration is not rejected. When computed F-statistic is greater than the upper bound value, the null hypothesis of no cointegration is rejected. However, the results are inclusive when computed F-statistic falls between the lower and upper bound values. Since the computed F-stat. for the work is 6.290875 which is higher than the upper bound critical value 5.85, the null hypothesis of no cointegration was rejected at 5 percent. Therefore, there is a long-run relationship and movement between the variables of interest in Nigeria over the period of study.

Table 3. Detecting the long run relationship using bound test table

| Nigeria | | | | | |
|---|---|---|---|---|---|
| F-Statistic | Significant level | Bound testing (unrestricted intercept and unrestricted trend) | | Bound testing (unrestricted intercept and restricted trend) | |
| **6.29087*** ** | | I(0) | I(1) | I(0) | I(1) |
| | 1% | 6.34 | 7.52 | 3.38 | 4.02 |
| | 5% | 4.87 | 5.85 | 3.88 | 4.61 |
| | 10% | 4.19 | 5.06 | 4.99 | 5.85 |

Source: Bound Testing for level relationship by Pesaran et al. (2001)

The third step adopted in this work is carried out by obtaining the long-run ARDL estimate which incorporate long-run parameters as shown in Table 4. The estimated long-run model passed both the stability test and serial autocorrelation LM test as shown on figure 3 and table 4 respectvely.

Table 4. Long-run ARDL Model

Dependent Variable: LCGDPK

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -0.910426 | 12.06303 | -10.36577 | 0.0000 |
| LCGDPK(-1) | 0.131331 | 0.076502 | 1.716691 | 0.0995 |
| LCCGS(-1) | 0.360369 | 0.031360 | 11.49142 | 0.0000 |
| LCRGS(-1) | -0.297740 | 0.025667 | -11.60030 | 0.0000 |
| LCPI(-1) | -0.003236 | 0.025228 | -0.128263 | 0.8991 |
| LGFCF(-1) | 0.077677 | 0.014981 | 5.185197 | 0.0000 |
| LPOP(-1) | 7.025068 | 0.697248 | 10.07542 | 0.0000 |
| ENRT(-1) | -0.000405 | 0.001501 | -0.269468 | 0.7900 |
| OPENESS(-1) | -0.000672 | 0.000478 | -1.406080 | 0.1731 |

Adjusted R-Square = 0.8999

D.W. = 1.915151

F- Statistics = 46636.58

The model then subjected to further test. The model passed the stability test as shown in Fig 1 where the cumulative sum of recursive (CUSUM) graphical illustration displys that the plots of the residuals did not cross the 5 per cent critical lines of parameter stability. By implication, the stability in the cyclical variation of the long-run parameters of LGDPK and LREXP and LCEXP function over the period 1970 to 2015 in Nigeria.

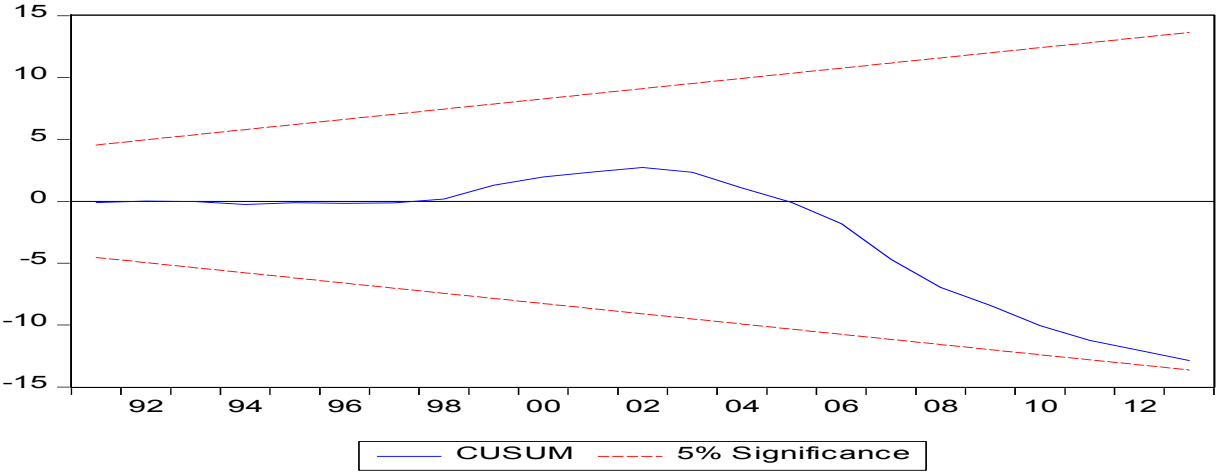


Figure 3. Graphical illustration of CUSUM of long-run estimate

The short-run as tabulated in Table 5, shows that the coefficient of the lagged error-correction term (ECT) was significant at all conventional level of significance had a negative sign as expected. The ECT estimated value of -0.26 implies that the adjustment speed to equilibrium after a shock was at rate 26%, such disequilibrim from shock in the previous year converged back to long-run equilibrium in the current year with a speed of adjustment speed which is 26%. In the test for whether the residuals from the equation violated the normality assumption of the ordinary least squares (OLS) technique, the hypothesis of non-normality was rejected as the probability value of the Jarque-Berra statistics was 0.9028. Because the statistics is greater than the assumed level of significance of 0.05, the residuals were therefore normally distributed. Also, the result of the heteroscedasticity test confirmed its absence in the residuals of the estimations. The specification error was equally carried out using Ramsey's regression specification error test (RESET). There was absence of specification error as the test statistics were not significantly different from zero at 5% level of significance.

Table 5. Short-run ARDL estimate

Dependent Variable: D(LCGDPK)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.082406 | 0.011857 | 6.950268 | 0.0000 |
| D(LCGDPK(-1)) | 0.823650 | 0.057390 | 14.35172 | 0.0000 |
| D(LCCGS(-1)) | 0.543723 | 0.100552 | 5.407369 | 0.0000 |
| D(LCCGS(-2)) | -0.433888 | 0.091260 | -4.754437 | 0.0001 |
| D(LCRGS(-1)) | -0.217029 | 0.032490 | -2.766834 | 0.0105 |
| D(LCRGS(-2) | 0.096372 | 0.033234 | 2.654526 | 0.0136 |
| ECM(-1) | -0.258422 | 0.080736 | -3.200841 | 0.0037 |

Adjusted R-Square = 0.66245 D.W. = 1.7679 F-Statistics= 857.234

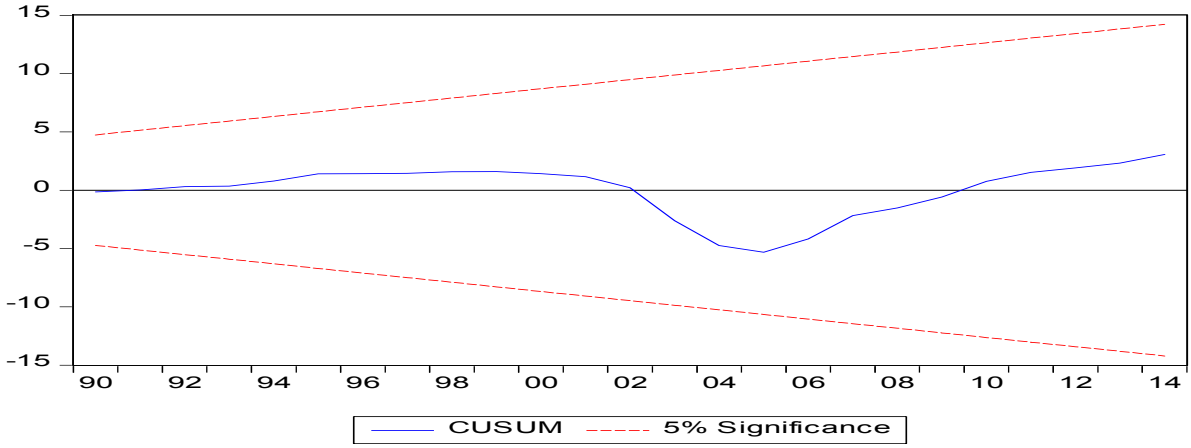


Figure 4. Graphical Illustration of CUSUM of short-run estimate

## 5. Conclusion, Policy Recommendation and Implication

This study examined the relationship between fiscal instability and economic development in Nigeria over the period of 1970 to 2015. Specifically, it evaluated how and to what extent fiscal instability components such as cyclical behaviour of both recurrent and capital spending has affected the fluctuation in the GDP per capital in Nigeria. The descriptive statistics revealed that both recurrent and capital expenditure as well as economy were unstable over the period of study. The found that lesser government revenue had been committed to the development purposes compared with recurrent expenditure since the beginning of the fourth republic in Nigeria. Recurrent government expenditure is relatively higher than capital expenditure and this has become manifest from 1999-2015 as recurrent expenditure constituted above 55% of total government expenditure which is supported by the study of Agu et al. (2014). The instability in the variables of interest was measured by Hodrick-Prescot Filter (HPF). Using the ARDL technique of analysis, the study found that there is a long-run association among the variables of interest. This work found that in the long-run, instability of recurrent spending had a significant negative effect on the GDP fluctuation with the magnitude of -0.297740 while that of capital expenditure was direct and significantly associated with fluctuation in the GDP with the magnitude of 0.360369. Specifically, in the long-run, one percent elevation in the rate of instability in recurrent expenditure would lead to an approximate of 30% reduction in the fluctuation of the welfare indicator while instability in the capital expenditure would lead to 36% increase in the fluctuation of the economy in Nigeria.

In the short-run however, the study found both direct and negative association between the cyclical government capital and recurrent expenditure on the fluctuation of the economic performance respectively. One percent increase in the immediate lagged value of CCEXP would significantly increase the fluctuation in the economic activity by 54% but such effect is reduced by 43% in two-year lagged. Also, one percent increase in the immediate lagged value of instability in the recurrent government expenditure had significantly reduced the fluctuation in the GDP per capital by 21% but only 9% of such reduction was off set in the two-year lagged. The study therefore, recommended greater

control of instability in the fiscal components should be emphasized in other to experience consistent reduction in the fluctuation of the welfare indicator both in the short-run and long-run in Nigeria.

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