



International Journal of Economics and Financial Research

ISSN: 2411-9407

Vol. 1, No. 4, pp: 50-56, 2015

URL: <http://arpgweb.com/?ic=journal&journal=5&info=aims>

Government Expenditure and Economic Growth in Nigeria, 1981-2013: A Bound Testing Approach

Aiyedogbon J.O.*

Department of Economics Bingham University, New Karo-Nasarawa State

Ohwofasa, B.O.

School of General Studies Delta State Polytechnic P.M.B. 03, Otefe-Oghara Delta State Nigeria

Anyanwu S.

Department of Economic University of Abuja Nigeria

Abstract: The paper examines the impact of public sectoral expenditure on economic growth in Nigeria for the period 1981-2013. It was observed that the growth of government expenditure has not fully felt by the economy. The econometric methodology employed is the ARDL model and results show that while the impact of government expenditure on administration and debt servicing were positive on economic growth in the long and short run, expenditure on economic and social sectors has negative impact. We argue that this may not be unconnected with the high level of corruption prevalent in the public sector where funds that are meant for provision or maintenance of social-economic activities like agriculture, roads, transportations, schools and hospitals are diverted for personal use. The CUSUM and CUSUMSQ test show the model is stable as neither of them cross the 5% boundary. The paper recommended that government should increase expenditure to the social and economic sectors while debts or debt servicing should be reduced. Also, corruption so prevalent in the public sector must be minimized if cannot be eradicated.

Keywords: Government expenditure; Economic growth; Unit root test; Co-integration; ARDL model.

1. Introduction

The large size of government expenditure in less developed countries (LDCs) in general and in Nigeria in particular and its attendant effects on macroeconomic variables has become one of the hottest debates among scholars. Public expenditure plays an important role in the functioning of an economy whether developed or underdeveloped. Public expenditure was born out of revenue allocation which refers to the redistribution of fiscal capacity between the various levels of government or the disposition of responsibilities between tiers of government (Okoro, 2013). Thus, government intervenes in undertaking fundamental roles of allocation, stabilization, distribution and regulation especially when there is market failure and externalities whose outcome may be socially undesirable.

In developing economies, governments intervene to achieve macroeconomic objectives such as economic growth and development, full employment, price stability and poverty reduction (Usman *et al.*, 2011). Economic growth brings about a better standard of living of the people through provision of better infrastructure, health, housing, education services and improvement in agricultural productivity and food security (Loto, 2011). Every year, almost all sectors in the national economy of developing countries demands more budgetary allocations (Musaba *et al.*, 2013). For instance, the agricultural sector under the Maputo Declaration of 2003 requires African Governments to increase expenditure on agricultural sector to at least 10 percent of the national budgetary resources (NEPAD, 2011).

In Nigeria, total government expenditure in terms of capital and recurrent expenditures have continued to rise over the last three decades or so. Expenditures on administration, economic, social and transfer sectors are proportionately rising overtime. For instance, government total recurrent expenditure increased from ₦4, 805.20 million in 1980 to ₦36, 219.60 million in 1990 and further to ₦1, 589,270.00 in 2007 and later by 2011, it stood at ₦2, 632,876.50 on the other hand, government capital expenditure rose from ₦10, 163.40 million in 1980 to ₦24, 048.60 million in 1990. It stood at ₦239, 450.90 million and ₦759, 323.00 million in 2000 and 2007 respectively and by 2011, it stood at ₦1,934,524.20 (Oni *et al.*, 2014).

Thus, the rising government expenditure in Nigeria is expected to translate into meaningful growth and development but there are evidences showing that the country has not fare well over the last thirty years. For example, there is a high level of unemployment and poverty rate in Nigeria which has been put at over 18 and 50 percent respectively (NBS, 2012). Looking at the area with the highest measure of welfare per capita, the leading area in Nigeria, which is Bayelsa with a poverty incidence of 26.2 percent between 1995 and 2006, is still below the

leading areas in Ghana (Greater Accra -2.4 percent), Cameroon (Douala, Capital of Littoral -10.9 percent) and South Africa (Baoteng -19.0 percent) (World Bank, 2009). In terms of the human development index, Nigeria is ranked 158th of the 159 countries surveyed in 2005 (CIA, 2009). Using selected world development indicators, the life expectancy at birth in 2006 for male and female in Nigeria was 46 and 47 years, respectively. Between 2000 and 2007, 27.2 percent of children under five years of age were malnourished. This is alarming compared to 3.7 percent between the same periods in Brazil, another emerging economy (Ayidogbon and Ohwofasa, 2012).

Further justification for this research is that earlier studies that have also investigated the relationship between public sectoral expenditure and economic growth may have employed methods that produced conflicting results. The ARDL model employed in this study is among the latest econometric discovery with copious advantages. Also, the raging controversy on this subject is one of the major reasons for the research interest in the field. Expectedly, the sequence of the paper is clear. Following the introduction, section two presented related literature while section three discussed the technique of analysis. Section four contained the result of findings. The paper is concluded in section five with policy remarks.

2. A Review of the Literature

Government expenditure belongs to the domain of public finance which is defined as the study of the principle underlying the raising and spending of funds by public authorities. It is the field of development economics that studies government activities and alternative means of financing expenditure. The influence of government in society is such that it will be difficult for any nation to attain high level of economic affluence without its presence. Where the government does not exist anarchy reigned and little wealth is accumulated by productive economic activity. However, the presence of government will ensure rule of law and the establishment of private property right, all of which will often contribute positively on the society. Economic growth represents the expansion of a country GDP or outputs which means increases in economic activities.

Peacock (1979) argued that the rise in government expenditure as a proportion of GNP in western industrial countries is one of the economic phenomena that are now producing a concomitant growth in professional comment and discussion. Classical economics who were the group of nineteenth century economists posited that the economy automatically tended toward full employment level of income basing their argument on Say's Law of market and Quantity Theory of money. To them full employment was a normal situation and that there were automatic self-inbuilt adjusting mechanism that tend to maintain full employment and produce output at that level and therefore advocated a minima role for government.

Keynes (1936) vehemently criticized the classical theory and rejected the classical view that the laissez-faire policy was essential for an automatic and self-adjusting process of full employment level of output. Citing the example of the Great Depression where the classical economics were incapacitated of providing answers except only government intervention, Keynes therefore argues that the classical theory of full employment was unrealistic. He wrote in his general theory that "the characteristics of the special case assumed by the classical theory happened not to be those of the economic society in which we actually live, with the results of teaching misleading and disastrous if we try to apply to the facts of experience.....But to assume that it actually does so is to assume difficulties away...." (Keynes, 1936).

Government expenditure in Nigeria has grown tremendously since independence. Having inherited a legacy of planned development from her colonial master, the post-independence government pursued policies aimed at accelerated industrialization and development. These included the rapid expansion of infrastructural facilities and social services. The production of some goods, which the private sector was unable to produce because of externalities or the need for a large capital outlay, and which were not otherwise produced, was also undertaken by government. The role of government in achieving a developmental objective cannot be overemphasized. Government budget, which is at the centre of this role, is structured into capital and recurrent budgets. While the capital budget is the public sector's contribution towards the realization of economic growth, recurrent budget refers to the cost of maintaining existing level of government services.

In many developing countries including Nigeria, except perhaps recently, higher allocations are being given to recurrent expenditure than capital expenditure despite the fact that it is the capital formation that makes impact on economic growth. However, in spite of this pivoting role of public expenditure the field appears to have received little attention among economists for most of the first half of the twenty-century. But by the second half of the century the scale had fallen out of people's eye following recent development in the literature (see for example (Wagna, 1890) and Peacock and Wiseman (1967).

Empirically, Bose *et al.* (2003) examined the growth effect of public expenditure by sectors using panel data for thirty developing countries covering the period of 1970-1990. The study found that public capital expenditure is positively correlated with economic growth, while the growth effects of current expenditure is insignificant for the group of countries. Meanwhile, at sectoral level, government expenditure on education is the only outlay that remains significant throughout the analysis. And whereas the growth effect of transport and communication, defence initially had significant impact they could not survive when other sectors and budget constraints were incorporated into the analysis.

Ghani and Din (2006) accessed impact of public investments on economic growth in Pakistan. The variables employed in their study were public investment, private investment, public consumption and GDP for the period of 1973- 2004. Employing VAR model on time series data, the study found that growth is largely driven by private investment than public investment as public investment crowds out private investment. Schaltegger and Torgler

(2006) examined the growth effect of public expenditure at the state and local levels in Switzerland from 1981 to 2001. The study found that impact of public expenditure on economic growth is negative.

Abu-Bader and Abu-Qarn (2003) investigated the causal link between government expenditures and economic growth for Egypt, Israel and Syria. The study found bidirectional causality from government spending to economic growth but with a negative long term relationship between the two variables. At the sectoral level, it was also found that Military burden negatively affects economic growth for all the three countries and that civilian expenditure had a positive growth effects in Egypt and Israel. In Sudan, Badawi (2003) found that the impact of private investments on real growth has been more pronounced compared to that of public investment. While the crowding-out effect of public investment on private investment was found to be highly significant.

Musaba *et al.* (2013) investigated the impact of government sectoral expenditure on economic growth in Malawi. Employing co-integration and error correction model on a data set of 1980-2007, he found that in the short run there was no significant relationship between government sectoral expenditure and economic growth. On the other hand, the long run results showed significant positive effect of agriculture and defence expenditure on economic growth. The expenditures on education, health, social protection and transportation and communication were negatively related to economic growth.

Okoro (2013) investigated the impact of government spending on economic growth for the sample data of 1980-2011. He employed Johansen co-integration test, ordinary least square (OLS) multiple regression technique, error correction model and causality test and found long-run equilibrium relationship between government spending and economic growth in Nigeria. Also, the short-run dynamics adjusts to the long-run equilibrium at the rate of 60 percent per annum which means that both the short-run and long-run expenditure has significant effect on economic growth. Finally, he found unidirectional causality running from government expenditure to economic growth.

In study by Usman *et al.* (2011), they investigated the effect of government expenditure on economic growth in Nigeria spanning the period 1970-2008. An augmented Solow model is specified in Cobb-Douglas form with public capital as one of the factors. The study decomposed expenditure into three expenditure streams namely public expenditure on education and health, public expenditure on transport and communication and public expenditure on administration. They found that in long run, there is relationship between public expenditure and growth while in the short run, public spending has no impact on growth.

Ohwofasa *et al.* (2012) scrutinized the relationship between government expenditure in education sector and economic growth in Nigeria using time series data spanning 1986 to 2011. The study employed Johansen co-integration technique and error correction method and found that long run relationship existed between the variables. Also, results further indicated that a one year lag of gross domestic product, current level of recurrent expenditure on education, two years lags of recurrent expenditure on education, current as well as two years lags of gross capital formation exhibit positive impact on economic growth in Nigeria. On the other hand, previous year capital expenditure on education and human capital development has negative and significant impact on economic growth within the period of study.

Oluwatobi and Ogunrinola (2011), examined the impact of government recurrent and capital expenditures on education and health and their effect on economic growth in Nigeria. The study adopted the augmented Solow model and real output as dependent variable while the explanatory variables are government capital and recurrent expenditures on education and health, gross fixed capital formation and the labour force. The result found that there exists a positive relationship between government recurrent expenditure on human capital development and the level of real output while capital expenditure is negatively related to the level of real output.

Akpan (2005) found that impact expenditures on functional classification (i.e administrative, economic, social and transfer sectors) disaggregated into recurrent and capital components on growth to be negative by some variables and positive by others. The coefficients of those found to be positive were rather small meaning that their impacts on growth would be minimal. The error correction showed that the rate of adjustment parameter was relatively high, significant and appropriately signed. This shows that economic growth in Nigeria adjusts fairly to changes in the explanatory variables. Loto (2011) applied co-integration and error correction model and showed that in the short-run, expenditure on agriculture and educations were negatively related to economic growth. However, expenditure on health, national security transportation and communication were positively related to economic growth.

Oni (2014) assessed the impact of health expenditure on growth in Nigeria by employing multiple regression technique. The founding showed that total health expenditure, gross capital formation and labour force productivity are important determinants of economic growth in Nigeria while life expectancy impacted negatively. He observed that increase in health expenditure has raised the level of national income by enhancing the marginal productivity of labour. In a related study, Oni *et al.* (2014) explored the joint effects of government capital and recurrent expenditures on economic growth in Nigeria. Using the ordinary least square method for estimating multiple regression models for the period 1980-2011, they found that both capital and recurrent expenditures impacted positively on economic growth during the reviewed period.

3. The Method

A linear regression model based on ARDL model is employed for the study. Thus,

$$GDP = f(GEAS, GEES, GESS, GETS).....(1)$$

Where:

GDP = Real gross domestic product

GEAS = Government expenditure in economic sector
 GESS = Government expenditure in social sector
 GETS = Government expenditure in transfer sector.

Technique of Analysis

This method is adopted for this study for four reasons. Firstly, bounds test method for co-integration is being applied irrespective of whether the variable are integrated first order I(1) or I(0). It has thus conditional unrestricted equilibrium ECM, (Pesaran *et al.*, 2001). Secondly, it is more robust and performs better for small sample sizes (such as in this study) than other co-integration techniques like Engle and Granger (1987), Johansen and Juselius (1990). Thirdly, all variables of the model are assumed to be endogenous thus its estimates are unbiased and efficient, since they avoid the problems that may arise in the presence of serial correlation and endogeneity. Finally, the short-run and long-run coefficients of the model are estimated simultaneously.

The ARDL method estimates (P+1)k number of regressors in order to obtain the optimal lag length for each variable, where p is the maximum number of lags to be used and k is the number of variables in each equation. An appropriate lag selection based on the Schwarz Criteria (SC) and Akaike Information Criteria (AIC) are employed.

The ARDL model from equation (1) is stated below:

$$\Delta \ln GDP_t = \alpha_0 + \sum_{i=1}^n \alpha_{1i} \Delta \ln GDP_{t-i} + \sum_{i=0}^n \alpha_{2i} \Delta \ln GEAS_{t-i} + \sum_{i=0}^n \alpha_{3i} \Delta \ln GEES_{t-i} + \sum_{i=0}^n \alpha_{4i} \Delta \ln GESS_{t-i} + \sum_{i=0}^n \alpha_{5i} \Delta \ln GETS_{t-i} + \beta_1 \ln GDP_{t-1} + \beta_2 \ln GEAS_{t-1} + \beta_3 \ln GEES_{t-1} + \beta_4 \ln GESS_{t-1} + \beta_5 \ln GETS_{t-1} + \epsilon_t \dots \dots \dots (2)$$

Where: Δ is the first difference operator, α₀ is the intercept and ε_t is white noise error. The components (α₁ – α₅) correspond to the short-run relationship while β₁ – β₅ is the long run equation. Two critical values are calculated by Pesaran *et al.* (2001) for the co-integration test. The lower critical bound assumes that all the variables are I(0) depicting absence of co-integration relationship between the examined variables. The upper bound assumes that all the variables are I(1) meaning that there is co-integration among the variables. When the computed F-statistic is greater than the upper bound critical value, then H₀ is rejected (the variables are co-integrated). If the F-statistic is below the lower bound critical value, then H₀ cannot be rejected (there is no co-integration among the variables). When the computed F-statistics falls between the lower and upper bounds, then the tests are inconclusive.

If a stable long-run relationship is supported by Wald test (i.e H₀ = α₁ = α₂ = α₃ = α₄ = α₅ = 0 against H₁ ≠ β₁ ≠ β₂ ≠ β₃ ≠ β₄ ≠ β₅ ≠ 0) in equation (2), then in the second stage, the augmented ARDL (m, n, o, p,q) model is estimated as following:

$$\ln GDP_t = \beta_0 + \beta_1 \ln GDP_{t-1} + \beta_2 \ln GEAS_{t-1} + \beta_3 \ln GEES_{t-1} + \beta_4 \ln GESS_{t-1} + \beta_5 \ln GETS_{t-1} + \epsilon_t \dots \dots \dots (3)$$

The final step is the estimation of the short-run dynamic coefficients via the error correction model.

$$\Delta \ln GDP_t = \alpha_0 + \sum_{i=1}^n \alpha_{1i} \Delta \ln GDP_{t-i} + \sum_{i=0}^n \alpha_{2i} \Delta \ln GEAS_{t-i} + \sum_{i=0}^n \alpha_{3i} \Delta \ln GEES_{t-i} + \sum_{i=0}^n \alpha_{4i} \Delta \ln GESS_{t-i} + \sum_{i=0}^n \alpha_{5i} \Delta \ln GETS_{t-i} + \lambda ECM_{t-1} + \mu_t \dots \dots \dots (2)$$

Where λ is the speed of adjustment parameter and ECM is the residuals that are obtained from the estimated co-integration model of equation (2). Pesaran *et al.* (2001) suggested applying the cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squares of recursive residuals (CUSUMSQ) tests whose equation is detail in Brown *et al.* (1975) to assess the parameter constancy of the model.

Unit Root Test

Although the ARDL co-integration approach does not require unit root tests, nevertheless we need to conduct this test to ensure that none of the variables are integrated of order 2, i.e., I(2), so as to avoid spurious results because, in case of I(2) variables, ARDL procedures makes no sense. In the presence of variables integrated of order two, we cannot interpret the values of F statistics provided by Pesaran *et al.* (2001). Thus, the Augmented Dickey Fuller (ADF) test that is employed in this study is specified as:

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta y_{t-1} + \alpha_i \sum_{t=1}^m \Delta y_{t-1} + \epsilon_t \dots \dots \dots (1)$$

Where:

ε_t = white noise error term

Δy_{t-1} = (y_{t-1} – y_{t-2}), Δy_{t-2} = (y_{t-2} – y_{t-3}) while m is the maximum lag length on the dependent variable to ensure that ε_t is the stationary random error. The null hypothesis of a unit root is rejected if the t-statistic associated with the estimated coefficient exceeds the critical values of the test.

4. Data and Discussion

Table 1 contained the results of stationarity test which reveals that only government expenditure in social sector is stationary at level while other four variables were stationary after first differencing.

Table-1. Stationarity Test

Variable	Level	1 st Difference	Order	Included in test equation
LRGDP	-2.135385	-4.145124	I(1)	Trend and intercept
LGEAS	-1.083929	-4.197877	I(1)	“
LGEES	-1.488953	-4.276184	I(1)	“
LGEES	-3.841355	-5.085298	I(0)	“
LGETS	-2.056050	-3.698108	I(1)	“

Critical Value 5% = -3.5614

Since the condition for bounds testing is meant, the ARDL model is estimated with lag length of 2 as suggested by Schwarz criteria (SC) and the co-integration result is presented in table 2.

Table 2 thus shows that the F-stat lies above the upper bound tabulated by Pesaran *et al.* (2001) and therefore indicating co-integration between real GDP, a proxy for economic growth, and government expenditure variables.

Table-2. ARDL Bound Test for Co-integration

	5 % Level		10 % Level	
K	I(0)	I(1)	I(0)	I(1)
4	2.86	4.01	2.45	3.52

Computed F-Statistics = 4.118

Notes: Critical values extracted from Pesaran *et al.* (2001) Table CI (iii) Case III: Unrestricted intercept and no trend With co-integration confirmed from the bound test, we proceeded to estimate the long run dynamic regression whose results are presented in table 3.

Table-3. Long run elasticity estimates based on ARDL Model Dependent Variable: LRGDP Method: Least Square

Variable	Coefficient	Std error	t-statistics	Prob
Constant	9.984690	0.556420	17.94453	0.0000
LGEAS	0.542592	0.156210	3.473475	0.0017
LGEES	-0.664584	0.478700	-1.388310	0.1760
LGEES	-0.265699	0.360485	-0.737060	0.4672
LGETS	0.583373	0.754811	0.772873	0.4461

R² = 0.80; F-stat = 28.8; DW = 1.64

In table 3, the long run result shows that the impact of government expenditure on general administration and debt services on economic growth is positive. This means that a unit increase in expenditure for administration and debt services increases economic growth by 0.54 and 0.58 respectively. On the other hand, the impact of government expenditure on economic and social services sector on economic growth is deleterious. Only expenditure on general administration is statistically significant. The R-square reveals that the explanatory variables explained about 80 percent of variation in economic growth while the F-stat shows that the joint distribution of the model is statistically significant. In the same vein, the DW of 1.64 falls in the region of no serial correlation of between 1.59 and 2.41. The positive constant shows that in the absence of the explanatory variables economic growth will be positive due probably to the effect of other variables not included in the model.

Table-4. Short run elasticity estimates based on ARDL Model, Dependent Variable: DLRGDP, Method: Least Square

Variable	Coefficient	Std error	t-statistics	Prob
Constant	0.048965	0.009630	5.084538	0.0000
DLRGDP(-1)	0.034644	0.028816	1.202236	0.2410
DLGEAS	0.064853	0.064853	0.035228	1.840948
DLGEES	-0.193243	0.091492	-2.112131	0.0453
DLGEES	-0.143090	0.059435	-2.407506	0.0241
DLGETS	0.266360	0.136421	1.952490	0.0626
ECM(-1)	-0.256906	0.061536	-4.174872	0.0003

R² 0.46; F-stat = 3.39; DW = 1.78

Diagnostic Tests

Jarque-Bera Normality Test F-stat 0.484258(0.784955)

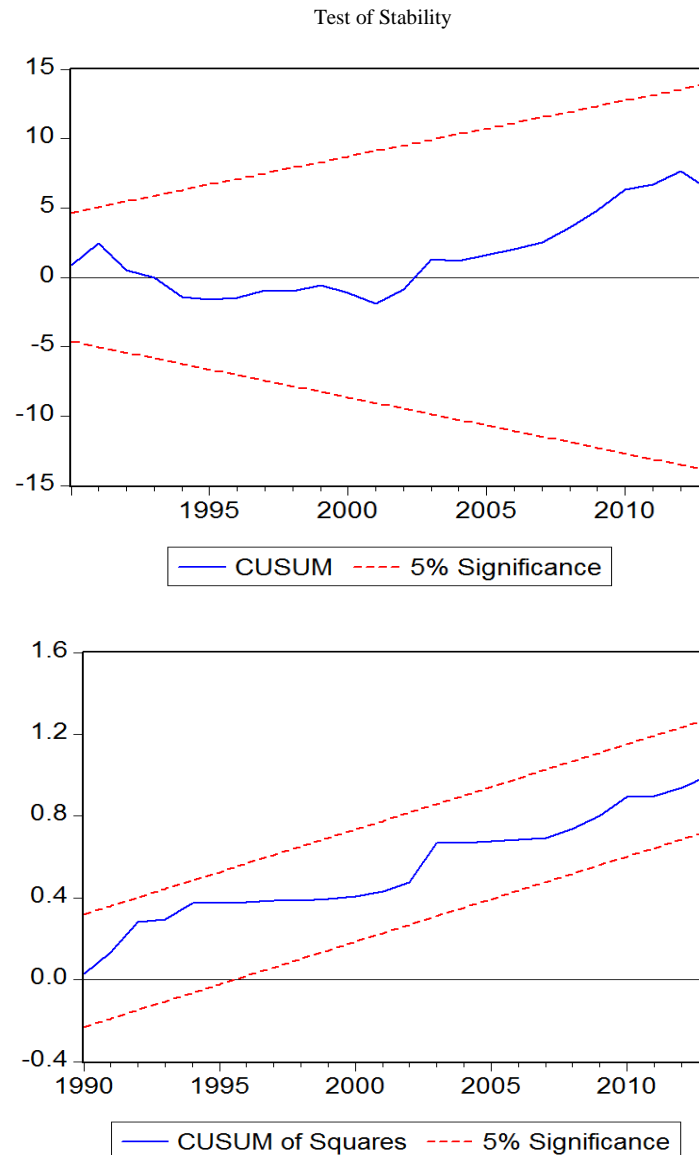
Breusch-Godfrey Serial Correlation LM Test: 0.323449(0.727032)

ARCH Test: 1.661613(0.207934)

White Heteroskedasticity Test: 1.580505(0.184373)

Table 4 shows the short run error correction term based on ARDL model. The battery of tests with p-value in parenthesis reveals that the model is normally specified, serially uncorrelated and is homoscedasticity. The R-square of 0.46 shows that in the short run, the explanatory variables explain about 46 of economic growth. Like the long run, government expenditure in general administration and debt service repayment exert positive impact on

economic growth while the impact economic and social sectors are negated. Also, impact of one year lag of real GDP on its current value is also positive. However, only GEES and GESS are statistically significant. Finally, the t-value of the ECM compared to the table of value calculated by Pesaran *et al.* (2001) is statistically significant and carries the expected sign. His speed of adjustment between the short and the long run is about 26 percent as indicated by the coefficient.



Pesaran *et al.* (2001) suggested that test of cumulative sum of recursive residuals (CUSUM) and cumulative sum of square of recursive residuals (CUSUMsq) whose equations are detail in Brown *et al.* (1975) should be performed to ensure that the model is valid for inferences. Thus, the CUSUM and the CUSUMSQ plots lie within the 5% critical bound showing that our model are stable.

5. Summary and Concluding Remarks

The paper aims to examine the relationship between public sectoral expenditure and economic growth in Nigeria for the period 1981-2013. One of the things observed by the paper is that government annual expenditure has been growing consistently without concomitant increase in economic growth. Thus, rather than reduce unemployment and poverty, these twine evils are on the increase as over fifty percent of Nigeria live on less than a dollar a day. The econometric methodology employed is the ARDL model and testing the results through unit root test to be sure that there were no I(2) variables that should violate the ARDL model.

It was discovered that while the impact of government expenditure on administration and debt servicing were positive on economic growth in the long and short run, expenditure on economic and social sectors have negative impact. Of particular interest is the statistical significant of public expenditure on economic and social sectors that were significant in the short run. The implication is that a unit increase in expenditure on these variables has been negatively impacting on the economic particularly in the short. This may not be unconnected with the high level of corruption prevalent in the public sector where funds that are meant for provision or maintenance of social-economic activities like agriculture, roads, transportations, schools and hospitals are diverted for personal use. Although,

expenditures on general administration and debt services show that they are affecting the economy positively, but the fact that only administration is statistically significant in the long run is worrisome. This shows that debts incurred by the government are not holistically spent for the purpose meant. Thus, we can conclude that the benefits of increased government expenditure in Nigeria to the citizens are very little. Our recommendations are that government should increase expenditure to the social and economic sectors while debts or debt servicing should be reduced. Also, corruption so prevalent in the public sector must be minimized if cannot be eradicated. Finally, the administrative sector must be proactive to justify the huge allocation budgeted for it annually to enable the economy to fill the impact both in the short and long run

References

- Abu-Bader, S. and Abu-Qarn, A. S. (2003). Government expenditures, military spending and economic growth: Causality evidence from Egypt, Israel, and Syria. *Journal of Policy Modeling*, 25(6-7): 567-83.
- Akpan, N. I. (2005). Government expenditure and economic growth in Nigeria: A disaggregated approach. *CBN Economic and Financial Review*, 43(1): 61-67.
- Ayidogbon, J. O. and Ohwofasa, B. O. (2012). Poverty and youth unemployment in Nigeria, 1987-2011. *International Journal of Business and Social Science*, 3(20): 269-79.
- Badawi, A. A. (2003). Private capital formation and public investment in Sudan: Testing the substitutability and complementarities hypotheses in a growth framework. *Journal of International Development*, 15(6): 783-99.
- Bose, N., Haque, M. E. and Osborn, D. R. (2003). Public expenditure and growth in developing countries: Education is the key. *Discussion Paper Series No. 80*.
- Brown, R. L., Durbin, J. and Evans, J. M. (1975). Techniques for testing the constancy of regression relations over time. *Journal of the Royal Statistical Society*, 37(2): 149-92.
- CIA (2009). The World FactBook: Washington, DC.
- Engle, R. F. and Granger, C. W. J. (1987). Co-integration and error correction representation and testing. *Econometrics*, 55(2): 251-76.
- Ghani, E. and Din, M. (2006). The impact of public expenditure on economic growth in Pakistan. *Pakistan Development Review*, 45(1): 87-98.
- Johansen, S. and Juselius, K. (1990). Maximum likelihood estimation and inference on co-integration with applications to the demand of money. *Oxford Bulletin of Economics and Statistics*, 52(2): 169-210.
- Keynes, J. M. (1936). *The general theory of employment, interest and money*. Harcourt and Burice: London.
- Loto, M. A. (2011). Impact of government sectoral expenditure on economic growth. *Journal of Economics and International Finance*, 3(11): 646-52.
- Musaba, E. C., Chilonda, P. and Matchaya, G. (2013). Impact of government sectoral expenditure on economic growth in Malawi, 1980-2007. *Journal of Economics and Sustainable Development*, 4(2): 71-78.
- NBS (2012). National Bureau of Statistic. *Annual Report*, 4(2).
- NEPAD (2011). New Partnership for Africa Development.
- Ohwofasa, B. O., Obegh, H. O. and Atumah, M. (2012). Impact of government expenditure in education on economic growth in Nigeria, 1986-2011: A parsimonious error correction model. *African Journal of Scientific Research*, 10(1): 587-898.
- Okoro, A. S. (2013). Government spending and economic growth in Nigeria, 1980-2011. *Global Journal of Management and Business Research, Economics and Commerce*, 13(5): 20-29.
- Oluwatobi, S. O. and Ogunrinola, I. O. (2011). Government expenditure on human capital development: Implications for economic growth in Nigeria. *Journal of sustainable Development*, 4(3): 123-36.
- Oni, L. B. (2014). Analysis of the growth impact of health expenditure in Nigeria. *IOSR Journal of Economics and Finance*, 3(1): 77-84.
- Oni, L. B., Aninkan, O. O. and Akinsanya, T. A. (2014). Joint effects of capital and recurrent expenditures in Nigeria's economic growth. *European Journal of Globalization and Development Research*, 9(1): 530 – 43.
- Peacock, A. T. (1979). Approaches to analysis of government expenditure growth. *Quarterly Journal of Public Finance*, 7(1): 3-23.
- Peacock, A. T. and Wiseman, J. (1967). *The growth of public expenditure in the United Kingdom*. Princeton University Press: Princeton N.J.
- Pesaran, M. H., Shinb, Y. and Smith, R. J. (2001). Bound testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, 16(3): 289-326.
- Schaltegger, A. C. and Torgler, B. (2006). Growth effects of public expenditure on state and local level: Evidence from a sample of rich governments. *Applied Economics*, 38(10): 1181-92.
- Usman, A., Mobolaji, H. I., Kilishi, A. A., Yaru, M. A. and Yakubu, T. A. (2011). Public expenditure and economic growth in Nigeria. *Asian Economic and Financial Review*, 1(3): 104-13.
- Wagna, A. (1890). *Finanzwissenschaft*. In Musgrave, R.A. & Peacock, A.T. (eds). *Theory of Public Finance*: London, Macmillan.
- World Bank (2009). World development report 2009.