

An Empirical Investigation of Government Spending in Primary School Enrolment and Poverty Reduction in Nigeria

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ABSTRACT

The economic rationale for government policy attention to unemployment and education is fundamentally to reduce poverty. A higher poverty rate suggests that citizens' welfare is at a low ebb. In Nigeria and other African countries, governments have historically addressed poverty with increased state spending. Therefore, this study sought to ascertain the role of government spending to reduce poverty in Nigeria between 1980 and 2017. Secondary data sourced from Central Bank of Nigeria publications, National Bureau of Statistics, indexmundi.com and World Development Indicators were utilized for the analyses. The data were on Government Capital Expenditure (GCEX), Government Recurrent Expenditure (GREX), Primary School Enrolment (PSE), and Per Capita Income (PCI). Descriptive statistics, Ordinary Least Squares (OLS) method of multiple regressions, as well as Engel-Granger variant of Error Correction Mechanism (ECM) test approaches were adopted to analyse the variables. The test result reveals that government capital expenditure is positively related to per capita income after one-year lag period. Again, the government recurrent expenditure stood negative and significantly affects per capita income after a one-year lag period, while the primary school enrolment rate exhibits a positive and insignificant relationship with it after three-year lag period. The paper therefore concludes that a longitudinal increase in government expenditures did not play a significant role in reducing poverty in Nigeria. The paper recommends that the government needs to prioritize its expenditures by allocating more of its resources to the capital component of annual budgets, to create the desired human and non-human infrastructure necessary to promote economic growth and development, thereby reducing the rising incidence of poverty in Nigeria.

Keywords: Government Spending, Primary School Enrolment and Poverty Reduction

INTRODUCTION

Economic literature has always been concerned with tackling the problem of poverty, and policy responses and associated political economy vary among countries. Developing countries are more acutely affected by the poverty logjam. Nigeria, like other African countries, are ravaged by poverty, and have variously engaged international bodies and governmental and non-governmental agencies to redress it. Because poverty essentially arises due to inefficiencies in the unregulated prevailing economic configuration, it is axiomatic that government must be involved in tackling it, as per the

classical view of J. M. Keynes in the 1930s (Musgrave and Musgrave, 1956; Agiobenebo; Onuchuku and Ajie, 2000; Ekpo, 2003). In a conventional macroeconomic setting, Keynesian economists argue that the government's role is to ensure economic stability, alongside other targeted policy instruments. The government can achieve this through spending and fiscal administration, whereby government expenditure serves as an equalizer. It covers areas like recurrent and capital expenses that governments normally incur for their own maintenance and the economy as a whole. In

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Anyanwu's (1997) view, it can be seen as the absorption of resources by the public sector.

Summing-up the role of government spending in reducing poverty in a national economy, Perotti (1993) noted that the direction of expenditure patterns has a mitigating effect on poverty by creating conditions that enhance the ability of the poor to accumulate assets. Other impacts include the creation of institutions that reduce the incidence of risk facing the poor and the impact of negative shocks, through the provision of safety nets.

Historically, Nigeria is a rent-seeking state with huge oil wealth and other vast natural resources; considering these, Nigeria ought to be able to tackle the problem of poverty, but wide spread poverty remains rife. Available statistics from the Central Bank of Nigeria (CBN, 2011) and National Bureau of Statistics (NBS, 2012) indicate that in the year 2010 Nigeria was one of the 20th poorest countries in the world in terms of rural poverty. By 2011 an estimated 70% of the population were at risk of poverty, while about 40% were actually living in absolute poverty. The symptoms of Nigeria's high incidence of poverty as couched in the CBN (2011) report are that many people suffer from deprivation, insufficient food, illiteracy, distress, inadequate shelter, diseases, and lack of remunerative employment, with exploitation and insecurity of life, property, and more.

The CBN (2011) and NBS (2012) reports of rising poverty profile were globally acknowledged in May 2018, when Nigeria was identified as the country with the highest number of poor people in the world; the Brookings Report (2018) estimated in the World Poverty Clock that Nigeria had over 87 million people living in poverty. Clearly this is cause for global concern. Commensurate with the continuance of rife and endemic poverty and material insecurity, Nigerian state expenditure has continued to increase. Theoretically, this is to be expected, reflecting intuitive Keynesian responses to poverty such as enhancing social infrastructure and encouraging human capital stock development through primary school enrolment, thereby reduce the level of poverty. This is a venerable economic doctrine, propounded in the Wagner (1917) thesis, whereby increased state spending on infrastructure and improvement in other economic indicators, including social amenities, supports general socio-economic development.

This was subsequently applied on a large scale in the 1930s in the US, in response to the Great Depression. More recent evaluations, including those by Krueger (1990:11), Ekpo (1999), Iwayemi (2013), and Asogwa (2019), have noted that the state can intervene in the workings of the market economy to guarantee Pareto-optimality condition, thereby redressing seeming distortions. This paper sets to shed light on poverty reduction in Nigeria between 1980 and 2017 by analysing the role of government spending and social infrastructure development through human capital investment reflected in primary school enrolment.

Away from this introduction, this paper contains four sections. Section two presents the literature review on the subject matter. The methodology adopted in the paper is discussed in section three. Section four presents focused on results and discussion. The final section presents the concluding remarks.

REVIEW OF RELATED LITERATURE

One of the highly debated concepts in economic literature is that of poverty. The diverse explanations revolve around in adequate availability of basic necessities of life, mass penury, higher rate of underemployment and unemployment, and more. Poverty is essentially "a situation when the resources of individuals or families are inadequate to provide a socially acceptable standard of living" (Johnson, 1974, cited in Agwu and Kadiri, 2014:2). Other scholars like Desai (1992), Odusola (2001), Ogwumike (2001), and Fasoranti (2010:143) defined poverty as a state of involuntary deprivation and lack of capabilities to carry out certain activities. The World Bank (1990) explained poverty as the inability to attain a minimum standard of living and high status in a society.

A follow-up of the above definitions of poverty in recent years necessitated a variety of measures of poverty in national economies, including the Poverty Gap Index (PGI), the Gini Index (GI), and the Human Development Index (HDI). The PGI calibrates poverty in terms of shortfalls or gaps between the average income of the poor and the poverty line, while GI focuses on the extent to which the distribution of income or consumption expenditure among individuals or households within a population deviates from a perfectly equal distribution line. The HDI emerged more recently based on diverse studies conducted by the UN

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Development Programme (UNDP) to boost national economic progress. It sees poverty as a composite measure of both the economic and the social indicators of human development based on longevity, knowledge, purchasing power, and other indicators. These perspectives of measuring poverty are based on diverse viewpoints.

According to the UNDP (1998), there are three perspectives to the definition of poverty. The first is the income perspective, which quantifies poverty in terms of falling below a pecuniarily defined poverty line. Second, the basic need view sees poverty as the deprivation of material requirements for minimal acceptable fulfilment of human needs, including foods, basic health, education, essential service, employment, and participation in normative socio-economic life. The third is lack of capacity, which represents the absence of some basic capabilities to function. The World Bank (2004) acknowledged the multifarious nature of poverty, which includes the low income perspective (e.g. of living on less than 'a dollar a day'), as well as more holistic factors such as illiteracy, ill health, gender inequality, environmental degradation, and many more universal and particular manifestations of poverty.

At the government level, one of the most obvious ways to address poverty is via fiscal policy, with progressive taxation offering the possibility to spend on the poor and disadvantaged (directly), and to invest in activities conducive to macroeconomic growth and poverty reduction. The latter view was enshrined as the best long-term solution by Keynesians during the last century, informing the clarion call to stimulate aggregate demand and resuscitate the economy during the Great Depression of the 1930s. The traditional *laissez-faire* free market mechanism of liberalism had increasingly conceded the need for targeted state spending to increase national economic efficiency during the early 20th century (e.g. on education and public health to create a healthy and competent workforce). Keynesian economics expanded this to address the failure of Say's law (*supply will create its own demand*) as manifest in the Great Depression, arguing that societal economic problems required state investment and spending to stabilize the economy and spur growth (Schlesinger, 2003).

The role of the state consequently expanded to an unprecedented degree in the advanced economies (particularly the US and Germany), especially in the area of infrastructural provision and the theory of public expenditure attracted increasing attention. This tendency was reinforced by the widening interest in the problems of economic growth, planning, regional disparities, distributive justice, and similar socio-economic and political problems (Bhagwati, 2012). Put simply, government investment and programmes were instituted to reduce poverty, increase employment, and raise living standards.

Extant economic literature suggests that the size of government spending and its effect on poverty reduction has been an issue with mixed outcomes. Some empirical studies have maintained that an increase in government spending on socio-economic and physical infrastructure encourages economic growth and development, and by extension reduces poverty. Others have argued that the economic rationale for state spending is based on political agendas and not underlying economic realities, and this view has been predominant in the hegemony of the political economy of neoliberalism since the late 1970s (Harvey, 2007). Consequently, empirical economic studies are essential to understand the complex and interconnected impacts of government spending with economic development and poverty.

Mehmood and Sadiq (2010) reviewed the long-run as well as short-run relationship between the fiscal deficits and poverty from 1976 to 2010 and found that fiscal deficits primarily occur when government expenditure is greater than the level of tax revenue generated. Based on the Error Correction Mechanism (ECM) modelling approach and Johnson co-integration test results, they identified an existent negative relationship between government spending and poverty. Again, the results also showed that there were short-run and long-run relationships between the poverty and government expenditure.

Okulegu (2013) profiled the relationship between government expenditure and poverty alleviation in Nigeria's economic growth. The research adopted time series analysis and descriptive statistics to determine the impact of government spending on Nigerian's economic growth. To achieve the objectives of the study, multiple regression model based on Ordinary Least Squares (OLS) method was utilized.

Poverty Level served as the dependent variable while Agricultural Credit Guarantee Scheme Fund (ACGSF) and Government Expenditure on Agriculture (GEA) were used as explanatory variables, covering the period 1980-2009. The results showed that public spending had significant impacts on poverty reduction in Nigeria, including the result that a 1% increase in AGCSF would lead to an average decrease in the number of those living at the Poverty Level of 0.06%.

Ozoana's (2013) study centred on the impact of public spending on poverty eradication in Nigeria between 1980 and 2011 using multiple regression analysis. Five variables were utilized in the empirical analysis: government expenditure on agriculture and water resources (AGWR), health (HTH), education (EDU), transportation and communication (TRCM), and housing and environment. The findings revealed that government expenditure on health, education, and transport and communication are insignificant, and increased government expenditure in these sectors would reduce poverty. The study thus recommended that the government at all levels should ensure that its expenditure is channelled towards projects that will reduce poverty level in Nigeria.

The work of Nwosa (2014) corroborated the impact of government expenditure on unemployment and poverty rates in Nigeria for the period 1981 to 2011. Using OLS estimation technique, the study observed that government expenditure has a positive and significant impact on the unemployment rate, and a negative and insignificant impact on poverty rate. Thus, the study recommended that urgent attention should be accorded to rising unemployment and high poverty rates in order to achieve the objective of being among the 20 economies of the world by 2020, and of achieving the MDG goal of halving poverty by 2015.

Edeh, Obi and Obi (2017) investigated the impact of education spending on poverty eradication in Nigeria using time series data for the period 1999-2017. Private Consumption per Capita was used as a proxy for poverty, which served as the dependent variable, while Capital Stock, Primary School Enrolment, and Expenditure in Education served as the independent variables. OLS regression analysis was used to analyse the time series data and the findings revealed that education expenditure did

not affect poverty reduction over the period of study. The study recommended that more should be done to increase education allocation in Nigeria's yearly budget to about 25% in the next ten years. It further recommended that healthcare and vocational training should be encouraged by increased funding and monitoring to improve the quality of human resources.

Ubong and Ubi-Atai (2018) specifically examined the effect of public expenditure on poverty alleviation for 1970 to 2016. Expenditure was disaggregated into recurrent and capital expenditure. Auto-Regressive Distributed Lag (ADL) technique was used to investigate the impact of government expenditure on poverty rate. The results showed a negative relationship between recurrent government expenditure on administration and poverty, and a positive relationship between government capital expenditure on administration and poverty. It was recommended that Nigerian government capital expenditures should be effectively implemented as stipulated in the budget; that funds generated by the government should be geared into productive sectors; and that government should minimize recurrent spending.

Gap in Reviewed Literature

In sum, the review of the related literature gives an overview of the contributions of other scholars to this area. The review suggests that the theoretical foundation on government spending and poverty reduction was based on the Keynesian approach. The choice of this theory is based on the fact that Keynes believed that the government's role is crucial as it averts depression by stimulating increase in demand, thus improving national economic development due to the multiplier phenomenon.

Relevant literature was also reviewed on the concept of poverty itself. In the process of reviewing empirical works, the researcher discovered that studies such as Ozoana (2013), Mehmood and Sadiq (2010), Nwosa (2014), and Odior (2014) viewed government expenditure in aggregate form to ascertain its relationship with poverty reduction in Nigeria. The major defects in these studies were that the authors relied on aggregated government spending.

To overcome the limitations of previous literature, the current study disaggregated government expenditure into capital and

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recurrent, as well as using primary school enrolment as a measure of literacy rate.

MATERIALS AND METHODS

Data Required and Sources

Poverty Rate

There are three perspectives to the definition of poverty (UNDP, 1998), of which this paper adopts the most common approximation: poverty rate based on per capita income. It serves as the dependent variable. The data were collected from the World Bank World Development Index (WDI, 2017).

Government Capital Expenditures

These are expenditures of government on long-term fixed assets. The *a priori* expectation is $\alpha_1 > 0$. This implies that the higher the government expenditure on capital projects, the higher the per capita income in the country, there by the lower the poverty rate. The data was assessed from the CBN (2017) *Statistical Bulletin*.

Government Recurrent Expenditures

These are expenditures of government on salaries and allowances paid to country employees, operational costs, and other aspects of state sector spending. The *a priori* expectation is $\alpha_2 > 0$. It is expected that higher government recurrent expenditures promote the rate of poverty, since productive resources are channelled to less production-driven activities. The data were also assessed from the CBN (2017) *Statistical Bulletin*.

Primary School Enrolment

School enrolment is the number of students enrolled in a given level of education, regardless of age and sex. Specifically, gross primary school enrolment ratio was utilized. It defines the number of children enrolled in primary level, regardless of age, divided by the

population of the age group that officially corresponds to it (UNICEF, 2017). The *a priori* expectation is that $\alpha_3 < 0$. This implies that if the literacy rate is higher, then the poverty rate will reduce. The data were collected from the World Bank World Development Index (WDI, 2017).

Analytical Framework

The analytical model followed the earlier works of Victor (2018) and Ernest (2014). However, the present study improves on them by disaggregating government expenditure into capital expenditure and recurrent expenditure. Furthermore, this study also introduced primary school enrolment as an independent variable. Thus, the functional form of the model is expressed in the multiplicative variant as:

$$PCI = \alpha_0 GCEXP_t^{\alpha_1} GREXP_t^{\alpha_2} PSE_t^{\alpha_3} e^{u_t} \quad (1)$$

Where: PCI=Per Capita Income (which measures the welfare of the Citizens). GCEXP=Government Capital Expenditure, GREXP=Government Recurrent Expenditure, PSE=Primary School Enrolment and α_0 =Constant terms

$\alpha_1, \alpha_2, \alpha_3$ =Coefficients of the explanatory variables, u_t =Error term.

A priori, $\alpha_1 > 0, \alpha_2 > 0$ and $\alpha_3 < 0$.

RESULTS AND DISCUSSION

Pre-Testing of the Properties of the Variables

Descriptive Statistics Test

Table 1 and Figure 1 show the summary of averages of government expenditure disaggregated into capital and recurrent expenditures, with the poverty rate proxied by per capita income, and primary school enrolment rate functioning as a check variable that equally affects the rate of poverty between 1980 and 2017.

Table 1. Summary of Averages of Disaggregated Government Expenditures and Poverty Rate in Nigeria, 1980-2017

Year	Government Capital Expenditure (₦ Billion)	Government Recurrent Expenditure (₦ Billion)	Per Capita Income (₦ Billion)	Primary School Enrolment Rate (%)
1980-1989	7.22	10.24	438.3249	0.799031
1990-1999	162.83	139.26	269.2232	0.821627
2000-2009	553.73	1,041.43	779.7864	0.850183
2010-2017	843.54	225.52	2634.865	0.957467

Source: Authors' Computation (2020)

In Table 1, the average government's capital expenditure (GCEX) and government's recurrent expenditure (GREX) stood at ₦7.22

billion and ₦10.24 billion, respectively. In the same period, the average per capita income (PCI) was ₦438.3249 billion, while the average

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primary school enrolment rate (PSE) was approximately 80%.

Moving from 1990 to 1999, the government capital expenditure and government recurrent expenditure, per capita income and rate, and primary school enrolment rate showed an average of ₦162.83 billion, ₦139.26 billion, ₦269.2232 billion, and 82% respectively. Between 2000 and 2009, the GCEX and GREX revealed average increased expenditures of

₦553.73 billion and ₦1,041.43 billion, while the PCI and PSE equally experienced an average increase of ₦779.7864 billion and 85%. The average increase continued from 2010 to 2017, as manifest in the values for government capital expenditure (₦843.54 billion), government recurrent expenditure (₦225.52 billion), per capita income (₦2634.865 billion), and primary school enrolment rate (96%).

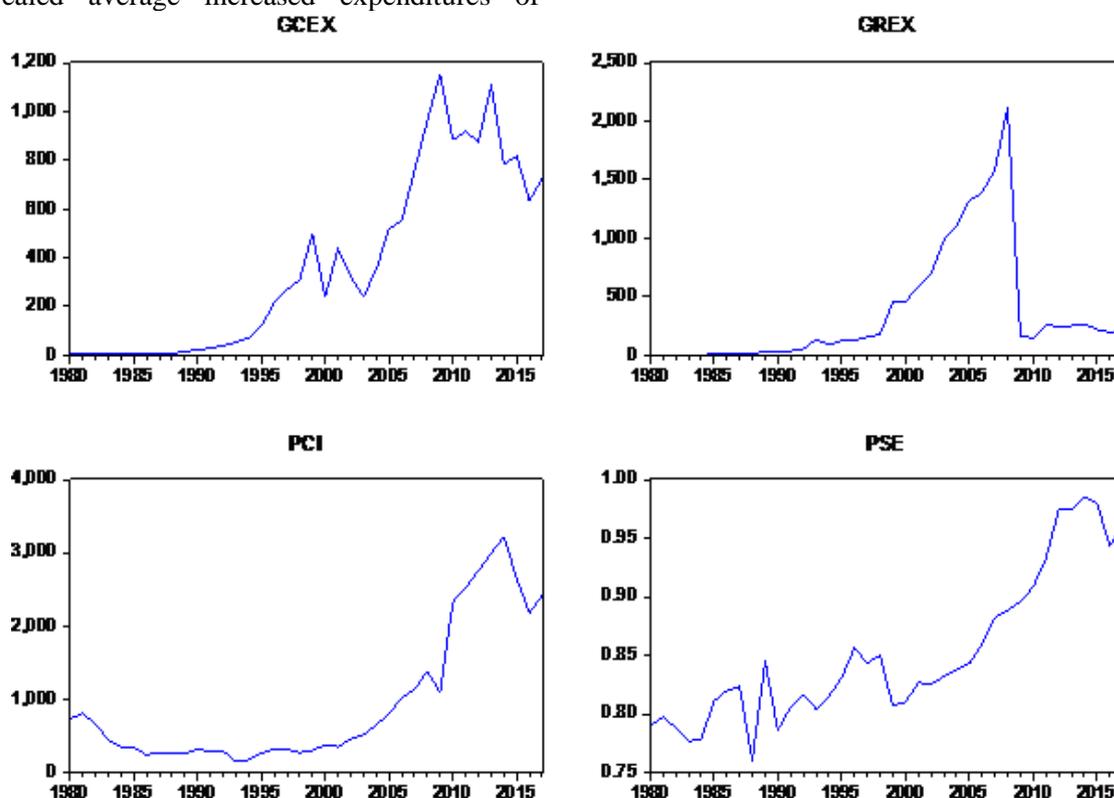


Figure 1. Trend Analysis of Selected Variables in Nigeria, 1980-2017

Table 2. Descriptive Statistics Test Results

	PCI	GCEX	GREX	PSE
Mean	946.1122	368.0574	360.8821	0.851793
Median	452.8003	255.6700	161.1350	0.831475
Maximum	3221.678	1152.800	2117.360	0.985370
Minimum	153.6467	4.100000	4.750000	0.760300
Std. Dev.	940.7718	371.6707	513.1861	0.063666
Skewness	1.229720	0.621523	1.890790	0.845921
Kurtosis	2.991178	2.007936	5.785032	2.582899
Jarque-Bera	9.577460	4.004809	34.92318	4.807483
Probability	0.008323	0.135010	0.000000	0.090379
Sum	35952.26	13986.18	13713.52	32.36814
Sum Sq. Dev.	32746908	5111146.	9744321.	0.149975
Observations	38	38	38	38

Source: Authors' Computation (2020)

The summary of the descriptive statistics results (Table 2) suggest that the variables show great disparity in terms of size. For example, the mean value of PCI within the period 1980-2017

stood at 946.1122 units. The calculated mean for the variables differs from that of the median values, suggesting the presence of skewness in the model. The Jarque-Beratest measures

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whether the series are normally distributed or not. The null hypothesis suggests a normal distribution. Therefore, we fail to reject the null hypothesis for GCEX and PSE, and conclude that they are normally distributed, since the computed probability is greater than 5% level of significance. We reject the null hypothesis for GREX and PCI and conclude that they are not normally distributed, since the computed probability is less than 5% level of significance. The meaning of this is that any attempt to make use of the data at their level form might result in misleading policy outcomes. This called for unit root test.

Unit Root Test Result

The examination of the properties of the variables is necessary if two or more variables

Table3. ADF and PP Unit Root Test Results

Variables	ADF Statistics Level	ADF Statistics First Difference	PP Statistics Level	PP Statistics First Diff.	Order of Integration
PCI	-2.031722	-3.686136*	-1.825754	-5.821230*	I(1)
GCEX	-1.845663	-3.610838*	-2.515963	-7.895174*	I(1)
GREX	-1.865154	-4.858118*	-2.182494	-6.944312*	I(1)
PSE	-1.914565	-4.764275*	-2.649455	-9.489775*	I(1)

Note: (i)*indicates rejection of the null hypothesis at 0.05 level

Source: Authors' Computation (2020)

Co-Integration Test Result

Having observed that the variables to be integrated of order one, we proceed to examine the presence of co-integration among the

Table4. Co-Integration Test Results

Hypothesized No. of CE(s)	$r = 0$	$r \leq 1$	$r \leq 2$	$r \leq 3$
Trace Statistic	69.31720	32.82416	10.08967	0.977909
0.05 critical value	47.85613	24.45707	15.49471	3.841466
Hypothesized No. of CE(s)	$r = 0$	$r \leq 1$	$r \leq 2$	$r \leq 3$
Maximum Eigen value	36.49304	22.73449	9.111757	0.977909
0.05 critical value	27.58434	21.13162	14.26460	3.841466

Source: Authors' Computation (2020)

The co-integration analysis results show that there are at least two co-integrating equations in the model according to trace method, and this is corroborated by the calculated maximum Eigen value statistic, calling for the validation of long-run relationships among the variables. Thereafter, the analysis proceeded to the estimate the error correction model (Table 5).

Error Correction Mechanism Result Analysis

The Adjusted R² has a value of 0.694434. This means that government capital expenditure, government recurrent expenditure, and primary

in a regression model are not stationary, whereby the standard errors produced by the regression estimate would be biased and unreliable (Mahadeva and Robinson, 2004). The properties of the variables in the model were examined by the Augmented Dickey-Fuller (1979) unit root test (ADF) and Philip-Peron (1988) unit root test. The results are presented in Table 3. The unit test results reveal that all the variables were not stationary at level. In other words, the variables have a unit root, but they all became stationary after first difference. Therefore, all the variables in the model are of the same order of integration: integrated of order one, i.e. the variables are I (1) series.

variables. To this end, the Johansen co-integration technique is utilized to generate the results shown in Table 4.

school enrolment accounted for about 42% variation in the level of poverty rate in Nigeria during the period under review. The ECM coefficient has a value of -0.076592 and is statistically significant. This implies that there is a stable long-run equilibrium relationship in the model. This coefficient indicates the speed of adjustment of model to any disequilibrium. In particular, the ECM coefficient reveals that about 7.7% of any disequilibrium in value between the current year and the previous year is recovered within one year.

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Table 5 shows that the relationship between government capital expenditure and per capita income is positive and statistically significant after one period lag. The result revealed that government capital expenditure is positively related to per capita income both in the current year and after a one-year lag period. The positive sign of GCEX conforms to *a priori* expectations. This means that increase in governments capital expenditure will increase the level of per capita income, invariably reducing the rate of poverty in Nigeria. More

Table 5. Parsimonious Error Correction Model Result

Dependent Variable: D(PCI)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PCI(-1))	0.346278	0.116119	2.982104	0.0067
D(PCI(-2))	-0.460042	0.195067	-2.358376	0.0272
D(PCI(-3))	0.146730	0.124487	1.178674	0.2506
D(GCEX)	0.349438	0.233950	1.493643	0.1489
D(GCEX(-1))	1.277110	0.265436	4.811367	0.0001
D(GREX)	0.224868	0.078876	2.850901	0.0090
D(GREX(-1))	-0.608368	0.088670	-6.861071	0.0000
D(GREX(-3))	-0.322032	0.138405	-2.326729	0.0291
D(PSE)	1804.762	1073.492	1.681207	0.1063
D(PSE(-3))	1231.047	1076.514	1.143549	0.2646
ECM(-1)	-0.076592	63.26508	-0.628560	0.0458
R-squared	0.787030	Mean dependent var		57.95377
Adjusted R-squared	0.694434	S.D. dependent var		276.9592
S.E. of regression	153.0975	Akaike info criterion		13.15622
Sum squared resid	539093.4	Schwarz criterion		13.65004
Log likelihood	12.6557	Hannan-Quinn criter.		13.32463
Durbin-Watson stat	1.525341			

Source: Authors' Computation (2020)

However, the relationship between government recurrent expenditure and per capita income after one-year lag and third-year lag income is negative and statistically significant. The negative sign of GREX does not conform to *apriori* expectations. This means that increase in governments recurrent expenditure will reduce the level of per capita income, invariably increasing the rate of poverty in Nigeria. A one-unit increase in government recurrent expenditure will bring about 0.61 and 0.32 unit decreases in per capita income and invariably increase the rate of poverty in Nigeria. The policy implication is that excess government recurrent expenditure has contributed to the rising poverty incidence in Nigeria. This perhaps is evidenced in the infrastructural deficit in the Nigeria today. This finding conforms to the findings of Mehmood and Sadiq (2010) but contradicts the findings of Ubong and Ubi-Atai (2018).

specifically, a one-unit increase in government capital expenditure will bring about 0.34 and 1.28 unit increases in per capita income and invariably reduce the rate of poverty in Nigeria. The policy implication of this result is that government capital expenditure on education is a veritable instrument in tackling the incidence of poverty in Nigeria. This finding conforms to the findings of Ubong and Ubi-Atai (2018) and Nwosa (2014) and contradicts the findings of Mehmood and Sadiq (2010).

Again, Table 5 indicates that primary school enrolment is positively and insignificantly related to per capita income after three-year lag period. The positive sign of PSE conforms to the *a priori* expectation. This means that increase in rate of primary school enrolment will increase the level of per capita income, invariably reducing the rate of poverty in Nigeria. A one-unit increase in primary school enrolment will bring about a 1231 unit increase in per capita income and invariably reduce the rate of poverty in Nigeria, but the rise in per capita income is not significant. The policy implication is that huge government expenditure over the years, especially on primary education, had not brought about a significant reduction in the poverty rate in Nigeria. This result is in tandem with the findings of Edeh, Obi and Obi (2017).

Model Stability Test

The structural stability of the long-run and short-run relationships for the entire period was

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examined by the model recursive residual plot and Brown et al.'s (1975) cumulative sum (CUSUM) and cumulative square (CUSUM of square) plot (Figure 2).

The pair of straight lines in each figure indicates the 5% significant level; if the plotted CUSUM

and recursive residual graphs remain inside the critical bound straight lines, the null hypothesis of correct specification of the model can be accepted.

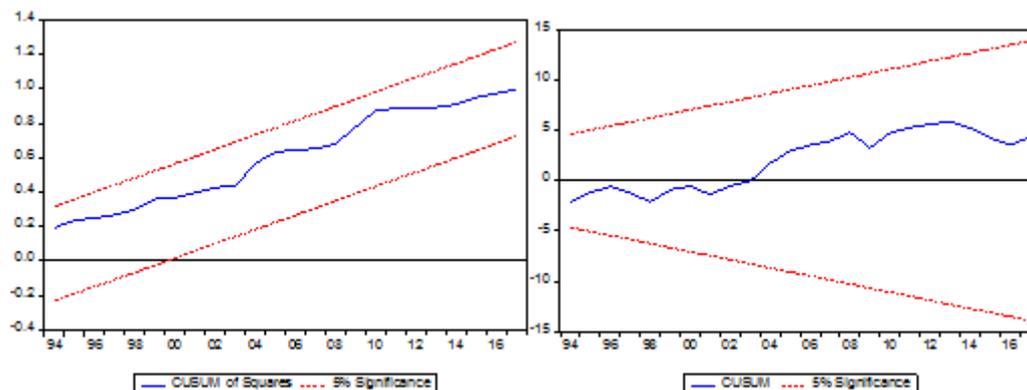


Figure2. CUSUM of Squares Test

CONCLUSION

This paper investigated the role of government expenditure and primary school enrolment on poverty reduction in Nigeria between 1980 and 2017. The analytical models of Victor (2018) and Ernest (2014) were employed, with some improvements. The study adopted both descriptive statistics and OLS for multiple regression methods of analysis. Other modelling techniques applied included the Johansen co-integration test and ECM to determine the speed of adjustment of the short run dynamics.

The results of the analysis indicate that there is an insignificant relationship between government recurrent expenditure and poverty reduction in Nigeria. This implies that despite the rising level of government recurrent expenditures and increased growth achieved over the years, the level of poverty has equally been on the increase in Nigeria. This is a negation of the Keynesian theory of public expenditure. However, government capital expenditure on the other hand had a positive and significant relationship with per capita income after a one-year period lag. The paper thus concludes that long-term government capital expenditure is a panacea to achieve a significant reduction on the level of poverty in Nigeria. This policy implication of these results is that government excess recurrent expenditure retards efforts towards the reduction of poverty in Nigeria. The paper therefore recommends that the governments at all levels should prioritize expenditures by allocating more of its budgetary

allocation to the capital component. This would help create the needed infrastructural framework that drives sustainable growth and development, addressing the rising incidence of poverty in Nigeria.

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