Impact of Education Spending on Poverty Reduction in a Democratic Dispensation in Nigeria

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Abstract
This paper investigates the impact of education spending on poverty eradication in Nigeria using time series data for the period of 1999 - 2017. In other to achieve the objectives of the study, Private Consumption per capita, a proxy measure for poverty, is specified as a function of capital stock (GFCF), primary school enrollment (PSE) and expenditure in education (EDX). The method of ordinary least square regression analysis was used to analyze the time series data. Finding reveals that education expenditure in does not impact poverty reduction over the period under study. The efforts of current political dispensation to wipe out poverty are not yielding the desired fruit. More should be done to increase education allocation in Nigeria's yearly budget to about 25% in the next ten years. In addition, human capital development is not yielding to poverty reduction in Nigeria. Healthcare and Vocational training should be encouraged by increased funding and monitoring to improve the quality of human resources

Keywords: poverty reduction, education expenditure

Introduction

Overall, poverty is a state of poor welfare of citizens in an economy. However, there is no objective definition of poverty and no objective way of measuring how many people are poor. The definitions of poverty vary widely among international agencies and countries, the most commonly used working definition for international poverty comparisons, and the poverty line is per capita expenditures of US $1 per person per day (adjusted for differences in purchasing power) (World Bank, 1990). While for some, it is defined as US $2 per person per day, others calculate minimum caloric requirement as the poverty line. The United Nations has favored composite indices which take into account access to Education and basic health into the computation of poverty and human development measures (Okosun, Siwar,

Hadi and Nor, 2012).

Kumar and Ahmad (2008) define education as a purposive, conscious or unconscious, psychological, sociological, scientific and philosophical process, which brings about the development of the individual to the fullest extent and also the maximum development of society in such a way that both enjoy maximum happiness and prosperity. It is an absolute human right that should be given to all human beings. In every nation, education should be accessible for every single citizen regardless of their status or social classes. And it is the core responsibility of governments to ensure this access. Education is linked and related to nation development. According to EFA (2002), education is a key index of development. Otive (2006), notes that schooling improves productivity, health, and reduces negative features of life, such as, child labour as well as bringing about empowerment.

Investment in education and human capital formation are essential for economic growth and poverty reduction. The nexus between education and poverty can be viewed from two directions. First, investment in education increases the skills and productivity of poor households. This, it does by enhancing the wage level as well as the overall well-being of the population.

Second, Poverty may hinder educational attainment. With poverty in place, students are handicapped in the area they acquire learning and other pedagogic materials needed for class activities. Second is that poverty may generate social pressures which deviate the mindset of poor students, self-concept, and world view. With widespread poverty, social education institutions suffer in terms of deteriorating standard becoming the case.

Nigeria is blessed tremendously and generously with huge economic resources such as crude oil, cocoa, rubber and plantations, etc. Despite all these natural resources, it is really lamentable to see millions of Nigerians still living in absolute poverty in recent times. Poverty in rural areas seems to be higher compared to urban areas. In Nigeria, widespread and severe poverty is a reality. It is a reality that depicts a lack of food, clothes, education and other basic amenities. Severely poor people lack the most basic necessities of life to a degree that it can be wondered how they manage to survive.

The Nigerian government has launched various Poverty Alleviation Programmes starting from 1980s and every new government seems to have their own Poverty Eradication or Alleviation Programmes. Eventually, all these programmes become an avenue for corruption and paving ways for embezzlement. For quality education to be achieved in Nigeria, poverty must be seriously addressed. Education has the capability of reducing poverty because once the majority of the people in the country are educated, they are likely to get jobs, earn living and the ability to provide the basic needs for their families. This is the strength and uniqueness of education in producing an excellent Human Capital for nation development and economy.

The relationship between poverty and education has been documented in many studies. The direction of causality between poverty and education linkages has been shown to flow both ways. On one hand poverty acts as a factor preventing people from getting access to education. On the other hand those with education are considered to be at less risk of poverty. Appleton (1997) states that each year of primary schooling is associated with a 2.5 percent fall in the risk of poverty, and that lower secondary schooling has roughly twice this effect. Overall, the effects of education on the probability of being poor were found to be very strong (Julius and Bawane, 2011).

In Kenya, the level of education is the most influencer of poverty (Geda et al, 2001)

and since a female headed household is more likely to be poor; investment in female education is recommended to reduce poverty. In the study conducted by Asghar, Hussain, & Rehman (2012), the impact of government expenditure on education on poverty was found to be negative. These findings are consistent with those of Awe (2013) in his case study of the Ekiti State of Nigeria. Osundina et al. (2014) found that government spending on education in Nigeria to be insignificant to poverty reduction. This controversy needs to be addressed.

Since the emergence of the new civilian dispensation in 1999, politicians in Nigeria have made a lot of claims in wiping out poverty in Nigeria. Such programmes include the National Poverty Eradication programme (NAPEP), Youth Empowerment Scheme (YES), and a host of others. In spite of these efforts, "lip service" claims and huge expenditure in addressing education and poverty problems in Nigeria, the result on ground shows that poverty is exacerbating. This study gives an empirical backing to show the impact of education spending on poverty reduction in Nigeria during the present democratic civilian dispensation.

Review of Related Literature
The study has been anchored on the following theories for better understanding.

The Keynesian theory of Poverty
This theory adduces that wiping out poverty is effective through government policies and interventions. The Keynesian theory of poverty holds that poverty is as a result of structural factors which could be economic or social or political. The proponents of this theory acknowledge that the poor are impoverished due to external reasons mostly beyond their control. Marshall and Keynes explain poverty to have been caused by economic underdevelopment and lack of human capital (Jung & Smith, 2006).

Modernization Theory
Modernization theory focuses on how education transforms an individual's value, belief and behavior. Modern values are being inculcated in people when they are exposed to modern institutions such as schools, social media, internet and factories. McClelland (1961) research work gave birth to modernization theory. He opines that certain societies are better and advanced because of their personality styles and cultural differences. As a social psychologists, he tries to explain why some societies are faster in social and technological advancement. This theory is trying to encourage societies to be open and adapt to modern ways of doing things by way of embracing technological changes. The world is changing rapidly, and for society to be relevant, modern ways of doing things must be accepted and be implemented (Omodero and Azubike, 2016).

Human Capital Theory
In a review of human capital theory by Walter Heller in the 1960s, Jeff and Laura (2014) discovered the reason why education is giving a central role in Federal economic policy in the USA. According to their study, before Kennedy's assassination in 1963, he met with Heller to look into the poverty situation of the United States. When eventually, President Johnson took over, Heller shared with him, Kennedy's plan to eradicate poverty and promote economic growth through education of human capital. Johnson keyed into the plan. Human capital formation through expenditure on education was practically linked to future growth. Education also became a powerful tool for fighting poverty, since there was obvious impact on the general income of the nation. According to them, the American's poor were poor because they failed to work towards educational attainment. The proponents of this theory therefore believe that education of human capital has the capacity and capability to eradicate

poverty and bring about economic development. Education for All (2015), reports that "the UBE programme is an expression of the desire of the Government of Nigeria to fight poverty and reinforce participatory democracy by raising the level of awareness and general education of the entire citizenry". This report is in support of human capital theory because it believes that education is the way out of economic problems for Nigeria as a nation (Omodero and Azubike, 2016).

Many empirical studies have been carried out to determine the impact of education spending on poverty in Nigeria. Dauda (2009) carried out an empirical investigation on the relationship between investment in education and economic growth in Nigeria, using annual time series data from 1977 to 2007. The paper employs Johansen co-integration technique and error correction methodology. Empirical results indicate that there is indeed, a long-run relationship between investment in education and economic growth. All the variables used including gross fixed capital formation and educational capital are statistically significant (except labour force) in the Nigerian economy. The findings have a strong implication on educational policy in Nigeria.

Omojomite (2010) examines the notion that formal education accelerates economic growth using Nigerian data for the period of 1980-2005. Time series econometrics (co-integration and Granger Causality Test) are applied to test the hypothesis of a growth strategy led by improvements in the education sector. The results show that there is co-integration between public expenditures on education, primary school enrolment and economic growth. The tests revealed that public expenditures on education Granger cause economic growth but the reverse is not the case. The tests also revealed that there is bi-directional causality between public recurrent expenditures on education and economic growth. No causal relationship was established between capital expenditure on education and growth, and primary school enrolment and economic growth. Chude and Chude (2013) investigate the effects of public expenditure in education on economic growth in Nigeria over a period, from 1977 to 2012, with particular focus on disaggregated and sectoral expenditures analysis. The study used Ex-post facto research design and applied time series econometrics technique (Error Correction Model) to examine the long and short run effects of public expenditure on economic growth in Nigeria. The results indicate that total expenditure on education is highly and statistically significant, and have positive relationship on economic growth in Nigeria in the long run. The study concludes that economic growth is clearly impacted by factors both exogenous and endogenous to the public expenditure in Nigeria.

Okulegu (2013) investigate the link between government spending and poverty reduction in Nigeria's economic growth. The study adopts time series econometrics analysis and descriptive statistics to determine the impact of government spending on Nigerian's economic growth. The research work employs the use of multiple regression model based on Ordinary Least Square (OLS) method in other to achieve the objectives mentioned above, the variables used are Poverty Level (Dependent variable) and the explanatory variables; Agricultural Credit Guarantee Scheme Fund (ACGSF) and Government Expenditure on Agriculture (GEA). It covers the period of years 1980-2009, and the data was mainly from CBN statistical bulletin. The regression result shows that public spending has significant impact on Poverty reduction in Nigeria. It is estimated from the result that 1% increase in Agricultural Credit Guarantee Scheme Fund (AGCSF) will, on the average lead to decrease by 0.06% in Poverty Level. Odior (2014) examines the likely impact of government expenditure policy on education and poverty reduction in Nigeria. An integrated sequential dynamic computable general equilibrium (CGE) model is used to simulate the potential

impact of increase in government expenditure on education in Nigeria. The result of experiment indicates that it will be extremely difficult for Nigeria to achieve the MDG target, in terms of education and poverty reduction by the year 2015, because this policy measure in the analysis was unable to meet this goal. It is found that the re-allocation of government expenditure to education sector is important in determining economic growth and the reduction of poverty in Nigeria.

Obi and Obi (2014) examine the impact of education expenditure on economic growth as a means of achieving the desired socio-economic change needed in Nigeria. The study uses time series data from 1981 to 2012. The Johansen's co-integration analysis and ordinary least square (OLS) econometric techniques were used to analyze the relationship between gross domestic product (GDP) and recurrent education expenditure. Findings indicate that though a positive relationship subsists between education expenditure and economic growth, but a long run relationship does not exist over the period under study. In conclusion, the above study has shown that educational sector has not been productive as expected. This is evidenced by the poor quality of graduates, increasing cases of cultism in schools and high rates of drop-outs.

Omodero and Azubike (2016) examine the extent to which the Nigerian GDP affects the government expenditure on education, social and community services and the number of school enrolment within the period 2000-2015. Secondary data employed were from the Education for All (2015) reports and CBN bulletin published in 2016. Multiple regression analysis result indicates that expenditure on education is significant and impacts on the economy. The conclusion is that, the anti-graft fight by the present government to encourage proper use of resource allocation has to be encouraged by all good citizens and lovers of education.

Urhie (2014) examines the effects of the components of public education expenditure on both education attainment and economic growth in Nigeria from 1970 to 2010.The Instrumental Variable Two Stage Least Squares estimation technique is employed to test the hypothesis that both recurrent and capital expenditure on education have different effects on education attainment and economic growth. The result reveals that public education expenditure has both direct and indirect effects on economic growth. The indirect channel has been more relevant for economic growth in Nigeria. Thus, total public education expenditure can promote economic growth without necessarily first improving education attainment. The study also reveals that recurrent and capital expenditure on education has different effects on economic growth. While recurrent expenditure has a negative impact on education, capital expenditure is found to have appositive impact. On the contrary, recurrent education expenditure had a positive and significant impact on economic growth while capital expenditure had a negative impact.

This present study differs from the above studies by examining the impact of education expenditure since the inception of the present civilian dispensation. The intention is to see how far the present day politicians and leaders have succeeded in fulfilling their promises of wiping out poverty in the land.

Methodology
This design of this study is ex post facto. The study makes use of time series data collected from the Central Bank of Nigeria Statistical Bulletin 2017 online edition and the World Bank database. The method of Ordinary least square is adopted to analyze the time series data.

Model Specification
This study adopted an endogenous production function used by Okulegu (2013) which specified Poverty level as a function of Agricultural Credit Guarantee Scheme Fund and Government Expenditure on Agriculture. This study examines poverty eradication from the perspective of agriculture. This present study amended the above model by specifying Poverty as a function of capital stock, labour and education expenditure.

$$PCP_t = f(GFCF_t, PSE_t, EDX_t) \qquad (1)$$

Stochastically, the model is specified as: $PCP_t = \beta_0 + \beta_1 GFCF_t, \beta_2 PSE_t, \beta_3 EDX_t + \mu_t \qquad (2)$

A priori expectations: $\beta_1 > 0, \beta_2 > 0$, while $\beta_3 < 0$.

Private Consumption per capita (PCP) (proxy for Poverty measured by consumption expenditure by household) is the dependent variable, while gross fixed capital stock (GFCF) (proxy for capital stock), primary school enrolment (PSE) (proxy for labour force), and education expenditure (EDX) are the explanatory variables.

Data Presentation
Table 1: Descriptive Statistics

	PCP	GFCF	PSE	EDX
Mean	0.551053	4395.046	0.405497	100.5668
Median	0.500000	2050.760	0.048650	8.410000
Maximum	0.830000	10571.74	7.921847	976.5700
Minimum	0.320000	231.6600	-0.907316	-84.98000
Std. Dev.	0.160100	4188.704	1.837359	280.5675
Skewness	0.510773	0.449616	3.876379	2.506094
Kurtosis	1.969848	1.396040	16.44140	7.687320
Jarque-Bera	1.666277	2.676868	190.6146	37.28195
Probability	0.434683	0.262256	0.000000	0.000000
Sum	10.47000	83505.88	7.704443	1910.770
Sum Sq. Dev.	0.461379	3.16E+08	60.76597	1416927.
Observations	19	19	19	19

Source: Author's Eviews Computations

Table 4.1 shows the result of descriptive statistics of the variables used in the study. It could be observed that gross fixed capital formation (GFCF) has the highest mean score, while primary school enrolment has the lowest mean score. All the variables show evident of positive skewness to the right since they are all positively signed. GFCF has the highest record of standard deviation, while real PCP has the lowest standard deviation. All the variables have positive kurtosis, with primary school enrolment having the highest value. . The probability of Jarque-Bera values for all the variables show that individually PSE and EDX are normally distributed at 0.05%. This is also evident from the values of their probability (prob < 0.05 for all the variables). Lastly, the study utilized only 19 observations.

Results and Discussions
Table 4.2: Result of Ordinary Least Square Estimation

Dependent Variable: PCP				
Sample: 1999 2017				
Included observations: 19				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GFCF	3.41E-05	5.25E-06	6.489662	0.0000
PSE	0.011290	0.011888	0.949754	0.3573
EDX	2.68E-05	7.89E-05	0.339214	0.7392
C	0.394066	0.034715	11.35151	0.0000
R-squared	0.749196	Mean dependent var		0.551053
Adjusted R-squared	0.699035	S.D. dependent var		0.160100
S.E. of regression	0.087832	Akaike info criterion		-1.842128
Sum squared resid	0.115716	Schwarz criterion		-1.643299
Log likelihood	21.50022	Hannan-Quinn criter.		-1.808478
F-statistic	14.93588	Durbin-Watson stat		1.117076
Prob(F-statistic)	0.000089			

Source: *Author's Eviews Computations*

Table 4.2 presents the result of the model estimation. The coefficient of determination (R^2) was 0.749196. This implies that the model is adequate inn measuring the relationship between the dependent and the independent variables. It implies that almost 75 % of changes in poverty reduction (PCP) is explained or attributed to changes in the explanatory variables (GFCF, PSE and EDX). The result of the F-statistic (14.395, with *P* value at o.000089) indicates that as a group, all the explanatory variables are jointly significant in explaining poverty in the model. Individually, capital stock (GFCF) was statically significant at 5% with the probability of its coefficient below 0.05. Labour force (PSE) was not statistically significant but positively related to the dependent variable. This implies that the quality of human capital in Nigeria does not meet the requirement for poverty elimination in the country. Individually, our variable of focus (education expenditure) was not statistically significant since the probability value of its coefficient is not less than0.05. In other words, education expenditure is not statistically significant in reducing poverty in Nigeria. The positive relationship between education expenditure (EDX) and poverty (PCP) indicates that on the average, the higher the poverty, the higher the education expenditure, ceteris paribus. This finding does not meet a priori expectations and therefore raises some important questions? Does it mean that funds meant for education by political leaders are not actually used for the intended purpose? Does it mean that funding of education in order to reduce poverty in Nigeria is not adequate? These questions should be addressed by researchers and public officials in charge of policy implementation. In comparison with other studies, the present finding is at variance with Okulegu (2013) whose discovery indicates that 1% increase in Agricultural Credit Guarantee Scheme Fund (AGCSF) will, on the average lead to decrease by 0.06% in Poverty Level. The reason for this variance could be as a result of the measure of poverty and used by the Okulegu (2013). However, the present finding in this study tends to agree with Odior (2014) and Obi and Obi (2014) whose outcomes suggests that education expenditure has not impacted poverty significantly in Nigeria.

Conclusion and Recommendations

Politicians and political parties all over the world strive to gain power to control resource allocation. However, what they do with the peoples' mandate leaves so much to be desired. In this study, we sought to determine the impact of education expenditure on poverty reduction since the inception of the fourth republic between 1999 – 2017. After the review of related literature, the ordinary least square technique was employed for data analysis. Finding reveals that education expenditure in does not impact poverty reduction over the period under study. The efforts of current political dispensation to wipe out poverty are not yielding the desired fruit. More should be done to increase education allocation in Nigeria's yearly budget to about 25 % in the next ten years. In addition, human capital development is not yielding to poverty reduction in Nigeria. Healthcare and Vocational training should be encouraged by increased funding and monitoring to improve the quality of human resources.

Contribution to Knowledge

This study brings in a political undertone to the examination of the contribution of education expenditure to poverty eradication in Nigeria, unlike other previous studies.

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