Educational Outcomes and Poverty in Nigeria

Omolara Ayotunde Campbell
Department of Economics,
Faculty of Management and Social Sciences,
Lead City University, Ibadan, Oyo State, Nigeria.
E-mail: *omolaracampbell@yahoo.com*

Kamorudeen Adekunle Amuda
Department of Economics,
Faculty of Management and Social Sciences,
Lead City University, Ibadan, Oyo State, Nigeria.
E-mail: *akanoanike@gmail.com*

Abstract

This study examines the relationship between education outcomes and poverty in Nigeria using time series data covering 1990 to 2021. The data were analysed using the Autoregressive Distributed Lag (ARDL) technique tso examine the short- and long-run relationship between education outcomes and poverty in Nigeria. The ARDL regression results revealed that primary school enrolment (PSEN), secondary school enrolment (SSEN), tertiary school enrolment (TSEN), and total education expenditure (TEXEDU) are not significantly related to the poverty rate in Nigeria. A major implication of this result is that the government has not been able to adequately finance the education sector to the extent of contributing positively to human capital development in the country. This would have boosted productivity and citizens' income-earning potential, helping to reduce poverty. The study therefore recommends increasing the budgetary allocation to the education sector to meet the 26% benchmark recommendation set by the United Nations Educational, Scientific and Cultural Organization (UNESCO). The government should also create a special commission for secondary education in Nigeria, as it has been done for primary education through the Universal Basic Education Commission (UBEC) at the Federal Government level and the State Universal Basic Education Board (SUBEB) by the State Government.

Keywords: Education outcomes, final consumption expenditure, poverty rate

1. Introduction

Human capital development has remained at the forefront of strategies for reducing poverty in both low and middle-income countries. There are often supported lessons from developed economies where their success, to an excellent extent, is linked to increased and sustained investment in human resources. Broad-based growth within the sorts of social, political, and economic transformations is driven by human capital. Numerous indicators of human capital development like quality and improved access to education, healthcare, and nutrition are crucial for alleviating poverty, either headcount or multidimensional. It is important to note that the standard of education had remained at the middle of human capital development in low and comparatively medium income countries (Amzat, 2010; The World Bank, 2014).

Education is linked and related to national development. "Education is a key index of development. It has been documented that schooling improves productivity, health and reduces negative features of life such as child labour as well as bringing about empowerment". Education has the capability of reducing poverty because once most of the people in the country are educated, they are likely to get jobs, earn a living and possess 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 a nation's development (Olopade et al, 2019).

Yusuf (2021) asserts that school enrolment is one of the key factors in achieving a desirable economic growth and productivity of the labour force thereby increase the income level; improve the standard of living as well as reducing the poverty level in an economy. The introduction of universal primary education (UPE) programme in 1976 was a significant milestone in broadening the access to education particularly for the poor and downtrodden, there laid a solid foundation for their human development process.

According to Becker (1995), Poverty is a state or condition where people and communities cannot meet a minimum standard of living because they lack the proper resources. These include but are not limited to financial resources, basic healthcare and education, clean drinking water, and infrastructure. (Oni, Adesoji & Alade, Ibiwumi. (2023). The Future of Higher Education in Nigeria: Global Challenges

and Opportunities. Poverty is often determined by socioeconomic status, ethnicity, gender, and geography. To James (2022), Many people are born into poverty and have little hope of overcoming it, while others may fall into this situation due to negative economic conditions, natural disasters, or increasing living costs, as well as drug addiction, depression, and other mental health issues. Poverty remains a key issue and has become an instrument of dialogue among experts as regards economic attainment of any country.

Uduakobong (2015) opines that the call for alleviating the scourge of poverty on the well-being of the masses and most especially in the developing world and Nigeria inclusive need some proactive measure. Its attendant process of inaugurating various processes towards achieving this aim in the international, regional, and local arena brings into the limelight, human capital development. This is one of the veritable tools of improving the wellness of human existence and reduction of poverty, hunger, and protection of life and property.

To achieve this important goal, series of poverty alleviation programmes were put in place to scale back the pervasiveness and incidence of poverty within the country. The most recent of the programmes towards addressing poverty is the Sustainable Development Goals (SDGs), also referred to as the worldwide goals, adopted by the United Nations as a universal call to action to end poverty, protect the earth, and make sure that by 2030 all people enjoy peace and prosperity.

The SDGs was designed to end poverty, hunger, AIDS and discrimination against women and girls among others. Specifically, the goals 1, 2 and 4 which are: No Poverty, Zero Hunger, and Quality education were all put in place to deal with the poverty scourge. The adoption of the SDGs by United Nation had given the fight against poverty a new dimension with focus now on human capital development features such as investing in people through quality education, jobs and skills which help develop human capital (World Bank, 2020). This serves as a key to ending extreme poverty and creating more inclusive growth. Hence, ensuring a significant decrease in poverty is now a foremost objective of every economy, both developed and developing. Yalley (2021) opines that human capital accumulated through

education, training and socialization is the best impetus for or means to wealth creation and poverty eradication.

Keji (2017) makes it clear that an increase in human capital leads to a decline in poverty level. The persistence and continuous spending in human capital stimulates long – run productivity hence increased income earnings thereby having positive impact on poverty rate. This is so as the workings of human capital development viz a viz education will improve the outcomes area such as increased basic school enrolment in both genders which is one of the key indicators towards measuring poverty rate in the country.

The education sector which is one of the vital agents of human capital development is grossly underfunded as budgetary allocation falls short of 26% recommended by UNESCO. This mandate is yet to be fulfilled by Nigeria Government in the last four decades. For instance, the budgetary allocation to the education sector for 1998 was just ₦26.7 billion out of ₦260 billion which accounted for 10.28%. For 2014, ₦493 billion was allocated to the education sector out of the total budget of ₦4.962 trillion amounting to 9.936% which by far were the two largest allocations to the sector in the last 43 years. The last five years have not been fulfilling as well. The budgets for 2019, 2020, 2021, 2022 and 2023 revealed that 745.53 billion, 686.82 billion, 742.52 billion, 923.79 billion and 1.79 trillion representing 8.4%, 6.5%, 5.6%, 5.4% and 8.2% of the total budget was allocated to the sector respectively. Even the little that has been contributed to education, most especially on primary education, had not brought about a significant reduction in the poverty rate in the country (Odigwe & Joseph; 2019 and Taiwo; 2022).

The high rate of poverty is an indication that Nigeria is not doing well in terms of meeting the Sustainable Development Goals (SDGs) especially eliminating poverty by 2030. It can also be categorically established that Nigeria government had not been committed enough to address the problem headlong by investing in human capital development programmes. Since independence in 1960 from British colonial rule, the various leadership of this country has adopted numerous human capital developmental strategies with view to reduce to some extent or do away with poverty. According to Aliyu & Dansabo

(2018), some of these programmes include National Poverty Eradication Programme, National Directorate of Employment established in November 1986, N-Power Programme with majority of its beneficiaries deployed to schools, the establishment of the new Ministry of Humanitarian Affairs, Disaster Management and Social Development etc. However, the fact remains that poverty could not be reduced due to the complex nature of the country's poverty status which can be termed as chronic poverty.

The Nigerian government in recognizing the critical role played by human capital development in driving sustained economic growth, boosting productivity, and reducing poverty design Nigeria's Human Capital Development Program in 2022. Eromosele (2022) opined that the program was designed with focus on three thematic areas: Health and Nutrition, Education and Labour Force as well as six critical human capital development outcomes: under – five mortality rate, malnutrition, adult mortality, expected years of school (primary and secondary school completion, quality learning and labour force participation rate.

Despite all these moves by the government towards improving the human capital development of the nation with the aim of using these as tools to fight the menace of poverty, no appreciable achievement has so far been recorded. This therefore called for the need to take a critical look at the relationship existing between human capital development and poverty in Nigeria, the major focus of this study.

The major aim of this paper is to examine the relationship between education outcomes and poverty rate in Nigeria. This paper is structured into six sections including the introduction as section one. Section two is literature review. Methodology and sources of data will occupy section three while section four is the presentation of the empirical results. Section five discusses the empirical results and implications of findings. Finally, section six provides the concluding remark as well as policy recommendation.

2. Literature Review

Many scholars have, from time to time, tried to put up well-defined statements to display how dangerous, poverty has become in eroding people's norms and values, hence the reason for not having a specific

approved definition of poverty. Al–Thani (2016) refers to poverty as a state in which an individual is unable to fulfill even the necessities of life. This implies that it includes a lack of access to services like education, markets, health care, lack of decision-making ability, and lack of communal facilities like water, sanitation, roads, electricity, transportation, and communications.

James (2022) defines poverty to mean an economic condition where people are facing scarcity or the lack of certain commodities that are essential for the lives of human beings like money and material things. Therefore, poverty is a multifaceted concept inclusive of social, economic, and political elements. Poverty is defined as a lack of power, representation, and freedom. In general terms poverty is more understood and appreciated as a condition in which its victims are unfit to have access to introductory requirements of life. These requirements include not having enough to eat, safe water to drink and health care. To these introductory requirements, can be added intellectual development through education, and acceptable access to productive coffers and participatory openings for the victims to free themselves from the goods of poverty (Guarav, 2018).

Nearly half of the world's population currently lives in poverty, defined as income of less than US $2 per day, including one billion children. Of those living in poverty, over 800 million people live in extreme poverty, surviving on less than US $1.25 a day. They lack access to proper nutrition, clean drinking water, and adequate health services. In Nigeria, an individual is considered poor when they have an availability of less than 137.4thousand Nigerian Naira, equivalent to roughly 334 U.S. dollars per year. Similarly, a person having less than 87.8thousand Naira roughly about 213 U.S. dollars in a year available for food was living below the poverty line according to Nigerian national standards. In total, 40.1 percent of the population in Nigeria lived in poverty (UNDP, 2022 and Statista 2022).

There are lots of factors contributing to the incidence of poverty in Nigeria which include but not limited to poor education, health, sanitation and water services, Inaccessibility to employment opportunities by majority of the populace. Inadequate market facilities for the goods and services produced in rural areas, inadequate means of

fostering rural development in poor regions as well as inadequate access to assets such as land and capital by the populace contributed greatly to high incidence of poverty in Nigeria. Furthermore, the presence of Boko Haram insurgency in North-East Nigeria; Low assistance to victims of Boko Haram, drought, flood, pests and war and non - involvement of the poor in the design of development programmes has made poverty to be best described as a socio-economic plague that needs serious attention (Ikechukwu, 2019).

Quality education results in dual benefits of improving income generation and income inequality reduction. As more and more people get educated, especially the poor, the more they will have access to earn higher income and the more the opportunities of access to greater opportunities to bridge the inequality gap (Nabassaga, Chuku, Mukasa & Amusa, 2020). Nigeria has one of the largest numbers of schools, from primary to university level, both at public and private ownership. A large chunk of graduates is rolled out on an annual basis, yet without jobs, thereby increasing poverty level.

In Nigeria today, more Nigerians live in poverty than 10 years ago because Nigeria economy lag in the core global socio-economic indicators for health, education, and jobs. To address this ugly trend and develop the economic sustainability, it is important to invest heavily in the Nigeria populace especially the youth. This implies an improved access to good and affordable healthcare and education; fostering social inclusion; promoting job creation; and protecting the environment. The major purpose here is to enhance opportunities for all Nigerians regardless of gender, religion age, and physical ability (Kanu, Anyanwu & Nwaimo, 2017).

Marshall and Keynes opined that poverty is majorly caused by economic underdevelopment and lack of human capital. There will be low literacy rate which will in turn lead to unavailability of manpower when the community is not developed. Human Capital Theory, associated with the work of Becker (1975), asserts that education creates skills which bring about higher levels of productivity amongst those who have them in comparison with those who do not. Education brings associated benefits which can be compared with its costs in much the same way as any investment project will be compared with their

benefits. Human capital theory was propounded based on the assertions that there are positive relationships between the wages and salaries people receive at work and the level of their educational attainment. They assumed that those with higher levels of education seem to have higher levels of productivity on the average in competitive labour and goods markets. Employers usually use educational characteristics as a condition for qualification and suitability for a job, and potential productivity of their employees. They also based their assumption on the fact that the earnings of the more educated not only start at a higher level but increase more rapidly to a peak level than the earnings profiles of the less educated. These patterns are said to indicate not just that education makes people more productive but also enhances the ability to learn-by-doing, causing productivity, and thus earnings, to increase at a faster rate than for those with less education.

Samuel & Wale–Odunaiya (2021) investigated the impact of education on poverty reduction and economic development in Nigeria. Data was a time series monthly data between January 2000 and December 2016. Autoregressive Distributed Lag model was employed for the analysis and the findings revealed that Primary and Secondary school enrolment, Primary school completion rate, Children out of school, literacy rate and government spending on education did not have short run effect on poverty, although they carried the correct signs, but the long run effect was significant. It was therefore recommended among other things, that government spending on education should be more targeted on vocational and practical training that can help the beneficiaries translate to income generation to lift them out of poverty.

To ascertain the role of government spending on education to reduce poverty in Nigeria, Simeon, isimekhai, Vite & Otovwe (2021) carried out a study using secondary data sourced from Central Bank of Nigeria publications, National Bureau of Statistics, indexmundi.com and World Development Indicators between 1980 and 2017. 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 analyze the variables. The test result revealed 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. It was therefore concluded 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.

Edeh, Amara & Cyril (2018) also carried out a study to investigate 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.

3. Methodology

3.1 Data

The period of study spans from 1990 to 2022 and the data employed were secondary data sourced from the Central Bank of Nigeria (CBN's) statistical bulletin and annual report and World Development indicator. The methodology adopted for this study is the ARDL

3.2 Model specification and *a priori* expectations

This work will be employing an econometric analytical method adapted from the work of Samuel & Wale-Odunaiya (2021) who used

expenditure on education and economic growth and education as independent variable respectively to explain poverty level in Nigeria between 1980 and 2012. This study will be employing the following variables as independent variables (Primary School Enrolment, Secondary School Enrolment, Tertiary School Enrolment, Government expenditure on education and poverty rate. The relationship can be functionally expressed as:

$FCEX = f(PSE + SSE + TSE + GEE)$ …….……..…… (3.1)

Equation 3.1 can be re-expressed econometrically as:

$FCEX_t = \propto_t + \beta_1 PSE_t + \beta_2 SSE_t + \beta_3 TSE_t + \beta_4 GEE_t + \mu_t$……...(3.2)

Where: FCEX = Final Consumption Expenditure, PSE = Primary School Enrolment, SSE = Secondary School Enrolment, TSE = Tertiary School Enrolment, GEE = Government Expenditure on Education, μ_t = Error term that satisfies the assumptions of OLS, $\propto_0$ = Intercept constant, β_i = Parameter. The theoretical expectation indicates that all the variables are expected to show positive relationship with final consumption expenditure. This is represented symbolically as:

$\beta_1 > 0, \beta_2 > 0, \quad \beta_3 > 0, \beta_4 > 0,$

This means that Primary School Enrolment, Secondary School Enrolment, Tertiary School Enrolment, and Government Expenditure on Education are directly related to final consumption expenditure. By implication, increases in PSE, SSE, TSE and GEE lead to reduction in Poverty by increasing final consumption expenditure.

3.3 Estimation methods

This study employed the Autoregressive Distributed Lag (ARDL) estimator to evaluate the coefficients of the empirical model. This was done having tested the stationarity level of the variables using the Augmented Dickey Fuller test and the ARDL approach to cointegration test.

4. Results and Discussion of Findings

4.1 Descriptive statistics

The empirical investigation commenced with the examination of the time series properties of all the variables. Accordingly, the summary of the preliminary analysis revealing the mean, standard deviation, skewness and kurtosis of the variables used for analyzing the relationship between human capital development and poverty rate in Nigeria is presented in table 1.

Table 1: Summary statistics

	FCEX	**PSEN**	**SSEN**	**TSEN**	**TEXEDU**
Mean	3.234	0.295	2.159	3.808	107.991
Median	0.451	0.900	0.231	-0.003	10.529
Maximum	45.316	15.728	23.564	81.582	2962.069
Minimum	-19.847	-11.912	-18.826	-16.832	-76.916
Std. Dev.	13.570	5.379	8.053	17.278	523.281
Skewness	1.151	0.036	0.331	3.575	5.309
Kurtosis	4.879	4.243	4.389	15.560	29.470
Jarque-Bera	11.775	2.065	3.159	278.494	1084.562
Probability	0.003	0.356	0.206	0.000	0.000
Sum	103.503	9.449	69.083	121.865	3455.696
Sum Sq. Dev.	5708.504	897.093	2010.479	9253.983	8488508.000
Observations	32	32	32	32	32

Source: Authors' Computation (2023)

Table 1 presents the descriptive statistics for the series in the models. It was clearly revealed from the table that most variables showed that all the series displayed a high consistency level as their mean and median values are within the maximum and minimum values of the series. The final consumption expenditure growth rate averaging 3.234 indicates that less than 5% growth of the population can conveniently access their daily basic needs: an indication of a very high rate of poverty in the country. The result equally indicates that the minimum and maximum levels of final consumption expenditure over the study period (1990 – 2021) are -19.85 percent and 45.32 percent respectively. It was also revealed that the mean of total expenditure on education 107.99 percent implying its relative high input towards improving the consumption

expenditure. The table also revealed that the maximum value TEXEDU was 2962.07 percent while its minimum value was -76.92 percent.

The table also revealed the mean of all other variables that are adopted to establish the outcomes of investment in human capital development through education to aid the final consumption expenditure thereby reducing the poverty rate in the country. The mean of primary school enrolment, secondary school enrolment and tertiary school enrolment are in the rate of 0.29, 2.159, and 3.808 respectively. This implies that all the government investment in education has not been able to translate into having those indices been able to make any significant contribution towards addressing the poverty rate. Their maximum growth rate levels are 15.73 percent, 23.56 percent, and 81.58 percent while their minimum levels are -11. 912percent, -18.83 percent and -16.83 respectively.

Skewness measures the degree of asymmetry of the distribution around its mean which always has normal distribution of zero. A positive skewness will have a long right tail and left long tail for the negative skewness while Kurtosis measures the degree of peaked Ness and flatness of a distribution. The result from the table revealed that all the variables except fertility rate and gross domestic product per capital are positively skewed thereby implying long right tails. It was also revealed that while the values of all variables in the tested in the series are greater than three which implied leptokurtic.

4.2 Correlation analysis

The results of the correlation analysis are shown in table 2. The coefficients show the level of association between education outcomes and poverty rate in Nigeria. The result reveals there is negative correlation between final consumption expenditure and all the independent variables except secondary school enrolment which has positive relationship with the dependent variable. There is a positive relationship between primary school enrolment and other independent variables. Virtually all the independent variables have either positive or negative relationship which implies that problems of multicollinearity cannot exist.

Table 2: Correlation matrix

	FCEX	PSEN	SSEN	TSEN	TEXEDU
FCEX	1				
PSEN	-0.289	1			
SSEN	0.094	0.146	1		
TSEN	-0.043	0.279	-0.181	1	
TEXEDU	-0.008	0.187	-0.054	-0.011	1

Source: Authors' Computation

4.3 Unit root tests

This section presents the unit test results to investigate the stationarity level of the variables using the Augmented Dickey Fuller (ADF) test. The results are presented in the Table 3. The rule of thumb while carrying out the ADF tests is that the variables are stationary when the values of the ADF are greater than the critical value at 5%level of significance. The results of the unit root test as shown in the Table 3 shows that all the variables are stationary at level. This implies that the series (growth rate of final consumption expenditure, growth rate of total expenditure on education, growth rate of primary school enrolment, growth rate of secondary school enrolment, growth rate tertiary school enrolment was found not to accept the null hypothesis at 5% level i.e. the series is integrated at order zero.

Table 3: Unit root test (Augmented Dickey - Fuller)

Series	ADF Stat	5% Critical	Prob.	I(d)
FCEX	-4.2516	-2.9718	0.025	I(0)
PSEN	-6.5412	-2.9604	0.0000	I(0)
SSEN	-6.5783	-2.9604	0.0000	I(0)
TSEN	-5.8214	-2.9604	0.0000	I(0)
TEXEDU	-6.9719	-2.9604	0.0000	I(0)

Source: Authors' computation

4.4 ARDL Bounds test

The study presents the cointegration results in Table 4 using the ARDL bound tests. In Table 4, the estimated F-statistics of the normalized equation for education outcomes and final consumption expenditure (F_{stat} = 11.1964) is greater that upper critical bound at 5% significance level. This means that the null hypothesis of non-long relationship is rejected at 5% significance level. The estimation above shows that the final consumption expenditure, primary school enrolment, secondary school enrolment, tertiary school enrolment and total expenditure on education do have equilibrium condition that keep them together in the long run which implies that long run relationship do exist between human capital development and poverty rate in Nigeria.

Table 4. ARDL Bound test

Test Statistic	**Value**	**K**
F-statistics (fcexp| psen, ssen, tsen, texedu)	11.1964	4
Critical Value Bounds		
Significance	**I(0) Bound**	**I(1) Bound**
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.29	4.37

Source: Authors' Computation (2023)

4.5 Short run and long run estimates of education outcomes and poverty

The lag length of three was automatically chosen for model to ensure sufficient degree of freedom based on automatic selection of Akaike Information Criterion (AIC). The short run estimates of the relationship between human capital development and poverty rate are presented in Table 5. The coefficient of the error correction term (ECT) -1.3147 was found to be negative and statistically significant at the convention level. The range of the ECT coefficient should be between 0 and -2; this ensures that the system will be convergent. If the value exists between -1 and -2 specifically, this means that the system is convergent, yet, has oscillatory adjustment process.

The result reveals that the short run estimates of primary school enrolment at lag one and current level was found to be negative and significant at 5%. This implies that primary school enrolment has

indirect influence on final consumption expenditure and as such, influence on poverty rate measured by final consumption expenditure. This can be interpreted to mean the important roles play by education in improving the final consumption expenditure thereby addressing the problem of poverty in the country. The long run estimates from the table indicate that none of the variables was significant in the long run.

Table 5: Estimates ARDL model of education outcomes and poverty

Dependent Variable: Poverty rate (FCEX)
Selected Model: ARDL (1, 2, 0, 2, 2,)
Sample: 1990 2021 **Included Observations: 32**

Short Run Estimates				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PSEN)	-1.020964	0.309421	-3.299595	0.0034
D(PSEN(-1))	-0.788442	0.309523	-2.547281	0.0188
D(TSEN)	0.043141	0.075074	0.574651	0.5716
CointEq(-1)*	-1.314743	0.144162	-9.119932	0.0000
Long- Run Estimates				
PSEN	-0.149904	0.564437	-0.265581	0.7932
SSEN	0.344861	0.24925	1.383596	0.1810
TSEN	-0.178514	0.171497	-1.040915	0.3098
TEXEDU	0.003004	0.003283	0.915025	0.3706
C	2.285251	1.864042	1.225965	0.2338
Adj. R-squared	0.7665		**F- stat**	2.2997
D – Watson	2.0447		**Prob. (F – statistics)**	(0.0605)

Diagnostic Tests of selected ARDL Model

Serial correlation: 0.5469 (0.5876) **Normality Test:** 1.4381 (0.4872)
Heteroskedasticity: 0.4684 (0.8646)

Source: Authors' computation

The result of the analysis on education as a key variable in measuring human capital development revealed that the coefficient of determination (Adjusted-R^2 is 0.7665 implying that about 76.65% of the total variations in poverty rate measured by final consumption expenditure was explained by the variables in the model. This is an indication that the variation of changes in poverty rate measured by final consumption expenditure was explained by 76.65% variation in

total expenditure on education and other control variables. The overall test using the F-statistics (2.2997) is statistically insignificant at 5% level revealing that the model is though, well specified but statistically insignificant. The Durbin Watson statistic (2.0447) shows that there is negative autocorrelation in the model. The rule of thumb is that DW test statistic values in the range of 1.5 to 2.5 are relatively normal. Values outside this range could however be a cause of concern.

Using the Breusch-Pagan-Godfrey (BPG) test for the presence of Heteroscedasticity, the result confirmed that the explanatory variables were homoscedasticity as shown by F-statistic to be 47 percent with a probability statistic of 86 percent. This means that the variables were free of Heteroscedasticity; therefore, we can apply the variances of the coefficients to conduct tests of significance and construct confidence interval in this study.

5. Conclusion

This study attempted to fill some gaps in the knowledge of education outcomes and poverty reduction by examining the relationship between education outcomes and final consumption expenditure. The findings revealed that PSEN, SSEN, TSEN and TEXEDU had insignificant relationship with final consumption expenditure which is used to measure poverty rate in Nigeria during the period. Therefore, statistical evidence strongly suggested that all the variables adopted to measure the outcomes of education investment on poverty rate affirmed the argument that government has not done enough in the education sector to be able to expect any positive outcomes. This reveals the major implication on the process of addressing poverty issue in the country by government. Government has not been able to do enough in financing the education sector to be able to contribute to the education sector that will aid the productivity and improve the income earning potential of the citizens which will assist in combating the scourge of poverty in the country.

On the backdrop of the insignificant relationship between education outcomes and final consumption expenditure, the paper recommends as follows: (i) The government and her agencies need to do more in the area of budgetary allocation and spending in education. In the short – term, the budgetary allocation to the sector should be moved to be

within the threshold of 15% to 20%. (ii) The government should also work towards meeting up the benchmark of 26% as recommended by United Nations Educational, Scientific and Cultural Organization (UNESCO) for education. (iii) Government should as well create a special commission for secondary education in Nigeria as it has been done for primary education through Universal Basic Education Commission (UBEC) at the Federal Government Level and State Universal Basic Education Board (SUBEB) by the State Government and this should be replicated at Local Government level since they are very close to the grassroots so as to make education more accessible and affordable.

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