

HUMAN CAPITAL DEVELOPMENT AND SUSTAINABLE DEVELOPMENT: EVIDENCE FROM NIGERIA

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Abstract: The contributions of human capital development in achieving the sustainable development cannot be overemphasized in any economy, this is because investment in education and health has been argued as the strategic impetus for improving the quality of human resources. Against this backdrop, this study investigates the impact of human capital development on the sustainable development goal one (1) - poverty reduction. The study utilizes the Nigerian data combining Johansen Cointegration test, Granger causality test and Fully Modified Least Squares to establish how public investments in both education and health affect poverty reduction in the country between 1981 and 2019. Originating from the findings of this study, both government expenditure on health and capital formation Granger caused poverty reduction in Nigeria. This is a vital signal that human capital development in the form of investment in health of human resources is an important condition for the achievement of the sustainable development goal one (1) - poverty eradication in Nigeria. Similarly, all the selected components of human capital development have positive contributions to poverty reduction in Nigeria. However, the contributions of health expenditures and capital formation are statistically significant. This implies that health expenditures and capital formation have a trickledown effect on poverty reduction in Nigeria. Therefore, this study recommends the following: any time the Nigerian policymakers want to achieve the sustainable development goal one (1) - poverty reduction, the Nigerian budgetary allocations to

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education and health sectors should be in tandem with the global benchmark; this would ensure material and human resources that could drive the country towards the sustainable development. The enhancement of educational and health facilities by the policymakers would also bring about improvement in the living standard of the Nigerians.

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1. Introduction

According to World Bank (2015), poverty is a multidimensional concept which is majorly involved the deprivation of well-being as a result of low incomes and the lack of capacity to possess the essential goods and services that guarantee survival and dignity. One of the ravaging monsters in developing economies of the world, especially Africa, is extreme poverty. Combating this monster has been a global concern in the past three decades. One of the drastic attempts to enhance human welfare through reduction of extreme poverty globally led to the institutionalization of the Millennium Development Goals (MDGs) in 1990 by the United Nations with a view to eradicating global poverty by 50% at the end of 2015. Meanwhile, the post assessment of MDGs indicated that between 1990 and 2010, global poverty has been reduced significantly. Most of the nations that harbor huge number of poor people such as China and India recorded a significant improvement in raising the level of human wellbeing. Paradoxically, the situation report of some developing countries, especially, Sub-Saharan Africa showed that poverty is still rising in these countries. This accounted for further commitment of the United Nations to see fight against poverty in developing countries as a continuous exercise through the introduction of the Sustainable Development Goals (SDGs).

However, achieving poverty reduction in Nigeria by 2030, which is the first goal of SDGs Nigeria cannot be overemphasized because poverty is a critical issue in the country. For instance, the number of Nigerians living below poverty line has been expanding rapidly beyond what the GDP growth rate of 8% and 10% could sustain (World Bank, 2013). This assertion was further justified when Nigeria was tagged as the world's headquarters of poverty in the recent time (World Poverty Clock, 2018). In the same vein, poverty is a current burning issue in the country (Aderemi *et al.*, 2020:1; Adebayo, 2018; Aye, 2013).

Consequently, Nigeria is blessed with huge resource endowments in terms of natural minerals and human population which is a paramount factor in driving development yet Nigeria is still the headquarters of poverty globally. Whereas, countries like Japan and Israel with little or no natural resources have subdued their developmental issues such as poverty and inequality through technological development. Therefore, human capital is the foundation for economic growth and development (Romer, 1986; Lucas, 1988; Barro and Sala-i-Martin, 1995). In some recent studies, it has been argued that natural resources contributed less to poverty reduction across the globe (Asaleye *et al.*, 2018; Apergis and Katsaiti, 2018; Goderis

and Malone, 2011). Similarly, in the theoretical literature, there have been several strong arguments in support of human capital as an indispensable variable in enhancing evenly distribution of income, promoting economic prosperity and reduction of unemployment (Fisher, 1946; Schultz, 1962; Becker, 1975; Roemer, 1998; World Bank, 2005; Santos, 2009; Teixeira, 2014; Silva and Sumarto, 2014). Empirical evidence from countries with inadequate resource endowments such as Japan, South Korea, Hong Kong and Taiwan has further proved that human capital led to sustainable economic growth (Becker, 1995).

In view of the above, investment in human capital otherwise known as human capital development becomes highly imperative in driving an inclusive growth in a country like Nigeria. The basic component of human capital development is investment in education and health, which increases the productive capacities of human resources. Although, human capital development has been reported to have a direct link with the creation of equal opportunity for all and sundry in the economy (Larionova and Varlamova, 2015; Ridell and Song, 2011).

Globally, studies regarding human capital development and poverty nexus in developing economies are occupying the frontline of the literature. For instance, recent studies such as Adekoya (2018), Attanasio et al. (2017), Olopade et al. (2019), Bhukuth, Roumane and Terrany (2018), Shahpari and Davoudi (2014) have provided mixed results in developing economies. In the same vein, further studies focusing on the Nigerian economy like Ogwumike and Ozughalu (2018), Babasanya, Oseni and Awode (2018), Chikelu (2016), Adekoya (2018) have equally showed variations in results. The measurement of poverty in the past studies has been observed as a principal factor responsible for the inconclusive nature of the literature. Therefore, there is an urgent need to resolve the current conflicting results of human capital development and poverty nexus in a country like Nigeria, where there viable policy is critically urgent to address poverty menace in the country. Against this backdrop, this current study has been put in place to examine the contribution of human capital development in achieving the Sustainable Development Goal one (1) poverty reduction in Nigeria. The uniqueness of this study lies in the adoption of GDP per capita as a poverty measurement in which majority of past studies in Nigeria have ignored in the most recent time.

2. Literature Review

There is a list of research works regarding the nexus between human capital development and poverty reduction across the globe. This signifies that the studies regarding this subject matter are ongoing. Few among the recent studies are enunciated as follows; Babasanya, Oseni and Awode (2018) employed a technique of error correction model technique to estimate the relationship between human capital development and alleviation of poverty in Nigeria between 1990 and 2017. The authors argued that government educational spending and unemployment rate led to the acute level of poverty in the country. Meanwhile, government's health expenditure resulted in an inverse but insignificant impact on the poverty prevalence in the country. In other study, Mathew *et al.* (2018) employed a fully modified ordinary least squares in examining the nexus between investment in humans, electricity

power and growth of the economy from '1981 to 2016 in Nigeria. The findings from the study revealed that the relationship between human capital development and growth of the Nigerian economy is insignificant.

Meanwhile, Olopade *et al.* (2019) directed their study towards investigating the link between human capital and poverty in twelve (12) OPEC member countries with the application of a panel fully modified least-square. The authors submitted that the principal components of human capital had s direct impact on poverty reduction in those countries. In the work of Afolayan *et al.* (2019), VECM modelling was utilized to appraise how consumption of electricity and human capital could serve as an agent of unemployment reduction in Nigeria. The authors asserted electricity consumption had a negative relationship with unemployment. Whereas, government spending on education had an inverse relationship with unemployment rate in the country. Chikelu (2016) explored the techniques of Johansen Co-integration and OLS to examine the relationship between human capital development and poverty reduction between 1986 and 2012 in Nigeria. It was discovered from the study that a positive relationship existed between human capital development and poverty reduction in the country.

However, Attanasio *et al.* (2017) data from Ethiopia and Peru to assess how human capital growth in terms of production function between age of 1 and 15 influence poverty. It was discovered from the study that the parents who possessed higher level of income invested more especially at tender ages when the investment have the capacities to bring greatest results. Fosu (2017) researched developing economies by using data of regional trends in GDP growth and reduction in poverty from 1981 to 1995 and 1996 to 2005. It was discovered from the study that growth of income in large number of these countries were responsible for poverty reduction in many parts of the universe. Aderemi *et al.* (2020:2) explored a technique of panel analysis to investigate how inflows of FDI reduced poverty in sixteen (16) ECOWAS countries from 1990 to 2017. The authors asserted that the contribution of FDI to poverty alleviation was significant in the ECOWAS sub region

Consequently, Adekoya (2018) applied a VECM and Granger causality test to investigate the role of human capital development in alleviating poverty in Nigeria between 1995 and 2017. The finding from the study showed there was no existence of causality between educational spending, health spending, infant mortality, poverty indicator and gross enrolment ratio. However, there was a bidirectional feedback between life expectancy, poverty indicator and life expectancy.

In another related study in 35 emerging and developed economies, Zhang (2015) explored a panel analysis in a comparative study that involves how human capital and ICT contributed to producer services advancement in those countries. The study provided an evidence to support the argument that the developmental level of each of the country is the determinant of the joint influence of human capital and ICT. It was discovered that in advanced countries, a significant joint influence was the case, meanwhile, otherwise was the case of emerging countries. In other words, joint influence of human capita and ICT led to producer services in developed countries but the situation of developing country is different. In another perspective, Simplice and Sarale (2017) researched about ICT could build inclusive human development in forty nine (49) countries in Sub-Saharan Africa between 2000 and 2012. The authors applied Tobit regressions to analysis the various relevant

variables of interest with the following conclusions; the strategies designed to provide an improvement in the level of information and communication technology infiltration had the capacity to cause an elevation to inclusive human development in order to achieve the SDGs.

Conclusively, steaming from the above reviewed empirical studies, opinions of scholars have been varied over time regarding the subject matter of this study. This implied that literature is still ongoing and hence, the relevance of this study.

3. Methodology

In providing an empirical evidence to support the impact of human capital development on poverty reduction Nigeria, which is the Sustainable Development Goal one (1) to be achieved comes 2030, this study employs time series data which were sourced from secondary sources. It should be stressed that an ex-post facto research design was adopted in this study due to the fact the main interest of the study is uncover the way in which the explanatory variable predicts variation in the dependent variable from 1981 to 2019. Explicitly, GDP per capita was used to measure poverty index, and the data were equally sourced from the World Bank Development Indicators (WDI) for Nigeria. In the same vein, human capital development was measured by government capital and recurrent expenditures on educational and health sectors in Nigeria, and the data were equally extracted the Central Bank of Nigeria statistical bulletin.

3.1 Theoretical Framework

The theoretical foundation of this study is hinged on the endogenous growth theory propounded by Romer in 1986. The development of this theory could be traceable to the shortcomings identified in the popular neoclassical (exogenous) growth model of Solow. The endogenous growth model basically argued that human capital constitutes a strategic input in the production function. As such, endogenizing technical progress is an impetus for the sustainable growth. However, the recent version of the model emphases that innovation which is an offshoot of investment in human capital and technical improvement are the drivers of economic growth (Ncube, 1999; Mankiw *et al.*, 1992; Lucas, 1988). Consequently, the principal assumptions of the theory are firstly attributable to increasing returns to scale orchestrated by positive externalities. In the same vein, human capital such as knowledge, training and skill associated with individuals alongside technical progress are strategic motivators of economic growth in the long run. it is important to stress that the development of research and innovation gives birth to progressive technologies. And some of non-rival good is knowledge or technical advances.

3.2 Empirical Model

In building an empirical model to estimate the relationship between human capital development and the sustainable development goal - poverty reduction in this work, an insight was drawn from studies such as Aderemi *et al.* (2021), Aderemi

et al. (2020:2), Ogunleye *et al.* (2020), Olayemi *et al.* (2019), and Babasanya, Oseni and Awode (2018) by adapting their model through elimination of some irrelevant variables that have nothing to do with this study focus.

Thus the model is stated as follows;

$$PRD = F (HCD)$$
(1)

PRD = F (EDE, HEE, GCF, INFL)(2)

If model two is log linearized, it gave birth to model (3) expressed as below:

$$PRD_t = \beta_0 + \beta_1 Log EDE_t + \beta_2 Log HEE_t + \beta_3 Log GCF_t + \mu t$$
(3)

Succinctly put, PRD is used to denote poverty reduction, and is measured by GDP per capita. EDE is used to proxy real government expenditure on educational sector. HEE is used to capture real government expenditure on health sector. GCF is the real gross fixed capital formation, and u is error term, this represents any other variables that could not be captured in the model. t ranges from 1981 to 2019. It is expected that the apriori expectation of the model follows this pattern; $\beta_1, \beta_2, \beta_3 > 0$.

4. Result and Discussion

Descriptive Statistics	PRD	Log EDE	Log HEE	Log GCF
Mean	1291.000	21.19923	22.71973	24.40135
Median	892.5000	21.14703	23.49048	24.39304
Maximum	3223.000	27.53341	26.99236	25.71382
Minimum	270.0000	19.19056	17.50439	23.23637
Std. Deviation	890.5159	1.449555	2.988246	0.621434
Skewness	0.610332	0.089436	0.299636	0.067511
Kurtosis	1.977697	10.57645	1.664366	2.028116
Jargue-Bera	4.013948	1.18.5373	3.393156	1.524416
Probability	0.134395	0.000000	0.183310	0.466635
Sum	49058.00	805.5709	863.3499	927.2514
Sum. Sq. Deviation	29341690	77.74480	330.3956	14.28867
Observation	38	38	38	38

Table 1: Descriptive Statistics of Variables

Source: Authors' Computation (2021)

The analysis of this study started with the presentation of summary of the descriptive statistics of the employed variables of interest which are as follows; government expenditures on health and educational sectors, gross fixed capital formation, all in log form and GDP per capita. The descriptive features of data such

as mean, median, maximum, minimum, standard deviation, skewness and kurtosis with respect to each of the variables are important in a study that utilizes econometrics as technique of estimation because econometric analysis becomes "BLUE" when the data set fulfils the assumption of the normal distribution. Therefore, it could be drawn from table 1 that PRD which is used to measure poverty reduction in Nigeria from 1981 to 2019 has a mean value of \$129, the value of maximum and minimum sides of the variable show that the GDP per capita rose as high as \$3223 and fell as low as \$270 in Nigeria in the last 38 years respectively. It could be stressed that the mean value of this variable is greater than that of its standard deviation. This shows that GDP per capita data dispersed moderately from its mean area. The skewness of the variable is equally positive with Kurtosis value that is not too far from 3. This is an indication that the GDP per capita data show some degree of agreement with the symmetrical distribution assumption.

Similarly, Log EDE which is government educational spending in log form between 1981 and 2019 has mean value of \$21 million. The maximum and minimum values show that the government spending on education rose as high as \$27 million and fell as low as \$19 million in Nigeria in the last 38 years simultaneously. It was observed that the mean value of this variable is greater that the value of its standard deviation. This implies that the dispersion of the data from its mean point is moderate. Though the variable is positively skewed, its kurtosis value is bigger than 3, which connotes that the variable does not show agreement with the assumption of symmetry in data distribution. The skewness of the variable is equally positive with Kurtosis value that is not too far from 3. This is an indication that the GDP per capita data show some degree of agreement with the symmetrical distribution assumption

Consequently, Log HEE which represents government expenditures on health in log form from 1981 to 2019 has a mean value of \$22 million. Its maximum and minimum values show that the government spending on health rose as high as \$26.9 million and fell as low as \$17.5 million in Nigeria in the last 38 years simultaneously. The variable has standard deviation which its value is less than that of the mean value. Therefore, the variable is moderately dispersed from its mean value.

In the same vein, Log GCF real gross fixed capital formation in log form has a mean value of \$24.4 billion. The maximum and minimum values show that the GCF rose as high as \$25.7 billion and fell as low as \$23.4 billion in Nigeria in the last 38 years respectively. The variable has a mean value that is greater than its standard deviation. This shows that Log GCF data dispersed moderately from its mean area. The skewness of the variable is equally positive with Kurtosis value that is not too far from 3. This is an indication that the real gross fixed capital formation data show some degree of agreement with the symmetrical distribution assumption.

One of the basic requirements that could not be undermined when employing time series data for empirical analysis is the testing of unit root. This is usually done with a view to determining the stationarity status of such data, because the adverse effect of using non-stationary data in a study that involves econometric technique is emergence of spurious results. Against this backdrop, this study utilized the popular Phillips and Peron (1981) and the Augmented Dickey-Fuller (ADF) by Dickey and Fuller(1988) unit root tests to investigate whether Log EDE, Log HEE, Log GCF and PRD are stationary or not. It is instructive to state that, in table 2, the estimated results show that all the variables of importance in this work are not stationary in their original form. Hence, the tendency of arriving at spurious empirical results has been eliminated with the use of these series. Therefore, the Cointegration test is imperative to the achievement of this objective.

Variables	ADF Test				
	Level	Probability	1 st Diff	Probability	Remark
PRD	-2.943427	0.7104	-2.943427	0.0078	l(1)
Log HEE	-2.951125	0.5781	-2.943427	0.0000	l(1)
Log EDE	-2.941145	0.9410	-2.943427	0.0000	l(1)
Log GCF	-2.943427	0.3087	-2.945842	0.0146	l(1)
Variables					
	Level	Probability	1 st Diff	Probability	l(1)
PRD	-2.941145	0.6735	-2.943427	0.6735	l(1)
Log HEE	-2.941145	0.7776	-2.943427	0.0001	l(1)
Log EDE	-2.941145	0.9410	-2.943427	0.0000	l(1)
Log GCF	-2.943427	0.2601	-2.945842	0.0216	l(1)

Table 2: Unit Root Test

Source: Authors' Computation (2021)

Hypothesized Number of CEs	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob**
None*	0.653272	56.30513	47.85613	0.0066
At most 1*	0.307785	18.17345	29.79707	0.5533
At most 2*	0.127738	4.930539	15.49471	0.8162
At most 3*	0.000294	0.010577	3.841466	0.9178

Table 4: Johansen Cointegration Test (Maximum Eigen Statistic)

Hypothesized Number of CEs	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob**
None*	0.653272	38.13168	27.58434	0.0015
At most 1*	0.307785	13.24291	21.13162	0.4301
At most 2*	0.127738	4.919962	14.26460	0.7519
At most 3*	0.000294	0.010577	3.841466	0.9178

Notes: *denotes rejection of the null hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values Non stationarity status of series could cause a short run disequilibrium among the dependent and explanatory variables. However, there is a possibility for this disequilibrium to disappear in the long run if the variables possess a long run convergence. In view of the above, the authors employed Johansen Cointegration test advanced by Johansen (1991) to verify if the explanatory and explained variables have a long run convergence. The estimated results presented in both tables 3 and 4 indicate that both the Trace statistic and the Maximum Eigen Statistic confirmed the presence of 3 cointegrating equations which exist among the relevant variables. Therefore, this corroborates that there is a long run relationship relationship between poverty reduction, human capital development and capital formation in Nigeria.

Null hypothesis	F-statistic	Prob.	Decision	Causality
Log HEE does not Granger Cause Log EDE	3.13458	0.0571	Reject	Unidirectional
Log EDE does not Granger Cause Log HEE	0.95217	0.3966	Accept	
Log GCF does not Granger Cause Log EDE	0.05761	0.9441	Accept	None
Log EDE does not Granger Cause Log GCF	1.23169	0.3057	Accept	
PRD does not Granger Cause Log EDE	0.63891	0.5345	Accept	None
Log EDE does not Granger Cause PRD	0.53212	0.5925	Accept	
Log GCF does not Granger Cause Log HEE	1.12215	0.3384	Accept	None
Log HEE does not Granger Cause Log GCF	14.9006	3.E-05	Accept	
PRD does not Granger Cause Log HEE	0.50932	0.6057	Accept	
Log HEE does not Granger Cause PRD	4.86752	0.0143	Reject	Unidirectional
Log GCF does not Granger Cause PRD	2.71048	0.0423	Reject	Unidirectional
PRD does not Granger Cause Log GCF	0.55109	0.5819	Accept	

Table 5: Pairwise Granger Causality Test between Poverty Reduction and

 Human Capital Development

Source: Authors' Computation (2021)

Having established the cointegrating relationship among the variables, the authors made further efforts to investigate the existence or otherwise of causal relationship between the various relevant variables. Meanwhile, the estimated results of the Granger Causality test were presented in table 5. From the table, it could be deduced that a unidirectional causality exists in only three (3) pairs among all the considered pairs. In an explicit form, there is a unidirectional causal relationship

flowing from government expenditures on health to government expenditures on education. Similarly, one way feedback flows from government expenditure on health and poverty reduction. Also, real gross fixed capital formation Granger causes poverty reduction.

In conclusion, since both government expenditure on health and capital formation Granger caused poverty reduction in Nigeria, this is a vital signal that human capital development in the form of investment in health of human resources is an important condition for the achievement of the sustainable development goal one (1) – poverty eradication in Nigeria.

Table 6: Relationship between Human Capital Development and Poverty Reduction

Dependent Variable: PRD Method: FMOLS

Regressors	Coefficient	T-statistics	Prob. Value
Log HEE	1.347364***	3.754450	0.0007
Log EDE	0.103210	0.103636	0.9181
Log GCF	10.26082***	4.016203	0.0003
R-Squared	0.848403		

Source: Authors' Computation (2021)

***Significant at1%; **significant at 5%; *Significant at 10%

Table 6 reported the estimates of the long run relationship between human capital development and poverty reduction using the Fully Modified Ordinary Least Square technique. Firstly, the result of the R-Squared is 0.85, this implies that human capital variables and other selected macroeconomic variable jointly explained about 85% of the systematic variations in poverty reduction. This justifies the fact that the model employed to run this analysis is relatively good.

Furthermore, government expenditures on health have a direct link with GDP per capita in Nigeria. A unit change in government health expenditures leads to a rise in GDP per capita by 1.3% in the country. This implies that government health expenditures, as a component of human capital development caused a significant poverty reduction in the country. In the same vein, government educational expenditures have a positive relationship with GDP per capita, though the relationship is not significant at 10% level of significance. The reason for this insignificant result might be traced to the past educational budgets in Nigeria that are far below 26 per cent global benchmark. This accounts for non-trickle-down effect of educational expenditure on poverty reduction in the country. Meanwhile, real gross fixed capital formation and GDP per capita have a positive and significant relationship. A unit change in capital formation brings about 10% increment in GDP per capita in Nigeria. The implication of this is that capital formation has a significant impact on poverty reduction in the country. By and large, it is instructive to state that all the selected components of human capital development caused poverty reduction in this study. However, the majority of the components are statistically significant. Hence, this study submits that human capital development led to poverty reduction in Nigeria. This conclusion further reinforced the earlier discoveries of the long run equilibrium relationship and unidirectional causality between human capital development and poverty reduction in this study. The finding in this study is in tandem with conclusions of Chikelu (2016) and Olopade *et al.* (2019) in related studies in Nigeria and twelve (12) OPEC countries respectively. Conversely, the finding contradicts the arguments of Babasanya, Oseni and Awode (2018) and Adekoya (2018) in similar studies in Nigeria.

5. Conclusion

The contributions of human capital development in achieving sustainable development cannot be overemphasized in any economy, this is because investment in education and health has been submitted as the strategic impetus for improving the quality of any country's human resources. Against this backdrop efforts have been made to investigate the impact of human capital development on the sustainable development goal one (1) - poverty reduction. The study utilizes the Nigerian data combining Johansen Cointegration test. Granger causality test and Fully Modified Least Squares to establish how public investment in both education and health affect poverty reduction in the country between 1981 and 2019. It was discovered that the unit root test results from ADF and PP indicates that all the variables are not stationary in their natural form but after first differencing, which means there are integrated of order one. It was also reported that all the variables possess a long-run relationship. Meanwhile, the estimated results of the Granger Causality test confirms that a unidirectional causality exists in only three (3) pairs among all the considered pairs as follows: there is a unidirectional causal relationship flowing from government expenditures on health to government expenditures on education. One way feedback flows from government expenditure on health and poverty reduction. Also, real gross fixed capital formation Granger causes poverty reduction.

Moreover, both government expenditures on health and real gross fixed capital formation have a significant positive relationship with GDP per capita in Nigeria. Whereas, government educational expenditures have a positive but insignificant on GDP per capita in the country

Originating from the findings of this study, it is expedient to know that both government expenditure on health and capital formation Granger caused poverty reduction in Nigeria, this is a vital signal that human capital development in the form of investment in health of human resources is an important condition for the achievement of the sustainable development goal one (1) – poverty eradication in Nigeria. In the same vein, all the selected components of human capital development have positive contributions to poverty reduction in this study. However, the contributions of health expenditures and capital formation are statistically significant. This implies health expenditures and capital formation have a trickle-down effect on poverty reduction in Nigeria. Therefore, this study recommends the following: any time the Nigerian policymakers want to achieve the sustainable development goal one (1) – poverty reduction, the Nigerian budgetary allocations to education and health sectors should be in tandem with the global benchmark this would ensure

material and human resources that drive the country towards sustainable the development. The enhancement of educational and health facilities by the policymakers would also bring about improvement in the living standard of the Nigerians. It is instructive to state that the limitation of this paper lies in the fact it only examined first goal of the sustainable development. Therefore, future researches could explore the contribution of human capital development to other remaining goals.

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