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Nexuses between human capital investment and poverty reduction in Nigeria

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Abstract
This paper examined the nexuses between human capital investment and poverty reduction in Nigeria from 1990-2018**.** Objectively the study, examined both the relationship between government expenditure in education and health on poverty reduction in Nigeria. Secondary data sourced from CBN statistical bulletin and World Bank data base were used for the analysis. The technique of descriptive statistic and Ordinary Least Square (OLS) was used to analyze the data. The empirical result from the descriptive statistics showed that the variables were normally distributed. Also positive standard deviation connotes data consistency. From the OLS result, the R^2 is 82%; meaning that the model is a good fit. Government investment in education is negatively related to poverty rate and statistically significant. Government investment in health is negatively related to poverty rate but not statistically significant. The paper concludes that quality education and good health could be achieved through sufficient financing of human capital, this will in turn reduce poverty in Nigeria. Based on these findings, the study recommended that Nigeria government at all levels should increase their budget to double digits in both the education and health sectors in order to increase the intellectual capacity of the people as well as health status of the citizenry which will in turn lead to increase in production aptitude of the economy.

Keywords: nexuses, human capital, investment, poverty, reduction

1. Introduction

The extraordinary degree of poverty around the universe has been a great concern to both international agencies and various administrations. In absolute term, poverty denotes total or insufficient lack of fundamental desires such as food, housing and medical cares. Relatively, people are said to be poor when their income fall below the average income in a community (World Bank, 2000) [20]. The poor finds it very challenging to afford sufficient food, housing, education and wellbeing which invariably makes them emotionally and psychologically hopeless. Thus, one of the prime aims of the Sustainable Development Goal (SDG) which Nigeria was signatory to is to reduce poverty by 50 percent in the year 2030 (Asaju, 2012; Obayori, Udeorah & Aborh, 2018) [2, 11].

Similarly, in the Sustainable Development Goals (SDGs) and the poverty reduction strategy paper (PRSP) human capital is considered as a device for poverty decrease. In this manner, Nigeria government in her very own Poverty Reduction Strategy Paper (PRSP) laid accentuation on human capital as a device for checking poverty. This is on the grounds that without human capital speculation the targets of poverty alleviation is unattainable in the developing country like Nigeria (Masood, 2011) [9].

Meanwhile, Ejere (2011) [6] averred that Nigeria's poverty circumstance is very disturbing. Both the quantitative and subjective estimations showed the rising predominance and gravity of poverty in the nation. This circumstance in any case, is much unexpected given the huge physical and human capital that the nation is honored. An additionally disturbing truth, is the way that progressive governments have contributed tremendous material and HR to capture poverty circumstance, yet noteworthy improvement have not been recorded toward that path. The Human Development Report (UNDP, 2019) [19]. uncovers that Nigeria is the least fortunate among the poor nations of the world. Nigeria positions 6h concerning the human development index (HDI) - making it housed poverty in the World since 2018.

Over the year, reduction in poverty and unemployment rates are some of the critical challenges facing Nigeria as a nation due to the fact that on the average, dominant part of the populace are living beneath poverty line and this trends has be on the increase over the year. For instance, the magnitude of those in poverty rose from 46percent in 1985 to 67percent in 1996 and by 1999 in excess of 70percent of Nigerians lived in poverty. The rise in poverty level is represented by poor interest in human capital, for example, poor interest in education and health of the populace (Obayori, 2016; Gbosi, 2019) [10, 7].

In the meantime, since Nigeria gained freedom in 1960, progressive governments have taken measures to advance projects that improves human capital investment and poverty reduction in differing ways. Several programmes such as poverty alleviation programme and skill acquisition centre amongst others which were aimed at developing the citizen, thereby reducing the incidence of poverty in the country. But these policies are yet to yield the much needed fruit. Given the above, the paper raised these questions; is there any relationship between the level of poverty and human capital investment? How can human capital investment in both education and health affect poverty reduction in Nigeria? These questions informed the basis of this study.

2. Conceptual Issues in human Capital and Poverty

The idea of human resource and human capital mean something very similar and they will be utilized conversely. Human resource

(HR) incorporate all the experience, aptitudes, judgment, capacities, information, contacts, hazard taking and intelligence of people and connects with an organization (UNDP, 2003) [18]. From the above definitions, HR comprise the work power accessible in a specific country with the essential expertise and abilities to address the issues and desires of a country. Samuelson (1954) [16] noted that the concept of 'Capital' as it relates to humans is investing in people, thereby making them more productive factors of production. He further clarified that when you see a medical graduate, you are in a specific sense looking at chunk of Capital. Thus, the 'Capital estimation of a man 'is the supply of Capital exemplified in individuals. Human Capital is the present estimation of past investment in the abilities of individuals (Ojo, 1997) [12].

In the interim, in simple term, poverty is a condition where people and families can't meet or fulfill the fundamental necessities of life, for example, food, clothing and housing and other essential social amenities and benefits that will make them to carry on with a better than average and satisfied life. Okoh (1998) [14] describes poverty as a condition of hardship regarding both monetary and social indicators, such as income, education, health care, and access to food, social status, and self-esteem. Poverty is an articulated hardship in prosperity, and contains numerous measurements. It incorporates low earnings and inability to procure the essential products and enterprises fundamental for endurance with dignity. It additionally envelops low degrees of wellbeing and education, poor access to clean water, and sanitation, deficient physical security, absence of voice, and opportunity to better one's standard of living (World Bank, 2004) [21].

3. Classical economic theory of human development

Numerous schools of thoughts in economic have since a long time ago acknowledged the idea that individual establishes a huge and significant proportion of the wealth of the country. In this way, the wealth of a country could be estimated by the amount and nature of its manpower. The idea here is that investment in human capital through training is inescapable improves the advancement of a country and the prosperity of the individuals.

The classist, especially, Adam Smith have supported the important of education through human capital improvement in financial advancement. Adam (1776) [1] posited that efforts put into education as venture will yield benefits both to the individual and the general public. He drew a similarity between a man and machine-that an informed man can be compared to a costly machine. Hence, human capital advancement through education is alluring a result of its significant and maintainable advantages to the individual and the general public as a whole. The acquirer utilizes his/her gifts and capacities to change and to upgrade the prosperity of himself as an individual and the general public as a whole through innovative ideas that will increase the productive capacity of the economy.

4. Empirical nexuses between human capital investment and poverty reduction

Empirically, Obayori, Udeorah and Aborh (2018) [11] utilized GMM procedure to look at the effect of human capital investment on decreasing rate of poverty in Nigeria. The empirical results indicated that the components of human capital were negatively and significantly related with poverty level. Chikelu (2016) [5] utilizes co-integration analysis to observe the impact of human capital development on reduction in poverty in the Nigeria between 1986 and 2012. The results showed that a long run relationship exists between the poverty rate, foundation school enrolment, secondary school enrolment, higher school enrolment and per capita income.

Asaju (2012) [2] used hypothetical approach to dissected human capital improvement and the level of poverty in Nigeria. He reasoned that human capital advancement improves economic development and is an adequate catalyst for decreasing poverty in Nigeria.

Gylfason and Zoega (2003) [8] hypothetically examine education, social equality and economic growth. The paper observed that that education are directly related to income equality. It also finds that more and better education appears to encourage economic growth directly through increased social equality.

Self and Grabowski (2004) [17] utilized granger causality test to analyze the effect of education on income development in India. The outcomes showed that essential training has a casual effect on development than the effect for secondary education. Also, it is obvious that female training at all levels has potential for producing monetary development while male casually affect development just at essential level.

Bakare (2006) [3] examined the development ramifications of human capital interest in Nigeria utilizing vector autoregressive instrument. The investigation uncovered that there is a significant connection between the interests in human capital and monetary development in Nigeria. Risikat (2010) [15] utilized ECM to survey investment in education and economic growth in Nigeria. She found that investment in education is below United Nations sanction. Nevertheless, it is found that investment in education contributed directly and significantly to economic growth in Nigeria.

5. Method of Study

The type of data utilised in the study is called secondary data. The data ranges from the period of 1990 to 2018. This data was mainly sourced from the publications of the Central Bank of Nigeria (CBN) statistical bulletin and World Bank data base. The techniques of analysis in this study are divided into qualitative and quantitative techniques. The descriptive statistics takes care of the qualitative technique, the econometrics of method Ordinary Least Square multiple regression analysis takes care of the quantitative technique. These techniques were briefly discussed below;

Descriptive Statistics

The descriptive statistics was used to test the reliability of data via mean, skewness and standard deviation for normal distribution to be achieved. Thus, it is expected that the standard deviation should be within the mean. Also, positive and low standard deviation connotes data consistency.

Ordinary Least Square (OLS) Regression Analysis

This study employed Ordinary Least Square (OLS) regression analysis in exploring the nexuses between the explanatory variables and the dependent variable by providing the regression estimates (constant and slope parameters).

Model Specification

Theoretically, the study was based on classical economic theory of human development, which is functionally stated as Q = f (K) (eq1), where; Q is the rate of growth and K is human capital investment. Conversely, the model was restated in log-linear forms as;

PRT = β_0 + LnHCEt+ LnHCHt+ U_t (eq 2)

Where; PRT is Poverty Rate, HCE is Government investment in education sector (proxy by government budget in the education sector), HCH is Government investment in health (proxy by government budget in the health sector), Ln is Natural Logarithm to base ten, U is Error Term, t is Time, β_1- β_2 is Slope Parameters, β_0 is Intercept Parameter.

On the apriori, it is expected $\beta_1 < 0$ and $\beta_2 < 0$

6. Results and Discussion

Discussion of Descriptive Statistics of the Variables

The descriptive statistics shows the variables mean, median, standard deviation, skewness and kurtosis amongst others.

Table 1: Descriptive Statistics of the Variables

Measurements	PRT	HCE	HCH
Mean	63.47276	110546.1	68154.18
Std. Dev.	8.824230	89536.66	58672.49
Skewness	0.784234	0.345741	0.337331
Jarque-Bera	3.050353	1.582473	1.857710
Probability	0.0217583	0.0453284	0.0395006
Observations	29	29	29

Source: Extracted from e-view 9.0

The descriptive statistics reported in Table 1 indicated that the approximate mean of poverty index (PRT) federal government investment in education (HCE), federal government investment in health (HCH) are 63.47276%, 110546.1million naira and 68154.18 million naira respectively. In response, the standard deviation of poverty index (PRT), federal government investment in education (HCE), federal government investment in health (HCH) are; 8.82%, 89536.7 million naira and 58672.5 million naira respectively. Thus, the standard deviation of all the variables are within their respective mean. The skewness test which measures the slope of the variables showed positive values for all the variables. The probability of Jarque-Bera statistics showed that the null hypothesis of the variables were rejected. Thus, the variables were normally distributed. Thus, the OLS result was estimated to determine the relationship between the dependent and independent variables.

Discussion of Ordinary Least Square (OLS) Multiple Regression Result

This section analyzed and discuss the regression result in line with the stated objectives of the study to validate or invalidate economic theory.

Table 2: Ordinary Least Square Regression Result

Dependent Variable: Poverty Index (PRT)				
Variables	**Coefficients**	**t-statistics**	**t-table**	**Probability**
C	1.638726	0.100882	2.0555	0.9204
Log(HCE)	-17.19336	-2.419323	2.0555	0.0228
Log(HCH)	-12.27361	-1.975650	2.0555	0.0589
R-Squared (R^2)	0.819915	f-statistics	9.410504	Prob(F-statistic)
Durbin Watson (DW)	1.479036	f-table	3.37	(0.000842)

Source: Extracted from e-view 9.0

The results of the estimated model as presented in Table 2 showed that the R-squared (R^2) is 82%, this shows that the model is a good fit. The Durbin Watson (DW) which measures the level of autocorrelation has the value of 1.479 which is not too far from 2.0 bench mark. This therefore suggested that the model does not have the problem of serial autocorrelation. Thus, the estimated model is good for policy recommendations. Also, the f-statistics which measures the overall significance of the independent variables in the model indicated that the two independent variables (federal government investment in education and federal government investment in health) are significant in explaining poverty reduction in Nigeria. This is because the f-statistics value of 9.40 is greater than f-table of 3.37.

Meanwhile, the estimated results in Table 2 showed that the coefficient of investment in education appeared with negative sign and statistically significant at 5% level. Thus, a percentage increase in investment in education will decrease poverty by 17.19%. Moreover, the estimated results showed that investment in education t-statistic; 2.4193 > t-table, 2.0555. This showed that there is a significant relationship between investment in education and poverty reduction in Nigeria during the period of study. Thus, the alternative hypothesis was acknowledged. The finding here conform with the empirical work of Obayori, Udeorah and Aborh (2018) [11]. who averred that there is an indirect relationship between human capital investment in education and poverty level in Nigeria

In addition, the estimated OLS result showed that the coefficient of investment in health has a negative sign with poverty reduction but statistically not significant. This showed that a percentage increase in health expenditure will decrease poverty by 12.27%. Also, the results showed that investment in health t-statistic; 1.9756 < t-table, 2.0555. This shows that there is no significant relationship between investment in health and poverty reduction in Nigeria during the period of study. Thus, the null hypothesis was established. The finding is in line with the scholarship such as Asaju (2012) [2] as well as Obayori, Udeorah and Aboeh, 2018 [11] who asserted that human capital development in health is a contributing factor to poverty reduction in Nigeria.

7. Conclusion and Recommendations

This paper examined the nexuses between human capital investment and poverty reduction in Nigeria from 1990-2018**.** The increasing rate of poverty in the country has been a significant worry to different administration. The concern is aimed at enhancing human wellbeing by reducing the progressive rate of poverty through human capital investment. This is because high poverty level is a characteristic of underdeveloped economy. The study thus identified investment in both education and health as a subset of human capital development that has the propensity to reduce poverty minimally. The implication of the findings is that educated and healthy society vis à-vis suitable funding will helps decrease poverty in Nigeria. Based on these findings, the study paper made the following recommendations; Nigeria government at all levels should increase their budget to double digits in both the education and health sectors in order to increase the intellectual capacity of the people as well as health status of the citizenry which will in turn lead to increase in production aptitude of the economy**.** Also, there should be huge spending in human capital through education/empowerment programmers. These will serve as strategies for overcoming the underdevelopment nature of the country, especially poverty reduction.

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