Impact of Human Capital Development on Poverty Reduction in Nigeria

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Abstract: This study examines the impact of human capital development on poverty reduction in Nigerian economy from the period 1986 to 2012. The Ordinary Least Squares (OLS), Augmented Dickey-Fuller and Johansen Co-integration methods were used to estimate the model of one dependent variable (poverty rate) and four explanatory variables (primary school enrolment, secondary school enrolment, tertiary school enrolment and per capita income). The study revealed that there exists a relationship between human capital development and poverty reduction in Nigeria. Recommendations were also made to help improve the country's human capital.

Keywords: Human capital, Poverty, Development

I. INTRODUCTION

In the face of recent global challenges facing economies of the world, almost all the nations of the world have been prompted to act towards creating and sustaining a competitive and comparative advantage in their dealings with other nations of the world. To this end, it has been supposed that nations that have individuals with higher levels of competence in their areas of specialization, stand a better chance of succeeding. In the end, people have become a priceless asset, and can be recognized within the context of human capital.

The idea of human capital denotes the abilities and skills of human resources of a country, while human capital development refers to the procedure of obtaining and growing the number of persons who have the skills, education and experience that are critical for economic growth and development of a country's economy (Okojie, 1995). Similarly, Ejere (2011) postulated that human capital has to do with the human factor in the process of production; and comprises of the joint knowledge, abilities or proficiencies and aptitudes of the labor force. Human beings alone have the innate ability to learn adapt, innovate and bring creative changes in the production process.

Poverty suggests several practices of social and financial scarcities. Poor people live their lives without the essential liberty of actions and choices that people around them have. Most times, they do cannot afford sufficient food and housing, education and wellbeing which eventually keeps emotionally and mentally unhappy. The poor in our society are most vulnerable to sickness, natural disasters, institutional abuse and capitalist exploitation.

Different government administrations have continuously implemented chains of policies and programmes in an effort to mitigate the impact of the severe poverty which majority of the Nigerian society is facing, but these policies have not yielded the much needed fruit, prompting a move away from the status quo, hence the need for systematic and human approach to poverty, which sees human capital development as the main point of economic development as well as poverty reduction. This new style to poverty reduction got credibility from numerous human development reports published by the United Nation Development Programme (UNDP) since 1990, which present an insightful and all-inclusive study on the

prospects and challenges facing human capital development, inspiring policy discussion and presenting policy recommendations for both global and national actions. At national level, the human development report sees human development strategy as a way to fulfill the potentials of the people by enlarging their capabilities and this necessarily implies the empowerment of people, and enabling them to participate actively in their own development. It is also a means through which the skills, knowledge, productivity and ineffectiveness of people are enhanced.

II. PROBLEM AND OBJECTIVE

The concept of poverty is complex, this is evident in various ways depending on the nature and degree of lack faced by individuals. Absolutely speaking, poverty denotes total or insufficient lack of rudimentary requirements such as food, housing and medical cares. It includes the insufficiency of education, opportunities, consumption goods, environmental health and transportation facilities. Relatively, people are said to be poor when their income fall below the average income in a community (World Bank, 2000).

Nigeria's poverty situation is quite alarming. Both the quantitative and qualitative measurements show the rising prevalence and gravity of poverty in the country. This situation however, is quite ironical given the enormous physical and human resources that the country is blessed. A more disquieting truth, is the fact that successive governments have invested huge material and human resources to arrest the poverty situation, but significant improvement have not been recorded in that direction. The Human Development Report (UNDP, 2003) reveals that Nigeria is one of the poorest among the poor countries of the world. Nigeria ranks 54th with respect to the human poverty index (HPI) - making it the 20th poorest country in the world. It is also ranked 30th in gender related development index (GDI) while occupying 40th position from below in its human development index (HD1), these figures have not significantly improved for the better till date. It is in line with the foregoing, that this study seeks to examine the impact of human capital development on poverty reduction in the Nigerian economy.

III. LITERATURE REVIEW

Selective authors are reviewed here to see what they had to say about the impact of human capital development on poverty reduction in Nigeria.

Gylfason and Zoega (2003), examined the impact of gross secondary school enrolment, public expenditure on education relative to national income and expected years of schooling for girls to the distribution of income as measured by the Gini coefficient as well as to economic growth across countries. The study found that these measures of education are directly related to income equality. It also finds that more and better education appears to encourage economic growth directly as well as indirectly through increased social equality and cohesion. More and better education financed by public expenditure can encourage economic growth and reduce inequality in the distribution of income as well. The study concludes that education encourages economic growth not only by increasing and improving human capital but also physical and social capital.

Ararat (2007) analyses the role and impact of education on economic growth in the two largest economies of the former Soviet Bloc, namely, the Russian Federation and Ukraine. The study attempts to estimate the significance of different educational levels, including secondary and tertiary education, for initiating substantial economic growth that now takes place in the two countries. This study estimates the model of endogenous economic growth and the system of linear and log-linear equations that account for different time lags in the possible impact of higher education on economic growth. The model estimation shows that there is no significant impact of educational attainment on economic growth. The results from

the system of equations indicate that an increase in access of population to higher education brings positive results for the per capita GDP growth in the long term. Increasing the number of college-educated specialists leads to sustainable economic growth.

Self and Grabowski (2004) examined the impact of education on income growth in India by categorizing the education into the primary, secondary, and tertiary to determine whether education, for each category, has a casual impact on growth. Additionally, the education variables are also broken down by gender and analysis is carried out to determine whether the casual results vary by gender. The results indicate that primary education has a strong casual impact on growth than the impact for secondary education. Moreover, it is evident that female education at all levels has potential for generating economic growth while males have a casual impact on growth only at primary level.

Bakare (2006) investigated the growth implications of human capital investment in Nigeria using vector autoregressive error corrections mechanism. The study revealed that there is a significant functional and institutional relationship between the investments in human capital and economic growth in Nigeria. It was revealed that 1% fall in human capital investment led to a 48.1% fall in the rate of growth in gross domestic output between 1970 and 2000.

Babatunde and Adefabi (2005) investigated the long run relationship between education and economic growth in Nigeria between 1970 and 2003 through the application of Johansen cointegration technique and vector error correction methodology. Their findings reveal that the Johansen cointegration result establishes a long run relationship between education and economic growth. A well-educated labour force appears to significantly influence economic growth both as a factor in the production function and through total factor productivity.

Risikat (2010), has provided evidence on the impact of investment in education on economic growth in Nigeria, using the standard growth-accounting model and relying on cointegration and error-correction techniques. The study found that investment in education in Nigeria is quite low and fall below the recommendations of the United Nations. Nevertheless, it is found that investment in education does not only contribute positively to economic growth in Nigeria, but the impact is strong and statistically significant.

Bloom et al. (2004) follows the Solow model with human capital. Although they find that health capital is a significant variable for economic growth under the two-stage least squares method, key variables such as capital and schooling are not significant; therefore, the results are questionable. For Latin America, there is a series of technical research documents of public health developed by the Pan-American Health Organization, which find a strong correlation between economic growth and the regional health, estimating regressions similar to Barro's (1996) where health is much more robust than schooling.

IV. RESEARCH METHODOLOGY

This study effectively captures the impact of human capital development on poverty reduction using the OLS technique, the Augmented Dickey-Fuller for unit root test and Johansen Co-integration test for long run relationship.

The study models Poverty Rate (PR) as a function of Primary School Enrolment (PSE), Secondary School Enrolment (SSE), Tertiary School Enrolment (TSE) and Per Capita Income (PCI). The model is specified below as:

$$PR = B_0 + B_1PSE + B_2SSE + B_3TSE + B_4PCI + \mu_1$$

V. A PRIORI EXPECTATIONS

This shows whether or not the explanatory variables conform to the postulations of economic theory in terms of their signs and magnitudes. According to economic theory, primary, secondary and tertiary school enrolments have a negative relationship with poverty rate, this is also true for per capita income which has a negative relationship with poverty rate as well. If the estimates do not conform to what we have above, then they must be rejected unless there are strong reason that will lead to their acceptance.

VI. DATA AND SOURCE

Secondary time series data from 1986 to 2012 obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin are used in this study.

VII. RESULTS

The result of the unit root test shows that the dependent variable is stationary at order 1 while all the explanatory variables are stationary at order 1 except for per capita income which is stationary at order 2. The Johansen cointegration test shows evidence that there is ample long run relationship between the variables in our model. The estimated result is shown below:

Dependent Variable: PV
Method: Least Squares
Date: 09/18/14 Time: 15:04
Sample: 1986 2012
Included observations: 27
Newey-West HAC Standard Errors & Covariance (lag truncation=2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16.18455	4.568631	3.542538	0.0018
PSE	6.50E-07	1.57E-07	4.143695	0.0004
SSE	9.25E-07	1.09E-06	0.845837	0.4067
TSE	8.06E-06	3.50E-06	2.301889	0.0312
PCI	0.010024	0.001918	5.225872	0.0000

R-squared	0.910586	Mean dependent var	30.89296
Adjusted R-squared	0.894329	S.D. dependent var	23.20947
S.E. of regression	7.544733	Akaike info criterion	7.045153
Sum squared resid	1252.306	Schwarz criterion	7.285122
Log likelihood	-90.10956	Hannan-Quinn criter.	7.116508
F-statistic	56.01146	Durbin-Watson stat	2.443801
Prob(F-statistic)	0.000000		

The R2 shows that the mix of regressors –Primary School Enrolment (PSE), Secondary School Enrolment (SSE), Tertiary School Enrolment (TSE) and Per Capita Income (PCI) in our model, explain approximately 91.06% of the variation in the dependent variable. It therefore goes without saying that other determinants of human capital development not captured in the model explain just 8.94% of the variation in human capital development in Nigeria. The F-statistic of 56.01146 shows the overall significance of the model. Individually, the variables of our model are significant except for secondary school enrolment, this is made evident by the T-test carried out on the variables. The Durbin-Watson of 2.443801shows the absence of negative autocorrelation.

From the estimated regression result above, it can be seen that none of the variables conformed to their respective a priori expectations they all have positive signs as opposed to negative expected signs. But

this does not mean that our variables of choice do not explain the relationship between human capital development and poverty very well, a fact that will be proved in subsequent sections as we shall later. The deviation is caused by some structural rigidity in the economy, for instance not all children that enroll into the primary school complete their programmes to make it to secondary school. Most of them drop mid-way maybe as a result of their parents or guardians' inability to finance their education. Even those of them that make it to secondary schools quit school after Senior School Certificate Examinations (SSCE), others don't even register for this exam, as a result of the high costs involved, which arises due to special examination centers where students are helped to pass their exams. From the forgoing we can see why the expected signs for our primary school enrolment (PSE) and secondary school enrolment (SSE) do not conform to the obtained signs. In addition, students who make it to the tertiary institutions come out after their years in the higher institutions to stay at home for a very longtime, because of lack of employment. When people cannot get jobs after school, it leads to a low per capita income, which does not improve the poverty situation. Therefore, all these are some of the structural rigidities in the Nigerian economy, which may make our variables of choice appear insignificant in the explanation of the dependent variable.

VII. Conclusion

The need for developing human capital in the Nigerian economy cannot be overemphasized due to the significant role it plays in every economy of the world. Given the findings of the study, the following recommendations were reached.

Governments should increase budgetary allocation to education sector and establish numerous skills acquisition centers across the federation due to the multiplier effects they have on the economy, it is pertinent to note that it is not enough to just increase budgetary allocations and establish these skills centers, there should also be proper control mechanisms set up to make sure that they achieve the expected results.

It is common knowledge that most times the authorities are unable to evaluate human capital development projects, provide professional guide to educational planners, coordinate professionally matters relating to employment and attract and retain competent staff. These factors continue to limit the benefits that will accrue to the Nigerian economy, therefore, the authorities should help in checking these flaws.

Since poverty is used as a proxy for economic growth and development in the country, the policy implication suggests that the variables discussed in this research are very strong index of human capital development in Nigeria and hence more allocation to these sectors are the virtue of developing human capital and tends to reduce poverty in the country. Therefore, the study adopted the alternative hypothesis and concludes that human capital development has significant impact on poverty reduction in Nigeria.

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