

## **Human Capital Development As Sources Of Economic Growth In Nigeria: An Empirical Review**

Enoma Ojo

---

### **ABSTRACT**

This study examined the contribution of expenditure on education and health as a transformative force on economic growth in Nigeria, spanning a period of 28 years, from 1991 to 2018. To achieve the specific objectives of the study, the OLS was used as the estimation technique, to estimate the impact of government expenditure on education and health on economic growth in Nigeria. From our empirical findings, in the short-run, there is a significant relationship between expenditure on education and health, and life expectancy on economic growth. The long-run analysis reveals that human capital development has negatively affected growth. The findings of these results shows the years of poor budgetary allocation to education and health, and the role of government in human capital development is vital for economic growth. A large proportion of government yearly budgetary allocation for health and education should be targeted at raising the literacy rate and health status of the citizens. It is recommended that government should have the political will to ensure policies and programs for improving the education and health infrastructure are carried out.

**KEYWORDS:** Economic growth; Expenditure on Education and health; Life expectancy.

---

Date of Submission: 20-11-2020

Date of Acceptance: 06-12-2020

---

### **I. INTRODUCTION**

Since independence, Nigeria has been grappling with the consequences of low human capital, with a huge population and one of the fastest-growing economies in the world, she has experienced low levels of skills and institutional development. Most resource-rich developing countries lack the necessary expertise to build the required human capital for productivity growth. Harbison (1973) indicates that human capital formation is the process of acquiring and increasing the number of persons who have the needed skills, education and experience which are critical for the economic and political development of the country.

Human capital is associated with investing in man to improve his creative and productive capacity. Human capital development, on the other hand, is a developmental paradigm, which focuses on the methods of developing a setting where people can live their full potentials and lead productive and useful lives, following their needs and interest. Okojie (2005) is of the position that human capital refers to the abilities and skills of human resources of a country, while human capital development is the process of acquiring and increasing the number of persons who have the skills, education and experiences that are critical for economic growth and development of a country's economy. It will be observed that the varying differences in the development trajectory of the advanced and the developing countries, is the huge reserve of quality human capital and not so much on the abundant reserve of natural resources and stock of physical capital in the developing countries. Dauda (2010) agreed that human resources are a critical variable in the growth process and worthy of development. Natural resources are necessary ingredients for growth, but quality human capital is the required driver for economic growth and development.

Nigeria's socio-political and economic objective has been to be self reliant and sufficient, maintain peace and progress and sustainable development. However, with the low dearth of quality human capital, there is the urgent need to prioritize human capital development. No country can effectively develop without skilled human resources to drive that growth. Human beings are the most important element in the production function and as the source of productivity and economic growth. Machines and technology and all other productive requirements are all a function of the human capabilities and the success of any productive venture. Productivity growth is the rate of outputs divided by the rate of growth of factor inputs, and increasing returns to scale is one possible source of productivity growth (Diewert, 2004). Productivity measures output per unit of input, such as labour, capital and other productive resources. This can also be calculated for the economy as a whole, as the ratio of GDP per hours worked. Productivity growth can be further sub-divided into labour growth, wage rate, and most importantly innovation and technology improvement. Output per worker, therefore, increase by the amount of capital available to each worker, the education and experience of the workforce, the quality of healthcare and improvement in technology.

## II. CONCEPTUAL AND THEORETICAL ISSUES

In the Solow Growth model, human capital was an important variable in the modified Cobb-Douglas production function:

$$Y = K^{\delta} (AH)^{1-\delta} \quad \text{where } H = e^{\omega t} L \quad (1.1)$$

Where:

$\mu$  = amount of investment in time  $t$

$\omega$  = returns to education.

Per person out from equation (1.1) is:

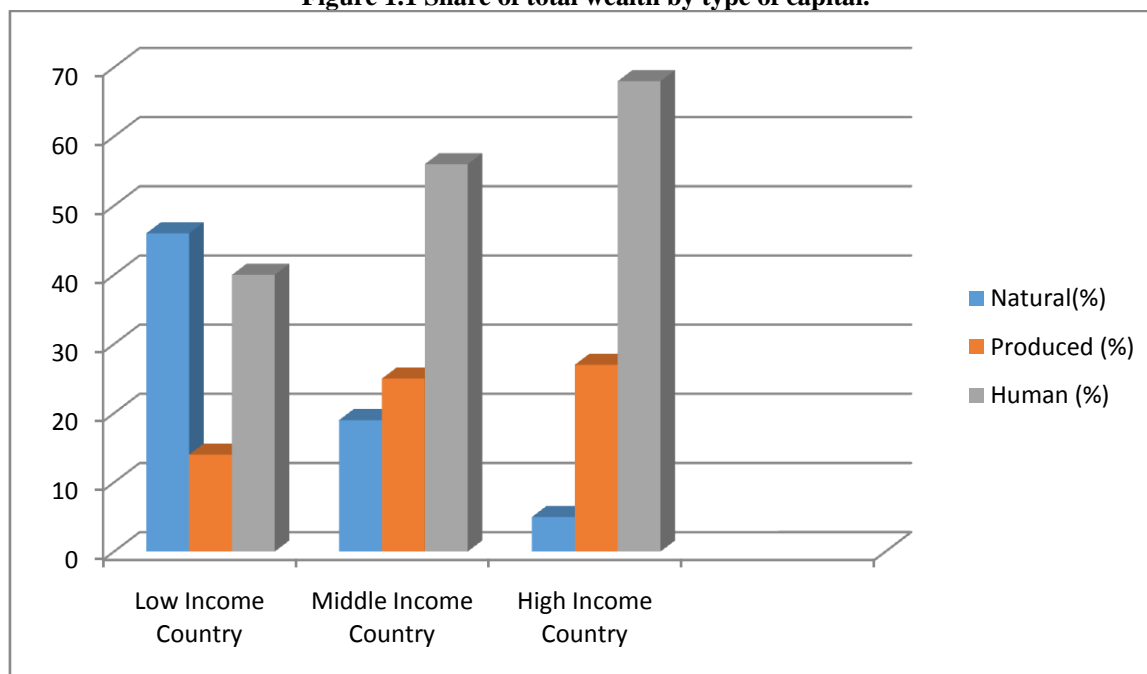
$$y = k^{\delta} (Ah)^{1-\delta} \quad (1.2)$$

Therefore the balanced growth path (BGP), where output per worker, capital per worker and consumption per worker grows at constant rates is:

$$\text{BGP} = y^*(t) = \left( \frac{s}{n+g+d} \right)^{1/(1-\delta)} hA(t) \quad (1.3)$$

Equation (1.3) represents growth in capital stock at constant rate. At this constant rate, there is full employment, high level of investment and overall growth in the productive capacity in the economy. In this equation, countries can have different relative incomes if they have different human capital or education levels. The higher the growth rates of human capital the higher the income growth rate. Human capital is now the biggest driver of wealth. Two thirds of global wealth is human capital ( World Bank, 2017). Investing in people leads to greater wealth and faster economic growth. However, in low income developing countries, only 41% of wealth is human capital. In Nigeria, there is a low level of investment in human capital and the resulting outcomes include, poor education and health outcomes negate the possibility of a sustained growth and poverty reduction. Studies have shown that between 10% and 30% of the differences in per capita income between countries can be attributed to human capital

Figure 1.1 Share of total wealth by type of capital.



Source: Author's reproduction: Wodon and Carey (2018) The Changing Wealth of Nations.

Figure 1.1 shows the contribution of human capital to the total wealth between the low, middle and high income countries. From the analysis, human capital contributes a larger percentage 68% to the total wealth of the high income countries. Human capital contributes 40% of the total wealth of low income countries.

Human capital theory is based on the assumption that a formal education or learning is the basis for improving the productive capacity of a population. Theorists of human capital have argued that when a population is educated, the population is productive. In this context, education raises the productivity of workers and the provision of formal education is seen as an investment in human capital and seen as much more important in the production process as physical capital (Woodhall and Psacharopolous, 1997). On the other

hand, human development is seen as the expansion of human abilities and capabilities and the ultimate strategy is to invest in the development of people through the provision of quality education, skills, innovation and creativity. Human capital must be trained, developed and provided with quality education within a collective system with the sole aim of raising productivity through the creativity and expertise of its workforce (Zidan, 2001).

**Table 1.1: Human Capital Index for Male and Female for Ten Low-Medium-Income, Upper-Medium and High-Income Countries.**

Country	Income Group	Probability of Survival to Age 5	Expected Years of School	Learning-Adjusted Years of Schooling	Adult Survival rate	Human Capital Index
Algeria	UMI	0.98	11.4	6.8	0.91	0.52
China	UMI	0.99	13.2	9.7	0.92	0.67
Egypt	LMI	0.98	11.1	6.3	0.85	0.49
India	LMI	0.98	10.2	5.8	0.83	0.44
Netherlands	HI	1.00	13.8	11.7	0.94	0.80
New Zealand	HI	0.99	13.6	11.3	0.94	0.77
Nigeria	LMI	0.90	8.2	4.3	0.65	0.34
South Africa	UMI	0.96	9.3	5.1	0.68	0.41
Spain	HI	1.00	13.1	10.8	0.94	0.74
USA	HI	0.99	13.3	11.1	0.90	0.76

Source: Author's Extract from World Bank Data Catalog 2018.

Table 1.1 shows the data for each country's level for each of the identified components of the human capital index. The human capital index measures the amount of human capital a child born today can expect to attain by age 18, given the expected risk of poor health and education. Curiously, we observed that countries in the lower-middle-income group have a lower human capital index, while countries in the high-income group have a higher human capital index. Nigeria had a human capital index of 0.34, according to the World Bank 2018 ranking, she was ranked 152 out of 157 countries. Human capital is perceived to be a necessary ingredient for the productivity growth of a country. So the more investment in education, training, and health of the people, the more the economic and productivity growth.

Education is the most powerful transformative force we have to build the world of tomorrow. It is the very essence of achieving sustainable economic development. Education raises people's productivity, innovation, and creativity and promotes technological advancement. Ozturk (2001) education in every sense is one of the fundamental factors of development. The importance of knowledge and learning has been with us since the beginning of time. Investment in education has a higher payoff in the economic growth and development of a country. Akbari (2016) stated that education enriches people's understanding of themselves and the world. It improves the quality of their lives and leads to broad social benefits to individuals and society. It also plays a very crucial role in securing social and economic progress, reducing poverty and inequality. Education directly impacts economic growth in so far as it directly affects human capital. Human capital is a function of the quality of education and health and the driver of economic growth in developing economies. Education is the key factor that improves the level of skills required in productivity improvement. However, there are differing views about the measurement of skills and education by the length of time spent in school. Arguments abound that these measurements is indeed flawed because the quality of education and the level of skills obtained differs widely between countries and regions of the world. In fact skill gap has been identified as the major factor identified in contradictory levels of economic growth between countries with similar levels of schooling.

Health is a foundational investment in a country's human capital. Is there a possibility that a child will live to see her fifth birthday and be ready to attend school? Will she grow to adulthood and be able to contribute productively to the society she lives? All these questions depends on the quality and the robustness of health and nutrition, at every stage in her life. The Sustainable Development Goal 3 is to ensure healthy lives and promoting well-being at all ages so as to achieve a better and more sustainable future for all by 2030. Better health is the cornerstone to human well-being and happiness. It is also a major driver in economic growth and progress. A healthy population is a productive population, a productive population raises the living standard of the people and boost overall well-being. Nordhaus (2002) noted that it is not extensively known that conservative measures of national income and output rule out the value of progress in the health status of the population.

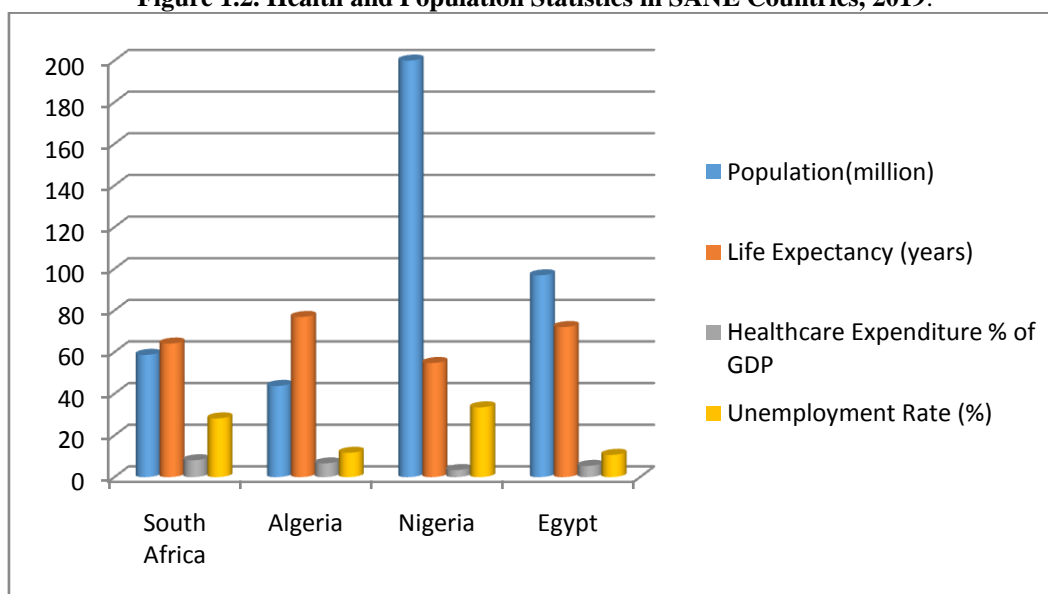
“Health is wealth”, as the saying goes, and good health means not only the absence of diseases in the body, but a complete physical, mental and spiritual well-being of an individual. In general, good health promotes good physical, mental and social health. The benefits of good health cannot be overemphasized. Health is an investment with a long-lasting implication for a good return and this is evident to the fact that people with challenging health issues often die young. A healthy population also contributes towards a healthy economy and contribute toward a better living standard.

**Table 1.2. Health and Population Statistics in South Africa, Algeria, Nigeria and Egypt, 2019.**

COUNTRY	POPULATION (Million)	LIFE EXPECTANCY AT BIRTH (Yrs)	HEALTH CARE EXPENDITURE % OF GDP	UNEMPLOYMENT RATE (%)
SOUTH AFRICA	58.7	64.12	8.1	28.2
ALGERIA	43.8	76.95	6.6	11.7
NIGERIA	200	54.81	3.4	33.5
EGYPT	96.98	72.06	5.4	10.7

Source: Author’s Compilation from World Bank, UNDP, 2019

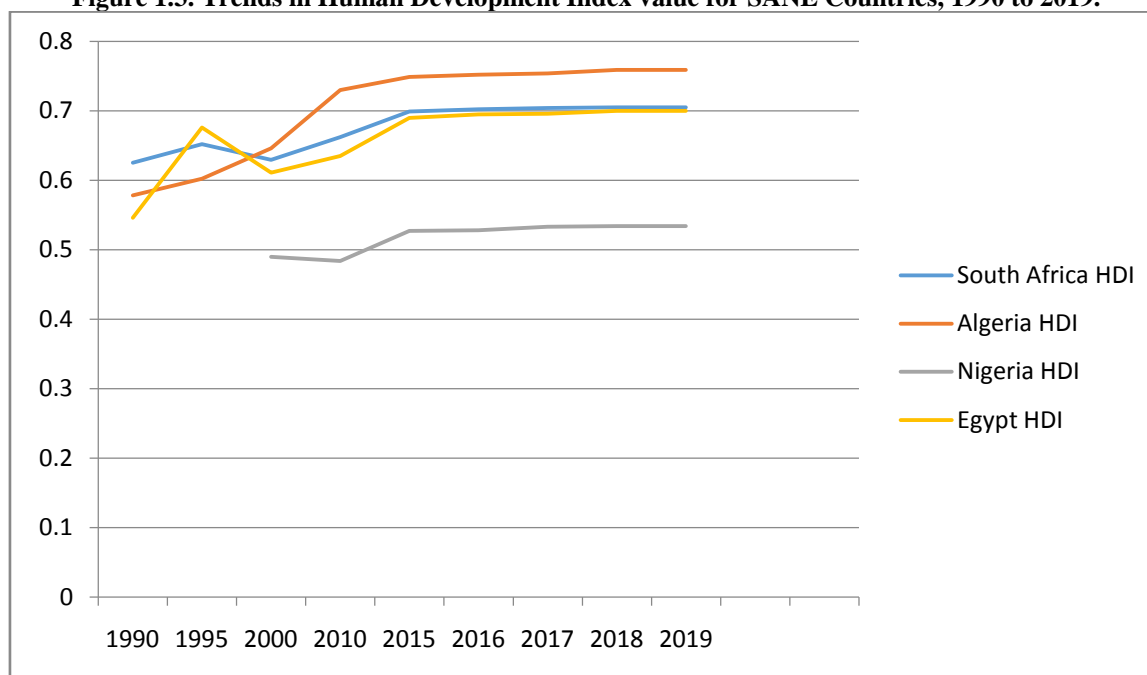
**Figure 1.2. Health and Population Statistics in SANE Countries, 2019.**



Source: Author’s representation from table 1.2

Table 1.2 and Figure 1.2, depicts the statistics of population, healthcare expenditure and as percentage of GDP and unemployment in South Africa, Algeria, Nigeria and Egypt. South Africa has the third largest population with the highest healthcare expenditure as percentage of GDP. Algeria with a population of 43.8 million spends 6.6% of its GDP on healthcare and the life expectancy at birth is the highest amongst the SANE countries. Nigeria with the highest population in Africa, and ranks seventh highest in the world, according to the 2019 estimates by the World Bank, spends 3.4% of its GDP on healthcare and the life expectancy is the lowest amongst the SANE countries. A cursory observation will show that there is a relationship between higher expenditure on healthcare and higher life expectancy. Sghari and Hammami (2016) however, observed that it is unclear to what extent a high health care spending has a causal link with increased life expectancy.

**Figure 1.3. Trends in Human Development Index value for SANE Countries, 1990 to 2019.**



**Source:** Human Development Index Report, 1995 – 2019, UNDP.

The role of healthcare in human capital formation cannot be overemphasized. A healthy individual can make himself available for work with his full potential. A healthy person can work to his full potential in an effective manner and can be productive so as to contribute to national economic growth and development. An unhealthy man becomes a liability to his country if not productive. In context, the development of human capital is also a function of the provision of quality healthcare system. Good health raise the efficiency level of a worker and helps him to contribute his full potential, it also increases the on-the-job learning capacity of the worker and health is a necessary condition for realizing an individual's well being. Bodgan (2016) identified health as an important form of human capital and the study of the link between health and economic growth is an important source of macroeconomic policy formulation.

### III. EMPIRICAL REVIEW

Education and health are the fundamental determinants of human capital. Human capital is a source of productivity growth in Nigeria. Increased productivity per worker raises output and economic growth. Human capital is a necessary condition for the improvement in the living standards, reduction in poverty levels, inequality and the level of economic growth and development. Human capital formation and development in Nigeria is challenged by inadequate funding, non-availability of adequate statistics, lack of political will in implementing various research results, defective educational structure that excludes vocational and skill-acquisition trainings, and brain-drain. Ifejika (2017) summarized the challenges of human capital development in Nigeria as certain inadequacies in the health and educational sectors such as the lack of adequate funding, corruption and lack of the needed infrastructure and “brain-drain”. According to Oyewole and Adegoke (2018) human capital development is one of the fundamental solutions to the numerous challenges of economic growth and development in Africa.

Sulaiman et al (2015) investigated the impact of human capital and technology growth on economic output in Nigeria between 1975 and 2010. Using the applied autoregressive distributed lag approach to examining the link between human capital and technological growth and output, showed that human capital has a positive impact on economic output in Nigeria. This shows the importance of human capital on growth and development in Nigeria. Omojimito (2010) summarized the link between education and economic growth in Nigeria, with the Granger Causality Analysis, and showed that there is a cointegration between government expenditure on education and economic growth and recommended increased funding for the sector. This shows the importance of education in human capital development and economic growth. According to Onisanwa (2014) health indicators have a long run impact on growth and its impact on human capital is a long-run consequence. Using the Johansen Cointegration and Granger Causality technique analyzing a quarterly time series between 1995 and 2009, GDP is positively impacted by the state of the health sector. Thus a high level of economic growth can be achieved through the improvement in the health status of the population workforce.

Health and other sources of human and physical capital raise productivity per worker and consequently increase the GDP per capita. Arthur (2015) examined the link between health expenditure, the outcomes of health activities and growth in the economy in 40 sub-Saharan African countries between 1995 and 2011, and testing for causal relationships among these factors, using the Panel Vector Autoregressive, posited that the findings indicate that health expenditure has a significant impact on health outcomes in these countries and these were as a result of the influence of the private health expenditure. Increased government spending on health activities can significantly increase the level of human capital with private participation. Omotor (2009) sort to analyze the determinants of government health expenditure between the period 1970 to 2003, using the error-correction model, and the study revealed that governments in a democracy spend more on health in Nigeria and the implication of the findings is that expenditure on health is heavily subsidized, which is a reflection of the poverty state of the country. Fasoranti (2015) in his econometric analysis of the determinants of health expenditures in Nigeria between 1970 and 2012, using the OLS, Augmented Dick-Fuller unit root test and the Johansen cointegration test, established a long-run relationship between government health expenditure and all the variables such as literacy rate and consumer price index were significant factors in government expenditures.

Productivity growth measures increased efficiency and harnesses the ability to generate economic output. Productivity growth refers to increased output for any level of input. Achieving higher productivity is the main aim of any business and the economy at large. Higher productivity reduces the cost of production and utilizes resources efficiently. Investment in human capital drives productivity growth. Stiroh (2005) in trying to determine the factors responsible for productivity growth, identified investment, which is the purchase of human capital and research development efforts, as the critical factor for productivity growth. According to Korkmaz and Korkmaz (2017) Improvements in productivity and technological innovation enables countries to produce at lower comparative cost and the increase in factor products will raise output. These factor products are higher in the developed countries than the developing. Using the panel data analysis for seven OECD countries between 2008 and 2014, they observed that there was a unidirectional causality relationship from growth in economic output to labour productivity.

#### **IV. THEORETICAL FRAMEWORK, METHODOLOGY AND MODEL SPECIFICATION.**

This study seeks to establish the short-run, long-run and causal relationship between human capital development and economic growth in Nigeria between 1981 and 2019. The OLS will be used to test the relationship between human capital development and economic growth, the Johansen Co-integration test will be used to test for a long-run relationship, the Error Correction Model (ECM) will be used to test for stationarity of variables and the Granger-Causality test will be used for causal relationship amongst the variables.

This study will focus on the extended Solow model. A major advantage of this model is that it provides a method to decompose capital into different components without violating any of its assumptions. Also, the model is amenable to time series data. We will define the framework with the Cobb-Douglas production function expressed as: output ( $Y$ ) is a function of capital stock ( $K$ ) and labour ( $L$ ):

$$Y = f(K, L), \quad f' > 0, f'' < 0 \quad (4.1)$$

$Y$  in equation (1) strictly represents agricultural output and its determining factors are limited to labour (employee) and capital (primitive tools or machines).

In the extended version of Solow, equation (3.1) can be augmented to include productivity:

$$Y_t = A_t f(K_t, L_t) \quad (4.2)$$

Where  $Y_t$ ,  $K_t$ ,  $L_t$  and  $A_t$  are agricultural output, physical capital stock, labour force and productivity respectively in year  $t$ . Exponential form of equation (3.2) is given as:

$$Y = AK^\alpha L^{1-\alpha}, \quad 0 < \alpha < 1 \quad (4.3)$$

Where  $A$  measures state of technology dividing both sides of equation (3.3) by  $L$ , gives  $Y/L = y$ , and  $K/L = k$ ; this gives the following equation:

$$y = Ak^\alpha \quad (4.4)$$

Where  $y$  denotes output-labour ratio and  $k$  denotes capital-labour ratio. Equation (3.4) represents Solow growth model with population growth and hence, labour force growth. Assuming output increases with capital, capital accumulation can be given as:

$${}_g k = sY - (N + \delta)k, \quad 0 < s, \delta < 1 \quad (4.5)$$

$s$  is the propensity to save,  $N > 0$  and the rate of exogenous population growth,  $\delta$  denotes the rate of depreciation of physical capital. It illustrates increment in capital in a period, holding labour constant, is determined by saving portion of national income  $Y$ , minus depreciation of capital and the proportion of population growth in a particular period. The idea portends in equation (4.1) to (4.5) relative to agriculture is that labour and capital are the underline factors in agricultural development and qualitative type of the two inputs are obtainable through saving (out of national income) over time. Policy instruments can be added into the model by augmenting equation (4.4). It then becomes:

$$Y = ZG^\rho k^{1-\rho} \quad (4.6)$$

Where  $\rho$  represents proportion of policy inputs, that is, monetary, fiscal and trade policies and  $1 - \rho$ , proportion of private capital inputs.  $k$  in equation (4.6) is the privately provided embodied capital broader than capital-labour ratio in equation (4.4).

Taking the log-linear form of equation (4.6), yields equation (4.7) below:

$$Y = Z + \rho \log G + 1 - \rho(\log k) \quad (4.7)$$

Assuming  $Y$  implies agricultural sectors and  $G$  &  $k$  in equation (3.7) represents macroeconomic variables, equation (4.7) can be augmented to a linear equation for the purpose of estimation of variables specified in the study.

$$Y_t = f(EDN_t, LIFE_t, HCE_t) \quad (4.8)$$

Where:

$Y_t$  = Economic Growth

$EDN_t$  = Education Expenditure as % of GDP

$LIFE_t$  = Life Expectancy rate.

$HCE_t$  = Health Care Expenditure

The long run form can be written as follow:

$$\ln Y_t = \alpha_0 + \alpha_1 \ln EDN_t + \alpha_2 \ln LIFE_t + \alpha_3 \ln HCE_t + \mu_t \quad (4.9)$$

$\mu_t$  = Error term

All variables are expressed in logarithm form.

The short run error correction model is specified in equation (4.9) below:

$$\Delta \ln Y_t = \beta_0 x + \sum \beta_1 \ln \Delta EDN_t + \sum \beta_2 \Delta \ln LIFE_t + \sum \beta_3 \Delta \ln HCE_t + \mu_t \quad (4.10)$$

Where:

ECT = Error term

$\Delta$  = Difference operator

$x$  = set of deterministic variables like the constant term and trend.  $\delta_0$  = vector of coefficients of deterministic variables  $\Delta$  = first-difference operator.  $r$  = optimal lag length;  $\mu_t$  = the residual term.

## V. SUMMARY AND CONCLUSION

The findings obtained from our study are reflective of how the human capital development affects economic growth in Nigeria. Human capital development is associated with investment in human development so as to improve his creative and productive capacity. The result which shows that education expenditure in the long run has negatively affected growth is reflective of years of poor budgetary allocation to the education sector which has for so many years been below the 26% target by UNESCO.

Our empirical findings, in the short-run, we observed a significant relationship between expenditure on education and health, and life expectancy on economic growth. The long-run analysis, however, reveals that human capital development has negatively affected growth and this is as a result of many years of poor government funding of the educational and health sector.

The expenditure on education improves the quality and hence raises the level of human capital development. No country can grow without a healthy population. A healthy population is a function of the level of government participation in the health sector through increase in funding and budgetary allocation.

Human capital development is vital for economic growth, a large proportion of the yearly budgetary allocation should be targeted at these sectors. This way the literacy rate is raised, health status of the population is improved.

It is recommended that government should have the political will to ensure policies and programs for improving the education and health infrastructure are carried out, and from the result, in the course of this study, the government should play a more positive role in the education and health sector by way of allocating more funds. Secondly, the government should collaborate with the private sector by providing the enabling environment for active participation of the private sector to provide more educational and health infrastructure. Thirdly, the government should also ensure a stable macroeconomic framework to attracting foreign investment in the health and education sector.

Overall, a healthy and literate population is a wealthy population. Health and education are two vital factors necessary for raising the level of human capital development and ultimately drives economic growth..

#### REFERENCES.

- [1]. Ben U. Omojimite (2010). Education and Economic Growth in Nigeria: A Granger Causality Analysis. *African Research Review*. ISSN 2070-0083. Vol.4 (3a) July,2010
- [2]. Chindo Sulaiman, Umar Bala, Bulama Abiso Tijani, Salisu Ibrahim Waziri and Ibrahim Kabiru Maji (2015). Human Capital, Technology, and Economic Growth: Evidence from Nigeria. *International Journal of Social Sciences and Management Research* Vol. 4 No. 1 2018 ISSN: 2545-5303
- [3]. Claudia Canals (2016). Education and Economic Growth. *CaixaBank Research Newsletter*. Labour Market and Demographics. May 19<sup>th</sup>.
- [4]. Danielle German and Carl A. Latkin (2012). Social Stability and Health: Exploring Multidimensional Social Disadvantage. *Journal of Urban Health*. 89(1) 19-35
- [5]. Douglason Omotor (2009). Determinants of Federal Government Health Expenditures in Nigeria. *International Journal of Economic Perspectives*. Volume 3, Issue 1, 5-18.
- [6]. Erwin Diewert (2004). Theories of Productivity Growth and the Role of Government in Facilitating Productivity Growth. *New Zealand Treasury Workshop*. Wellington New Zealand. July 28-29, 2004.
- [7]. Frederick H.Harbrison (1973). Human Resources a the Wealth of Nations (Economic Development series) *Oxford University Press*.ISBN-13: 978-0195016116
- [8]. Idowu Daniel Onisanwa (2014). The Impact of Health on Economic Growth in Nigeria. *Journal of Economics and Sustainable Development*. www.iiste.org ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online) Vol.5, No.19, 2014
- [9]. Ilhan Ozturk (2008). The Role of Education in Economic Development: A Theoretical Perspective. SSRN <https://ssrn.com/abstract=1137541>
- [10]. Kevin J.Stiroh (2005). What Drives Productivity Growth?. *Economic Policy Review*, Vol. 7, No. 1, March 2001
- [11]. M.M. Fazoranti (2015). An Econometric Analysis of the Determinants of Government Health Expenditures in Nigeria. *Journal of Empirical Economics*. Vol.4, No.4, 2015. 193-206.
- [12]. Miniar Ben Ammar Sghari and Pr. Sami Hammami (2016). The Relationship between Life Expectancy and Health Spending. *International Journal of Development and Economic Sustainability*. Vol.4, No.6, pp.45-53
- [13]. Mohammad Zahir Akbari ( 2016). Role of Education in Economic Development. *Daily Outlook Afghanistan*. September 2016
- [14]. Okojie, C.E.E.( 2012). "Human Capital Formation for Productivity Growth in Nigeria". *Nigeria Economic and Financial Review*, June pp.44-5
- [15]. Oyewole, T.G and Adegoke, J.A (2018). Human Capital Development in Nigeria: Implications for Nation Building. *International Journal of Social Sciences and Management Research* Vol. 4 No. 1 2018 ISSN: 2545-5303.
- [16]. Psacharopoulos, G. & Woodhall, M. (1997). *Education for Development: An Analysis of Investment Choice*. New York: Oxford University Press.
- [17]. ROS Dauda (2010). Role of Human Capital in Economic Development: An Empirical Study of Nigeria case. *International Research Journal of Finance and Economics*. 55(10), 158-169
- [18]. Solomon Ifeanyi Chukwu Ifejika ( 2017). The Challenges of Human Capital Development in Nigeria: A Theoretical Insight. *Silpakorn University Journal of Social Sciences, Humanities, and Arts* Vol.17(2): 41-74, 2017.
- [19]. Suna korkmaz and Oya Korkmaz (2017). The Relationship between Labour Productivity and Economic Growth in OECD Countries. *International Journal of Economics and Finance* 9(5):71
- [20]. Tatiana Bogdan (2016). "The role of health on economic growth," *Theoretical and Applied Economics, Asociatia Generala a Economistilor din Romania - AGER*, vol. 0 (Special I), pages 29-34.



- [21]. Wodon and Carey (2018) The Changing Wealth of Nations. “*The Changing Wealth of Nations 2018: Building a Sustainable Future*”, released in January 2018,
- [22]. William D. Nordhaus (2002). The Health of Nations: The Contribution of Improved Health to Living Standards. *National Bureau of Economic Research*. NBER Working Paper No. 8818.
- [23]. Zidan, S.S. (2001). The role of HRD in economic development. *Human Resources Development Quarterly*, 12(4), 437.

Enoma Ojo. “Human Capital Development As Sources Of Economic Growth In Nigeria: An Empirical Review.” *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 25(12), 2020, pp. 15-23.