

Human Capital Development: Efficacy Of Education For Sustainable Growth And Development

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Abstract

Labour and entrepreneur are generally described as human capital and recognized as factors of production required for productive activities to take place. To this end, this study investigated how human capital development promotes sustainable growth and national development in developing countries in Africa using Nigeria as focus. The study clarified the basic terms – human capital, growth and national development and provided an analytical review on human capital development status in Africa. The new endogenous growth theory and empirical evidence from selected literature in Africa (Nigeria inclusive) provided support to conclude that investment in education through training, research and skill development, is a driver of growth and sustainable development. Following the theoretical and empirical exposition, it was concluded that investment in education for increased access to education quality is a necessity for the attainment of national prosperity (development) in Africa. The researcher recommended that the government should provide basic social amenities like electricity, good road network and portable water in other to reduce the private cost of education on their citizens.

Keywords: Human Capital, Education, Growth, National Development, School

INTRODUCTION

Human capital is of great importance in any field of endeavour; be it business, ministry, industry or a commission. It is one of the factors of production that is crucial in the development in any given society. Human capital refers to the acquired and useful abilities of all the inhabitants or members of the society. It has been recognized globally as one major factor that is responsible for the ‘wealth of nation’ [1]. The definition of a nation’s wealth has widened to accommodate not only physical capital but also human capital as an independent factor of production for sustainable development. In recognition of this relationship, developing nations have in varying degrees, attempted to stimulate the accumulation of human capital through public education expenditure as well as government spending on health and related social services [2].

A submission that there are conventional approaches or standards to measure human capital stock was made by [3]. These standards are categorized into three parts: output, cost, and income-based approach. School enrollment rates, scholastic attainments, adult literacy, and average years of schooling are the examples of output-based approach; cost-based approach is calculating costs paid for obtaining knowledge; and income-based approach is closely

linked to each individual's benefits obtained by education and training investment. However, human capital development is commonly measured using a composite index called the human development index (HDI). This index constitute health, knowledge, and standard living components using life expectancy at birth, expected years of schooling and quality of life as proxy respectively [4].

The macroeconomic objective of most nations - developing and less developed countries in Africa remains how to achieve accelerated growth and reduce poverty. [5] suggested that accelerated growth and poverty reduction can be attained by focusing on investment in human capital which should be seen in the light of how the economy is managed and wealth is distributed for the benefit of the people. Also, the United Nation (UN) recommended that at least 26% of the annual government budget should be allocated to education sector in order to enhance human capital development [6, 1].

It is expected that this paper would provide the national government and international bodies such as UNDP and UNESCO with relevant information on human capital development in Africa to enable them make further investment plans in the education sector of member nations. Hence, this study is confirmatory

as it explores human capital and national development nexus from a theoretical perspective using Nigeria and other African countries as evidences. To accomplish this, the objectives of this paper are to: a) clarify some basic concepts – human capital development, education, growth; b) review from theoretical and empirical perspective, the relationship between human capital development and national development; c) examine the role of education in human capital development.

Basic Concepts

The concept of human capital refers to the abilities and skills of human resources of a country [8]. [9]posited that human capital refers to the human factor in the production process; and consists of the combined knowledge, skills or competencies and abilities of the workforce. On the other hand, human capital development is any effort to provide education which will increase human knowledge, enhance skills, productivity and stimulate resourcefulness of individuals [8, 9].

Thus, human capital development is all about investing in human resource through training, coaching, internship and human capital management with a view to increasing human knowledge, enhance skills through education, training and experience for increased productivity.

The term national growth and development can be viewed from two different perspectives. Some view it as the total increase in the level of individuals' income within the country. [11] posits that national development is conventionally measured by the level of education and commensurate employment opportunity provided. In Economics, [12] posits that national growth typically refers to the growth of potential output, that is, production at full employment. [13] views it as an increase in the amount of goods and services produced per head of the population over a period of time. This shows that it is all about increase in market value of the goods and services produced by an economy over time which is conventionally measured by the percentage rate of increase in real gross domestic product (GDP).

National development on the other hand, comprises sustained, concerted actions of communities and policy makers that improve the people's standard of living and economic health of every individual in the country at large. [13] defines it as an increase in living conditions, improvement of the citizens' self-esteem needs and a free and just society. One can deduce from the foregoing that national growth is much more of quantitative because it looks at rate of change in growth over time while national development considers the quality of changes in terms of human and non-human infrastructure.

Overview of Human Capital Development in Africa

Annually, particularly since 1990, the United Nations Development Program (UNDP) publishes the world human development report to assess the living conditions and wellbeing of citizens in the different countries of the world. This report, tagged the human development index (HDI) as having three dimensional components namely: (1) living a long and healthy life (measured by life expectancy); (2) level of education or state of being educated (measured by adult literacy and gross enrollment in education); and, (3) having a decent standard of living (measured by purchasing power parity (PPP) income) [14]. Although these three aspects of human development measurement, embedded in the HDI, excluded important indicators, such as gender or income inequality, human rights, and political freedom, they provide a broadened prism for viewing human progress and the complex relationship between income and well-being [15].

Nigeria is dismally ranked 151 among the 177 countries rated in the 2004 Human Development Report while South Africa was ranked 119 and Ghana, 131 [15]. A basic interpretation of this is that, Nigeria is only better off than 26 countries in the measurable human development indices (HDI) and by implication in the quality of life of citizens. The major indices considered in the ranking include: economic performance (Gross Domestic Product (GDP), Gross National Product (GNP), and per capita income), life expectancy, literacy rates, water, nutrition and sanitation status, health risks and technology diffusion and use [5].

In 2016 and 2017, the United Nations Development Programmes (UNDP) report in its 2016 and 2017 report placed Nigeria in the 152nd position of 188 countries in the low Human Development Category. By the UNDP ranking, Nigeria could not even come or appear in the medium Human Development category in which some developing countries such as Ghana, Morocco, Sao'tome and Congo among others featured. More disheartening is the fact that Nigeria's HDI ranking in the UNDP (2017) report specifically placed Nigeria below Zambia positioned at 139th position, Gabon, 109 and even Equatorial Guinea at 135th position. At present, Nigeria is ranked in the category of medium human development countries in the four category classification in the UN Human Development Report, namely: (1) Very high human development (ranked 1-38); (2) High human development (ranked 39-83); (3) Medium human development (ranked 84-158); and (4) Low human development (ranked 159-182). Indeed, even among the countries classified as medium human development countries, Nigeria is at the bottom, that is 158th position.

The United Nations Educational Scientific and Cultural Organization in year 2016 recommended that 26 percent of the total expenditure be devoted to education. They noted that Seychelles had committed 10.2 percent of its gross national product (GNP) to total education in 1985-87 and 8 percent in 1995-97. Ghana allocates an average of 20 percent of its total expenditure to education yearly. Between 1986 and 1992, Botswana spent 21 percent of her expenditure on education; Malaysia, 19 percent; Kenya, 20 percent; Uganda, 15 percent; and Nigeria, 5.23 percent [5].

Using GDP per capita to assess the state of the human beings in the selected countries shows that Nigeria is in the 9th position and 141 in the global ranking, just little above Ghana. Her GDP per capita in 2007 was 1,969 dollars, which was far below that of Egypt, which stood at 5,349 dollars and occupied the 8th position in the selected countries and 103rd position in the world. Countries like Angola, Gabon, and Seychelles, all African nations, not in the race of becoming one of the 20 largest economics in the next 10 years, are far ahead of Nigeria. Apart from Angola and Egypt, the other countries, are at least 10 times higher than Nigeria in this respect. What this indicates is that the standard of living in the country is very low. Since these countries are also developing, this has a low standard of living as a characteristic. It is important to note that Nigeria's target of achieving 4,000 US dollar GDP per capita income by 2020 is still very low, even among the selected developing economies [1].

Analyzing the health conditions measured in term of life expectancy at birth, among the selected countries, revealed that Nigerians at birth are expected to live for an average of 47 years and Angolans, 46 years. This means Nigeria is slightly above Angola in this regarded. South Africa, Ghana, and Gabon are in the range of 50-60 years, while Barbados, Malaysia, and South Korea are in the range of 70-80 years[5]. The significance of this analysis is that it has shown, very clearly, that the healthcare delivery system in Nigeria is about the worst in the world.

Theoretical/Empirical Evidence

Endogenous growth or the new growth theory emerged in the 1980s, particularly due to the works of Paul Romer and his associates in response to the postulations of the exogenous theorists. New growth theorists linked the technological change to the production of knowledge [16, 17, 18]. The new growth theory emphasizes that economic growth results from increasing returns to the use of knowledge rather than labour and capital.

In the work of [16] titled "increasing returns and long run growth" broadened the concept of capital to include human capital. He argues that the law of

diminishing returns to scale phenomenon may not be true as is the case for the East Asian economies. The theory holds that if a firm or an economy which invests in capital (physical) also employs educated and skilled workers who are also healthy, then not only will the labor be productive, but it will also be able to use capital and technology more effectively. This will lead to a "neutral" shift in the production function and, therefore, there can be increasing rather than decreasing returns to investments. This means that technology and human capital are both endogenous to the system [19].

The basic assumption of the endogenous growth theory is that policy measures can have an impact on the long-run growth rate of an economy. It argues that investment (subsidies) on education or research and development increase the growth rate by increasing the incentive to innovate. For instance, [17] identified two sources of economic growth to include human capital accumulation due to education investments and technological progress due to learning-by-doing externalities [19]. In other words, education and learning-by-doing improve the knowledge and skills of labor in the production sector.

The endogenous theorists also assume that research and development (R&D) is the key to the growth and development of an economy or a firm. Research and development generate new ideas or new technologies that are not common in the society. Whenever there is technological change in a given productive process, those with education or greater skills are faster in adopting the new technology [18]. In addition, the theorists assert that training of the human resources of the society is central to growth and development.

Several studies in Nigeria and other African countries have been carried out to examine the relevance or importance of human capital development in the achievement of economic growth. [20]explored the relative impact of human capital formation on economic growth in Nigeria from 1981 to 2014 using time series data of thirty four (34) years. The empirical analysis showed that a long run dynamic relationship exists between human capital formation (educational and health policy development) and economic growth in Nigeria.

An investigated was carried out by [21] on Human capital, social capabilities and economic growth in 132 countries covering Sub-Sahara Africa (SSA), Europe and Asia from 1996 to 2011. The empirical results revealed that human capital plays a positive role in per capita GDP growth only in the presence of better economic opportunities and high-quality legal institutions.[22]examined the effect of government human capital investment on the economic growth of three Sub-Sahara African (SSA) countries of Nigeria,

South Africa and Ghana from 1980 to 2013. The results indicated that two out of the three human capital proxy variables: Health (GIH) and Education (GIE) showed significant positive effect on growth only in Nigeria, while literacy ratio (LR) is insignificantly positive in all countries.

A study on the relationship between human capital development and economic growth in Morocco [23]. The economic model used was estimated using annual data from 1973 – 2011 (38 years of data). The analysis showed that high level of human capital development in Morocco is the key to the nation's socio-economic development and also the greatest catalyst for the improvement of the standard of living of the Moroccan population. [1]investigated the relationship between human capital (through education and effective health care services) and economic growth in Nigeria, using annual time series data from 1980 to 2012. The result showed that considering the magnitude, 1% increase in Gross Domestic Product (GDP) is brought about by 22% increase in human capital. This postulates that an increase in allocation to education and health will lead to increase in GDP. The findings had a strong implication on educational and health policy in Nigeria.

An examination of the impact of human capital development on economic growth in Nigeria was considered by [24]. It was concluded that human capital development, educational development through government expenditure on education and health development through government expenditure on health, all have positive relationship with economic growth. [25] carried out an empirical investigation on the relationship between investment in education, health and economic growth in Nigeria, using time series data from 1982 to 2011. Empirical findings however indicated that there is a long-run relationship between government expenditure on education, health and economic growth. The variables: health and education expenditure, secondary and tertiary enrolment rate and gross fixed capital formation appear with the expected positive signs and are statistically significant (except government expenditure on education and primary enrolment rate). The findings of this work showed strong implications on education policies and considering that it is of great debate in the country.

In Ethiopia, [26] investigated the long run and short run impact of human capital on economic growth using real GDP per capita, as a proxy for economic growth. The study was conducted over the period 1975-2011. The finding of the bounds test shows that there is a stable long run relationship between real GDP per capita, education human capital, health human capital, labor force, gross capital formation, government expenditure and official development

assistance. The estimated long run model reveals that human capital in the form of health (proxied by the ratio of public expenditure on health to real GDP) is the main contributor to real GDP per capita rise followed by education human capital (proxied by secondary school enrolment). Such findings are consistent with the endogenous growth theories which argue that an improvement in human capital (skilled and healthy workers) improves productivity.

Role of Education in Human Capital Development

Identification of nine (9) indicators and sub-indicators for measuring Human Capital Development (HCD) as follows [5]: a) population trend indicators – such as urban population, total fertility i.e birth per woman; b) health outcome indicators – such as physicians per 10,000 people; c) education achievement indicators such as gross enrollment ratio into preprimary, primary, secondary, tertiary; d) national income and composition of resources indicators such as domestic food price level; e) work and employment indicators – such as labour force participation, f) human security indicators such as depth of food deficit (kilocalorie per person per day); g) international integration indicators such as number of internet users and mobile phone subscription; h) Supplementary or perception of well-being indicators) such as perception of individuals on their well-being, confidence in the judicial system, trust in national government; and i) status of fundamental human right treaties covers a nation's membership, year of ratification and commitment to international human right treaties such as: CRC (Convention on the Rights of the Child, 1989), CAT (Convention Against Torture and other Cruel, Inhuman or Degrading Treatment or Punishment) among others [5].

It was also submitted that the aforementioned indicators directly or indirectly measure a nation's development of human capital using the output, cost or income-based approaches. However, education achievement, health outcomes and work-employment indicators among others are most often debated by economists and government because for human capital to play active role in the growth of economies, education, health, and other work related services must be raised to increase productivity of the labour force [13]. This explains that health and education among others are two closely related human capital components that work together to make the citizens more productive. Taking one component as more important than the other is unrealistic as a more educated individual, who is ill, is as inefficient as an illiterate, but healthy individual

It was asserted that education is one of the components of human capital that are contributors to human welfare [4]. He added that these components is different from other types of goods produced in

societies because the production of other durable and consumer goods only depends on the education or training of labour in the society (holding health momentarily constant). This is the reason education is made compulsory for certain minimum length of time. Moreso, in some developing countries in Africa such as Nigeria, Benin Republic, Sudan, Togo, Ghana, Gabon, South Africa; educational policies are often reviewed to meet the needs and aspirations of citizens. This is the case with Nigeria with the change of the 6-3-3-4 education system to the Universal Basic Education (UBE) of 9-3-4 system in 1999.

Recognition by [27] that basic education under the Universal Basic Education (UBE) programme shall be free, compulsory, universal, qualitative, and comprise of: 3-years of kindergarten; 6years of primary; and 3 years of junior Secondary Education. The education is to be provided by the government in order to : provide the child with basic knowledge and skills for entrepreneurship, wealth and educational advancement; develop patriotic young people equipped to contribute to social development and in the performance of their civic responsibilities; inculcate values and raise morally upright individuals capable of independent thinking, and who appreciate the dignity of labour; inspire national consciousness and harmonious co-existence, irrespective of differences in endowment; religion, ethnic and socio-economic background; and provide opportunities for the child to develop manipulative skill that will enable the function effectively in the society within the limits of the UBE programme is aimed at developing human capital for the promotion of human skills in the appreciation of dignity of labour.

In human capital development, education is essential because it is concerned with the cultivation of the whole person including intellectual, character and psychomotor development. [28] defined education as an 'instrument par excellence' for effecting national changes and economic development through the development of human resources. This shows that development of human resource or capital is a must for any that wishes to survive under the complex challenges of a dynamic world. Consequently, the concept of human capital has shifted the focus of economic development theorists to generally agree that the quality of human capital has a significant impact on economic development and growth [29]. This body of thinking is one of the options that the quality and quantity of labour determines the quality of product and services in a given economy by virtue of its labour being a major factor of production.

Moreover, improving the quality of the labour force yields implicit, non-economic outputs related to the generation of ideas and decisions which have a significantly positive impact on investment, innovation and other growth opportunities [7]. The

United Nation (UN) recommended that at least 26% of the annual government budget should be allocated to education sector in order to enhance human capital development. However, the human capital development indices in most African countries including Rwanda, Zimbabwe and Nigeria do not reflect that an enormous amount of national budget and public fund is expended yearly on education and health [6, 1, 7].

Developing countries such as Ghana and Kenya spend up to 20 – 25% of their total budget on education, and their literacy rates are quite appreciable. The Human Development Index (HDI) for developing countries such as Nigeria and Rwanda are among the low human development with indices below 0.4[6]. Over the years, the recurrent expenditure on the Nigerian education sector is more than the capital expenditure. It is time for the government to realize that with the growing rate of population increase, more investment should be, not on the recurrent expenditure alone, but to increase the capital expenditure for the provision of more educational facilities, building of more schools and universities in other to avoid overcrowding the available schools and educational facilities. The recurrent expenditure is not enough to go round for what it is meant. The facilities are not well maintained; staff poorly motivated, poor physical infrastructure, and all these leads to decline in literacy rate.

Submission that Nigeria still struggles with allotting 10-14% of her RGDP towards educational services and investment [22]. On the global front, [30] pointed that Norway tops the table as the number one country in HDI. Closely followed is Switzerland at the second position while Australia, Germany and Denmark take the third, fourth and fifth position respectively. One notable thing the developing countries in Africa can learn from these global front economies is the quality of investment in human infrastructure made by their national government. Hence, increase in government's investment in the education sector for sustainable growth attainment is eminent.

CONCLUSIONS

Understanding that Human Development Index (HDI) is a composite index measuring average achievement in three basic dimensions of human development - long and healthy life, knowledge and standard of living only. Following the theoretical and empirical exposition, it is pertinent to emphasize that any investment in human capital development such as increasing access to education, health and social welfare among others; is an necessity for the attainment of national prosperity (development) in Africa.

RECOMMENDATIONS

The following recommendations are made for policy implementation:

- a) The government should provide basic social amenities like electricity, good road network and portable water in order to reduce the private cost of education on their citizens.

To increase human development index (HDI) in developing countries in Africa, the federal government of Nigeria should endeavour to allocate twenty six percent (26%) of the nation's gross domestic product (GDP) to development of the education sector in adherence to the recommended of the United Nations Educational Scientific and Cultural Organization (UNESCO).

REFERENCES

- [1] Oladeji, A.O. Impact of human capital development of economic growth in Nigeria. *International Journal of Recent Research in Commerce Economics and Management (IJRRCEM)*, 2(2), 151-164.(2015).
- [2] Adawo, M. A. Has education (human capital) contributed to the economic growth of Nigeria? *Journal of Economics and International Finance*. 3(1): 46-58.(2011).
- [3] Gallardo, G. The human development index as an effort to measure well-being in Honduras. *The 3rd OECD World Forum on "Statistics, Knowledge and Policy. Charting Progress, Building Visions, Improving Life.*(2009).
- [4] Kairo, C. I., Mang N. J., Okeke, A. &Aondo, D. C. Government expenditure and human capital development in Nigeria: an auto-regressive distributed lagged model approach (ARDL). *International Journal of Advanced Studies in Economics and Public Sector Management*, 5 (1), 143-158.(2017).
- [5] United Nations Development Programme (2016). *Development for everyone*. Washington DC: Communications Development Incorporated.
- [6] Oriakhi, D. E. &Ameh, G. Government expenditure and the development of the education sector in Nigeria: an evaluation, Department of Public Administration NnamdiAzikiwe University, Awka, Nigeria and Zainab Arabian Research Society for Multidisciplinary Issues Dubai, UAE.(2014). www.arabianjbm.com/RPAM_index.php
- [7] Odo, S.I. Eze, O. R. &Onyeisi, S.O. Analysis of the relationship between human capital development and economic growth in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 4(3), 56-71.(2006).
- [8] Okojie. N. The paradox of education and economic growth in Nigeria: An empirical evidence. Selected Papers for the 2001 Annual Conference. Nigerian Economic Society (NES), Ibadan.(2001).
- [9] Ejere, S.I. Human capital development as catalyst for national development: Nigeria in perspective. *International Business and Management*, 2(2), 98-104.(2011).
- [10] Farah, K. Education, foreign direct investment and socio-economic development-A review. *Abasyn Journal of Social Sciences* 7(2): 269-273.(2008).
- [11] Coechy, R. Y. Towards enhanced human capital development in developing countries for the 21st century. *International Journal of Current Research*, 2(3), 114-217. (2011).
- [12] Erinoso, S. R. The mechanics of economic development. *Journal of Monetary Economics*, 83(3): 66-90.(2010).
- [13] Todaro, M. F. Economic growth and development. Retrieved May 24th, 2020 (2013). from <http://www.whatisconomics.org/economic-development>.
- [14] United Nation Economic Commission for Africa. Africa's Human Resources Agenda for the 1990s and beyond. Report of the Fourth Meeting of the ECA Conference of Ministers Responsible for Human Resources Planning, Development and Utilization.(1991).
- [15] Oisaozoje, I. A. &Opusunju, M. I. Impact of human capital development on economic growth in Nigeria. *International Journal of Business and Management Invention*, 5(3): 62-68. (2016).
- [16] Romer, P. Increasing returns and long run growth. *The Journal of Political Economy*, 94, 1002-1037.(1986).
- [17] Lucas, R. On the mechanism of economic development. *Journal of Monetary Economics*, 21, 3-42.(1988).
- [18] Aghion, P., &Howitt, P. A model of growth through creative destruction. *Econometrica*, 60(2), 323-351.(1992).
- [19] Monimah, H. D. (2010). The centrality of human capital development to the attainment of Nigeria's Vision 2020 development programme. *Journal of Sustainable Development in Africa*, 12(5): 139-155.
- [20] Ogunniyi, M. B. Human capital formation and economic growth in Nigeria: A time bound testing approach (1981-2014). *African Educational Research Journal*. 6(2): 80-87.(2018).
- [21] Ali, M., Egbetokun, A. &Memon, M. H. Human capital, social capabilities and economic growth. *Economics*. 6(2):1-18. (2018).
- [22] Obialor, M. C. Effect of government human capital investment on economic growth in sub-saharan Africa: Evidence from Nigeria, South Africa and Ghana. *International Journal of Asian Social Science*. 7(4), 328-339(2017).

- [23] Hadir, A. & Lahrech, A. Human capital development and economic growth in Morocco. *International Journal of Education and Human Developments*, 1(1): 49-73.(2015).
- [24] Oloyede, B. M. Impact of human capital development on economic growth in Nigeria. A project submitted to the Department Of Economics and Business Studies, Samuel Adeboyege University, Ogwa, Edo State. (2015). Retrieved 9th December 2019. <https://www.sau.edu.ng/materials/impact%20of%20human%20capital%20development%20on%20economic%20growth%20in%20nigeria.pdf4>
- [25] Jaiyeoba, S. V. Human capital investment and economic growth in Nigeria. *An International Multidisciplinary Journal, Ethiopia*, 9(1), 30-46.(2015).
- [26] Gebrehiwot, G. The long run and short run impact of human capital on economic growth in Ethiopia. *Journal of Humanities and Social Science*. 21(3): 01-07.(2014).
- [27] Federal Republic of Nigeria. *National Policy on Education (6th Edition)*. Abuja: Nigeria. NERDC Press.(2013).
- [28] Federal Republic of Nigeria. *National Policy on Education (4th Edition)*. Lagos: NERDC Press.(2004).
- [29] Torruam, J .T. & Abur, C. C. Public expenditure on human capital development as a strategy for economic growth in Nigeria: Application of co integration and causality test analysis. *International Journal of Research in Humanities and Social Studies (IJRHSS)*, 1(2), 14-23.(2014).
- [30] Oyinlola O.M & Adeyemi A.Z. An empirical analysis of human capital development and organizational performance in banking sector: A Nigerian Experience. *International Journal of Economics, Commerce and Management*, 2(7), 123-136.(2014).