CHALLENGES OF HUMAN CAPITAL FORMATION IN NIGERIA: A DISCRIPTIVE ANALYSIS

[1]ONOGBOSELE, DONATUS.O. (Ph.D) and [2]ADENUGA, OLUDARE SOLOMON

[1]Department of Economics, Kogi State University, Anyigba.
donogbosele@gmail.com
[2]Zenith Bank of Nigeria Plc, KSU-Anyigba Branch.
talktodami3@gmail.com, talktodami@yahoo.com

Abstract

This paper examines the trends and challenges of human capital formation process in Nigeria from 1981 to 2016. In achieving these objectives, the paper adopts a descriptive statistical method such as ratios, percentages, standard deviation, skewness, kurtosis analysis among others. Our results show that the funding of the education and health sectors fell far short of the 15% and 26% of annual budget for education and health sectors recommended for developing countries by the Abuja 2001 declaration, and UNESCO respectively. For example, in the case of education sector in Nigeria, it has been mostly less than 8% and less than 5% of annual budget allocated to the health sector in our review period. Thus the poor funding (especially the capital expenditure funding of both sectors) has resulted in brain drain, medical tourism as well as education tourism, further blighting the human capital formation process in Nigeria. This results in huge foreign exchange loss where about $1billion dollar (N400b) are lost annually to medical tourism, and about N1trillion is also lost to education tourism in Nigeria. This work found that a lot of challenges such as abysmal funding and curtailing the huge exodus of education and other health experts to other countries were basically responsible for poor human capital formation in Nigeria. Some recommendations including proper funding, and policy streamlines where proffered to encourage innovation and motivation in other to sanitize the two sectors to enhance economic growth and human capital utilization in Nigeria.

Keywords: Human Capital, Education Tourism, Medical Tourism, Brain Drain

1. INTRODUCTION

Hitherto, the concept of human development was not given the needed international attention until the economic crisis that preceded the 1990s brought to the fore the publication of the first Human Development Reports by the United Nation's Development Programme in 1990. However, the importance of human capital in the growth process of developing countries has always been recognized by policy makers as a major factor used in converting all resources for the benefit and use of mankind (Habison,1973).

Beyond all of that, is a realization of the fact that the greatest assets of a nation which can actually stand scrutiny of economic development history are not necessarily crude oil, gold, diamonds, uranium and the likes, but the depth of human capital a country can draw from her quest for development. The skills, knowledge, and innovation that people accumulate are the greatest assets of economies on the rise. Recent evidence shows that human capital explains up to two thirds of income differences across the world. This is profoundly important for Africa today (Hansen, Matiang'i, & Ziob, 2017).

Human capital formation and usage has enhanced economic growth across the world, hence, some scholars have emphasized the importance of human capital on economic growth (Abramovitz, 1981; Romer, 1986; Lucas, 1988; & Adelakun, 2011). Human has actually been described as an end or objective of development. According to Otu and Adenuga (2006), it is a way to fulfill the potentials of people by enlarging their capabilities, and this necessarily implies empowerment of people, enabling them to participate actively in their own development. The late Prime Minister of Singapore Lew Kuan Yew once stated that *trained talent is the yeast that transforms a society and makes it rise*.

Bannock, Baxter & Rees (1985) describe human capital as the skills, capabilities and abilities possessed by an individual which permits him to earn income. They regard income a person derives from supplying personal services as the return on the human capital he possesses. On the other hand, Black (2003) sees human capital as the present discounted value of the additional productivity, over and above the product of unskilled labour, of people with skills and qualifications. In enhancing human capital formation, two areas are very important among others viz; Education and Health sectors (Thirlwall, 1999). The federal government has often realized the role they play in enhancing economic growth in Nigeria; hence the allowance accorded them (health and education) in the concurrent list among items in the nation's

constitution (Nigeria's Constitution, 1999). Despite these efforts, human capital development and usage in Nigeria is still very abysmal.

Every year, Nigerians are inundated with rituals of budget speech by the president and various states governors outlining their development plans for the fiscal year as it relates to their areas of operations. However, though money seems to be earmarked to enhance human capital formation, it often falls short of world standards (for education, UNESCO recommended 26% of total budget while for health, WHO recommended 15% of GDP). The emphasis on education through knowledge acquisition, training and information system stems from the fact that they have become increasingly critical to growth, as scientific and engineering findings proliferate and take on ever greater importance in production of goods and services. As information grows exponentially, and its incorporation in production process becomes increasingly complex, the ability to acquire, and adapt new knowledge will be an important determinant of economic growth (World Bank, 1997). Despite all the purported amount spent by Nigeria and all of Africa in the expansion of schools' enrollment leading to rapid accumulation of human capital, and the absence of a growth response to this educational miracle, pointed Pinchett (1997) to ask *where has all the education gone?*

In addition to the above, it is pertinent to include the fact that human capital formation can also be enhanced in the form of Health. Health is central to well-being of an individual and enhances his productivity. This can be manifested through good health, excellent sanitation or improvement in environmental conditions, promoting the development of comprehensive health services, prevention and controlling communicable diseases as well as developing health manpower among others (Thirlwall, 1999). These two keys areas are the fulcrums of our work in discussing human capital formation review giving the conclusion from Schultz (1961) that identified five areas of human resources development which are:

i. Investment in health facilities and services, broadly conceived to include all expenditures that affect life expectancy, strength and stamina and the vigour and vitality of the people.

ii. On-the-job training, including old-typed apprenticeships organized by firms.

iii. Formally organized education at the elementary, secondary and higher levels.

iv. Study programmes for adults that are organized by firms including extension programmes notably in farms and

v. Migration of individuals and families to adjust to changing job opportunities.

In the 2004 Human Development Index Report which relies on indices of economic performance indicators such as GDP, GNP, and per capita income, life expectancy, literacy, water, nutrition and sanitation status, health risks, and technology diffusion and use, ranked Nigeria 151 among 177 countries rated. However, countries like Malaysia, Thailand, Tunisia, South Africa, and Ghana were rated 59, 76, 92, 119, and 131 respectively (Aluko, 2015). Based on this abysmal performance of human capital formation and usage in Nigeria, this study tries to analyze the trend in funding the two key sectors of education and health in Nigeria with a view to understanding and unraveling the reasons for this poor performance.

1.1 Objectives of the Study

The main objective of this study is to ascertain the process and usage of human capital formation in Nigeria; and the specific objectives are to:

i. Analyze the trends in Federal Government funding of the two key areas or sectors critical to human capital formation in Nigeria viz; education and health;

ii. Highlight some of the challenges facing human capital formation process and usage in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual Literature

Basically, human development is enhanced through the process of human capital formation and usage. Bammock, et al. (1985) describe human capital as the skills, natural capabilities and abilities possessed by an individual which permits him to earn income. They regard income a person derives from supplying personal services as the return on the human capital he possesses. On the other hand, Black (2003) sees human capital as the present discounted value of the additional productivity over and above the product of unskilled labour of people with skills and qualifications. Essentially, any activity according to McConnel, Bruce & Macpherscn (2010) that increases the quality (productivity) of labour may be considered an investment in

human capital. Human capital is therefore associated with investment in man and his creative productive resource.

There are two sides to human development enhanced through human capital formation. The first is the formation of human capabilities, which includes health, knowledge, skills and general wellbeing. The second is the use of which people put their acquired capabilities. This implies investment in people for productive purposes that contribute to growth and employment, for active participation in cultural, political and social affairs (Arimah, 2001).

The concept (human capital) refers to activities and skills of the human resources of the country while human capital for a nation refers to the process of acquiring and increasing the number of persons who have the skills, education and experience which are critical for the economic and political development of the country.

Theoretical Literature

The human capital theory as explained by Adelakun (2011) is one that shows how education leads to increase in productivity and efficiency of workers by increasing the level of their cognitive skills. He further stated that Theodore, Schultz, Gory, Bucker and Jacob Mincer introduced the notion that people invest in education so as to increase their stock of human capabilities which can be formed by combining innate abilities with investment in human beings (Babalola, 2010). Examples of such investment include expenditure on education, on-the-job training, health and nutrition-these have been recurring in the literature. The provision of education is seen as a productive investment in human capital which is considered to be equally or even more worthwhile than that of physical capital.

However, in the theoretical literature, Romer (1986) and Lucas (1988) have in recent times past pioneered the human capital growth framework in their endogenous growth theories. They were of the view that in the long-run, output per unit of input could increase even when input has been accounted for. Technically, advanced human capital and a growing knowledge base were important contributors of this growth. The endogenous growth model as pioneered by Robert Lucas and Paul Romer assumed that there are positive externalities associated with human capital formation (for example, education and training) and research and development that prevent the marginal product of capital from falling and the capital-output ratio from rising. We have a production function in capital of:

$Y=AK^{á}$ ---------- (1)

Where á =1. Indeed, it can be seen from the expression of the capital-output ratio. i.e.

$$\frac{K}{Y} = \frac{K}{L} \cdot \frac{L}{Y} \text{---------- (2)}$$

that anything that raises the productivity of labour $(\frac{Y}{L})$ in the same proportion as $(\frac{K}{L})$ will keep the capital-output ratio constant. Learning by doing and embodied technical progress in the spirit of Arrow and Kaldor as well as technological spill overs from trade are additional possibilities to education and research and development (Thirwall, 1999).

In summary, the endogenous growth model discards;

i. The diminishing marginal returns to capital investment.

ii. Permits increasing returns to scale in aggregate production.

iii. Focus on externalities in determining the rate of returns on capital investment

iv. Focus on private and public investment in human capital.

The conclusion is that the high rate of returns on investment offered by the developing countries with low capital-output ratio are greatly eroded by lower levels of complementary investment in human capital (education), infrastructure or research and development (R and D).

The endogenous growth models view human capital as an input to the production function and predict that the growth rate is positively related to the stock of education. The accumulation of human capital involves a sacrifice of current utility in the form of less current consumption, in the case of education, or a less desirable mix of current consumption goods when on-the-job training is considered.

2.3 Empirical Literature Review

Human resources constitute the ultimate basis for the wealth of nations, capital and natural resources are passive factors of production. Human beings are the active agents who accumulate capital, exploit natural resources, build social, economic and political organizations, and carry forward national development. Clearly a country which is unable to develop the skills and knowledge of its people and to utilize them effectively in the natural economy will be unable to develop anything else (Habison, 1973). Ngustav (2005) citing Ojo et al. (1997) opined that of all the contributing

factors to economic development, human resources stand out as the major factor that determines the manner in which all other factors should be combined and the spur of the developmental process.

The human element in economic development is such that it must be highly skilled, must have ability to search, discover, and mobilize the result for the development of a nation's natural resources (Okoh, 2002).

According to Iheriohanma & Ukachukwu (2014) globalization and its impact on production, has caused many unprepared nations unawares especially for developing nations like Nigeria. The authors citing ICT-G22 (2005) opined that Nigeria isthus left in the catch-up mode in a very significant and critical human existence and development equation-acquisition of fixed capital equipment without the relevant technologically skilled human capital succeeds only in withering the Nigerian economy and deepening the underdevelopment and poverty situation. Education is a key variable in unlocking the latent skills and talents in humans.

Oluwasanya (2014) identified several complex factors that have become challenges confronting Nigerian higher institutions. These include increasing cost, decreasing quality, and inflexibility in course selection. Other challenges identified are outdated academic equipment as well as obsolete organizational structure. Citing Salami (2001), the author also stated that the challenges of a growing population seeking college degrees, where in the potentials by developing countries to meet these obligations is frequently thwarted by long standing problem of finance, efficiency, equity and governance.

Ngustav (2005) opined that education has enhanced the rapid growth rate of overall GDP in Nigeria. It has provided for the creation of wealth professionals in both the private and public sectors for the required planning, management and running of the national economy: Policy makers and implementers in governments and other agencies require very high education to build up or enrich their human capacity in order to function effectively. Okoh (2008) while emphasizing this role of education in the nation's development quoted Joseph Addison:

> Education is a companion which no misfortune can depress, no crime can destroy, no enemy can alienate, no despotism can enslave. At home a friend, abroad an introduction, in solitude a solace and in society an ornament. It hastens vice, it gives virtue, it guides at once

grace and government to genius, without it what is man?
Asplendid slave, a reasoning savage.

Economic growth springs from the accumulation of physical and human capital (labour) and advances in production technology – Total Factor Productivity. For most developing countries, conventional growth accounting studies show that accumulation of factors, especially physical capital, has accounted for the greater part of output growth. According to Richardson (2010), World Bank estimates indicate that in the period 1960 – 92, roughly 60 – 70 per cent of growth in per capita incomes was due to increases in physical capital per worker while education contributed a substantial 15 – 20 per cent, with total factor productivity accounting for the rest. Also, Richardson (2010) argued that in most international industries, the main determinant of competitiveness is unit labour cost, and this is where education and training have pride of place. Adequate supply of labour is perhaps the most important economic resource and factor of production. Investment in education and human capital leads to the acquisition of skills that raise labour productivity and allow wide spread use of existing technology as well as promote new technological development. Not surprisingly, the level of human capital in high growth countries has been significantly higher than less successful ones.

As has been emphasized elsewhere, knowledge is seen as the most powerful engine of production that enables mankind to subdue nature and satisfy our wants. Besides, it is seen as the only instrument of production that is excluded from diminishing returns. Furthermore, World Bank report of 1991 indicated that a-one year increase in the average amount of education of the labour force leads to a substantial nine per cent in GDP. In a similar vein, a UNIDO report concluded that Japan's industrial success was due to its unique combination of formal education, vocational education, and post-employment training and on-and-off the job training (Richardson, 2010).

Anna (2007) identified factors influencing human capital growth to include population, population's income, a country's economic growth, educational reforms or policies. He opined that the transition of modern economy to the economy based on knowledge makes human capital one of the main components for economic welfare.

Basically, any activity according to McConnell et al. (2010) that increases the quality (productivity) of labour may be considered an investment in human capital. It includes expenditure not only on former education and on-the-job training, but also

on health, migration, job search and pre-school nurturing of children. According to Todaro and Smith (2009) education and health are basic objectives of development; they are important ends in themselves. Health is central to well-being and education is essential for a satisfying and rewarding life, both are fundamental to the broader notion of expanded human capabilities that lie in the heart of the meaning of development.

Aluko (2015) was of the view that capacity development and human capital development are closely linked and cannot be separated. He opined that they are closely linked or connected in a range of issues including human capital development, through health, education, and training; the accumulation of physical capital that increases the level of investment to generate employment opportunities strengthening governance through institutional policy reforms; and the application of improved technologies, logistics and system to enhance organizational performance, end result which translate to increase in people's incomes and improvement in their quality of life.

A nation's human capital endowment-the knowledge and skills embodied in individuals that enable them to create economic value can be a more important determinant of its long-term success than virtually any other resource. This resource must be invested in and leverage efficiently in order for it to generate returns-for the individual involved as well as the economy as a whole (World Economic Forum, 2016).

However, in the development literature, though the aforementioned has long been recognized, it was brought to the front burner with the works of Romer and Lucas. The growth theory of Romer (1986) and Lucas (1988) emphasized the role of human capital growth framework in the 80s. They opined that in the long-run, output per unit of input could increase even when input has been accounted for. Technically, advanced human capital and a growing knowledge base were important contributors to this growth. The concept refers to the activities and skills of the human resources of the country while human capital for a nation refers to the process of acquiring and increasing the number of persons who have the skills, education and experience which are critical for the economic and political development of the country. Human capital formation is therefore associated with investment in man and his creative productive resource.

Knowledge about technology includes practical knowledge, such as basic knowledge about nutrition and birth control, and technical knowledge such as in the

field of engineering, information and communication technology that can be used to formulate solution to problems such as transportation bottlenecks, security, water pollution, inadequate housing and the likes. Differences in the level of knowledge about technology, often referred to as "knowledge gaps", are large and threaten to increase the gap in income between developed and less developed countries (World Bank, 1998).

Obadan and Uga (1997) opined that the role of advancement in knowledge in human and social progression is profound and universally acknowledged. According to them, the quality of life and living in societies is significantly and positively related to the existing stock of knowledge, as well as the ability to increase and use it effectively in resolving societal problems. In his empirical work on growth, inequality and poverty in Nigeria, Aigbokhan (2008) was able to establish a nexus between household poverty and level of education. The empirical evidence indicated that the less educated the head, the more likely the household would be poor and hence decline in their welfare.

In appraising education as a strategy of human capital development in Nigeria, Adelakun (2011) discovered that:

i. Adult literacy did not improve by any margin

ii. The number of pupils per primary school increased and the number of pupils per teacher also increased

iii. The number of pupils per secondary school increased while the number of pupils per teacher stagnated.

According to WEF (2016), approximately 25000 new workers will enter the labour market every day until 2020, and more than 200 million people globally continue to be out of a job; yet, simultaneously, there is an expected shortage of some 50 million high-skilled job applicants over the coming decade. The organization further stated that there are 90 million children without access to primary school; 150 million children unable to attend secondary school; and hundreds of millions of young people who cannot afford to go to university; while the world is experiencing the shortage of 4 million qualified teachers per year.

It has been suggested by Olaniyan and Bankole (2005) that education not only promotes growth and efficiency, but that it can reduce inequality and impact on disadvantaged background. They argued that education remains the most effective

way by which young people of poor backgrounds can rise in the economic hierarchy because human capital remains the main asset of 90% of the population. This also explains why income inequality is greater in countries where inequality in education is also high (Becker, 1981).

However, between 2009 and 2018, educational sector in Nigeria got a paltry allocation of N3.9 trillion out of N551.19 trillion proposed budget in ten years. That translates to about 7.07% of the total budget estimates in ten years in comparism with the 26% bench mark set by United Nations (UNESCO) for Developing countries (Vanguard Report of 2018). This was also the position canvassed by Ibuzor (2017) when he said that various countries in Africa allocates far more funds of their budget to education than Nigeria. In his research, he found that Burundi allocated 17.24% of its annual budget to education in 2013, Ethiopia allocated 27.02% in the same year. Furthermore, Benin allocated 20.23% of its annual budget to education sector in 2014, while Madagascar allocated 20.33% of its annual budget to education sector in 2012. Similar report indicates that Ghana allocated 23.1%, Liberia 12.1%,Benin 15.9%, and Cape Verde 13.8% of their budget estimates to education in 2017 (Business Day, Jan 3, 2017). With Nigeria less than 10% allocation of its annual budget to educational sector, little wonder that UIS-UNESCO data estimates show that 8.7 million children were out of school in its 2015 report on financing education in Nigeria.

In a recent address at the convocation of Crawford University, Charles Ayo a former Vice Chancellor of Covenant University emphasized one of the current challenges confronting the education sector in Nigeria, when he opined that Nigeria loses a minimum N1trillion annually to education tourism, with about 75,000 Nigerians currently studying in Ghana, Benin Republic and Egypt (Asabor, 2018). This is very worrisome when this loss is compared with the federal government allocation to the education sector in Nigeria annually.

Health is also a major source of human capital formation that contributes to economic growth and development. The world summit for sustainable development according to Amah & Sheiki (2007) recognized health as a resource for, and an indicator for sustainable development. By 1992, Rio declaration recognized the fact that human beings are the center of concerns for sustainable development. They are entitled to health and productive life in harmony with nature. The latter point stressed the important inter-linkage between the social economic environment pillars of sustainable development, all of which are dependent on good health. Health here is defined by WHO (1978) in the declaration at Alma-Ata to mean a state of complete

physical, mental and social well-being, and not just merely the absence of disease or infirmity. Amah et al; (2007) as emphasized by Tamer (1998) said that the extent of any development process aims at national sustainability is dependent on understanding the extent of health and well-being of the people.

Put differently, the negative effect of poor health on human capital and economic growth can be seen through cost of illness, which reduces labour productivity, and leads to irregularity at work. These costs comprise of medical expenses related diagnoses and treatment, opportunity cost of income and the pain and suffering borne by patients and other members of household due to illness. The size and unpredictability of the cost, suggests that families may not be able to smoothen their consumption over period of major illness, especially in LDCs where few individuals are covered by formal health and disability insurance. The fall in income affects the aggregate level of savings and consequently capital formation. The reduction in labour supply and fall in labour at the household level will further cause the nation's labour productivity and supply to fall. This then shows the long-term effects of poor health on economic growth and development (Asensop, Asote, Osei-Akoto & Adokonu, 1998, Gertler, 1999, World Bank 1993 & 1995 Amah et al;2007).

Olaniyan and Bankole (2005) were of the view that improvement in health status leads to increase in life expectancy, which implies more opportunities for people to work and earn more income and subsequently break the yoke of poverty. This stems from the empirical evidence of Deaton (2003) that shows the strong nexus between life expectancy with increase in productivity and income.

Medical Tourism Statistics (2018) shows that 5,000 Nigerians fly out on monthly basis seeking medical treatment in India and other countries. The data show that Nigeria loses over $500 million annually in medical tourism to India alone. The body blamed poor budget funding on health sector as partly responsible for this. It reasoned that for example, only 3.9% of the total budget was earmarked for the health sector in Nigeria's 2018 estimate. On a global scale, the data indicate that Nigeria spends over $1 billion yearly on medical treatment abroad. The countries most visited according to Nigeria's House of Representatives findings are United Kingdom, Germany, USA, Israel, and some other countries in Middle East.

Onyebuchi (2017) said that Nigeria was losing about N175 billion annually to medical tourism. He opined that this “wasted” fund was more than 50% of the proposed budget for 2018 for federal health sector. He stated that the health sector is been denied the much needed funding which is affecting development. He further

emphasized that: "Skilled proficiency becomes a victim as both trainer and trainees are not exposed to enough cases and of course quality of care ultimately suffers. As outbound medical tourism gradually becomes the preference of patience, the local sector loses confidence in the local populace resulting in low esteem and loss of morale among the health personnel".

Epudu, Adinma, Ogbonna & Epudu (2018) found that Nigeria loses $1.35 billion annually to medical tourism out of its estimated 180 million people. On the average, they opined that 9000 medical tourists occur monthly from Nigeria to other countries. India according to them, is a major destination with an average of 500 visits monthly and affordable treatment in modern medicine and specialties. They were of the view that medical tourism in Nigeria increased by 20% annually. They concluded that poor health care delivery system encourages medical tourism from Nigeria which leads to huge foreign exchange waste and medical work force, as over 700 Nigeria medical doctors move to Europe annually. They also blamed poor government funding as one of the factors that had impoverished the health sector.

Ikhuoria (2016) said that Nigeria has not come close to implementing 15% of national budget allocation to the health sector in accordance with the Abuja declaration of 2001, where African countries committed themselves to implementing the policiy. He stated further that other African countries with less resources have committed far more of their national budget to their health sectors. He gave examples of Rwanda that allocated 18% of its annual budget to its health sector, Botswana and Niger Republic that committed 17.8% of their annual budget to their health sectors as well as Zambia and Burkina Faso that committed 16.4% and 15.8% of their national budget to their health sectors in 2016 respectively.

Nutritional status of an individual has also been seen as another form of human capital formation process. It is often based on three anthropometric measures which are height for age, which measures "stunting" or chronic malnutrition, weight for age, a measure of underweight, and weight for height, a measure of wasting or acute malnutrition. Nutritional status has long-term consequences (Todaro, 2009).

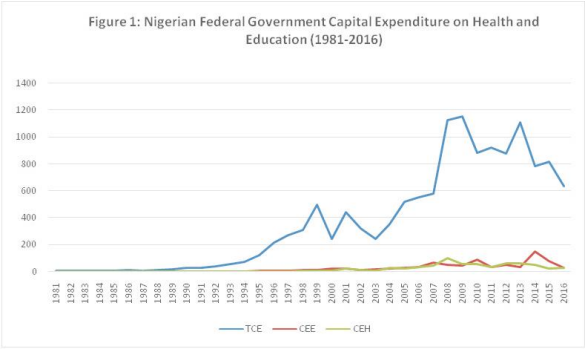
Apart from convincing evidence which suggests that nutritional inadequacy increases the risks of death and impairs cognitive development, there are also evidences to show that inadequate nutrition can affect future productivity and earnings and hence poverty. Evidences also abound that if a child under five years does not have the requisite quantity and quality of nutrition, it may cause serious impairment to his intellectual capacity with all its implied consequences when he

grows up as an adult. Investment in better nutrition has a considerable positive effect in terms of economic growth and equality. This is predicated on the fact that healthy individuals would be able to work adequately to earn better income to improve their living condition (Olaniyan & Bankole, 2005, Strauss & Thomas, 1998). Although migration process has also been fingered in individual human capital and capabilities, suffice to add that the aforementioned are the most potent factors central to human capital formation hence the emphasis on them.

In our reviewed literature, none of them made use of the descriptive statistics or trend analysis to illustrate the enormity of the problem of human capital formation and usage in Nigeria in exposing the funding deficits in the key sectors of education and health, especially as it relates to its capital expenditure funding. Beside, none of the reviewed literature simultaneously dealt with both education and health sectors as they relate to the challenges of human capital formation in Nigeria.

3. RESEARCH METHOD

The research method adopted in this study is basically the descriptive. The data used for these analysis were obtained from various sources such as CBN statistical bulletin (various Issues), CBN Annual Reports (Various Issues), Nigeria Health Watch (2016), NBS (Various Issues), Authors' Computation etc. These descriptive statistical charts and graphs were analyzed using Microsoft excel.



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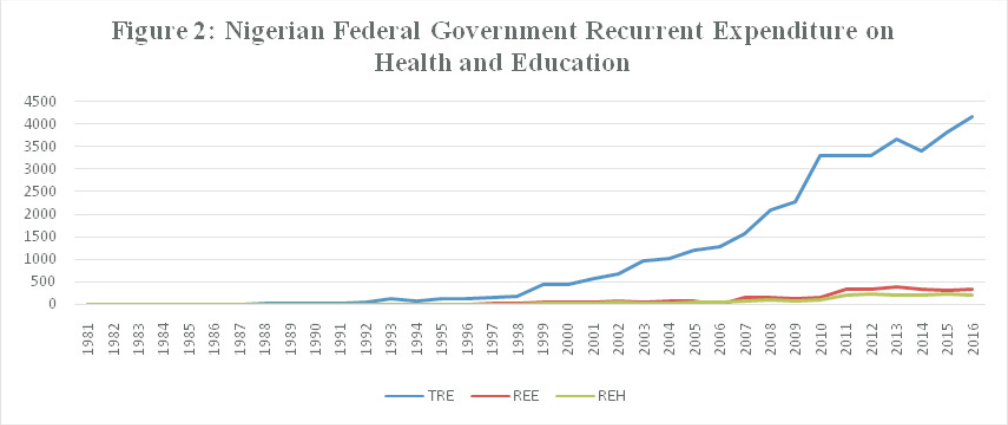

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ABrief Review of Table 1

Acritical look at table 1, from Appendix, above will reveal a reluctance on the part of federal government of Nigeria to adequately fund these two key sectors vital to human capital formation in the country, which is quite contrary to their posturing. The data above show that the federal government fell short in all ramifications vis-à-vis internationally accepted best practices in terms of funding education and the health sectors. Okoh (2002) found that only a budget estimate of between 10 – 12% was devoted to education in comparison to 26% as recommended by United Nation - UNESCO.

The data presented in table 1, in Appendix, above lend credence to this assertion. In the whole period of review, funding of education has largely been inconsistent-rising and falling expenditure. While total expenditure on education increased maximally from N610m to N680m in 1981 and 1982 respectively, it experienced drastic falls in the next five years save for 1986, reaching a mere N370m in 1987. This similar trend was recorded between 1988 and 1994, with the year 1992 recording the least expenditure of N670m in that period. Thereafter, it consistently increased till 2010, but for four years of 2001-2003, total expenditure on education were respectively N59.74b and N79.46b, as well as 2008 and 2009 which were N212.80b and N180.52b respectively. However, it continuously increased from 2010 to 2014 reaching the highest amount of N493b in 2014, before dropping to N402.20b in 2015 and N369.60b in 2016 respectively.

Another fact that can be discerned from the table 1 above, from Appendix, is that total recurrent expenditure on education was higher than its capital expenditure in most of the years except in about five years which are 1981, 1982, 1983, 1986 and 1992. The implication of this is that most of the expenditure on education went into salary, wages and other overheads like maintenance and the likes. This perhaps explains the dearth of educational infrastructure that has become the lot of the Nigerian educational system. The gap between recurrent expenditure on education (REE) and capital expenditure on education (CEE) became so large between 2007 and 2016, wherein REE was N150.80b in 2007, CEE was mere N68.30 same year, with the worst case scenario being in 2012 where REE was N348.40b viz-a-viz CEE that was N47.6b in the same period. The year 2016 was not better as CEE was a mere N27:70b as against REE that was N341.88b.

Taking education as a percentage of total federal government expenditure, the result from table, 1, in Appendix is very abysmal in performance. In the period of review, only the years 2000 and 2014 recorded a-two digit percentages of 11.60 and 10.75 respectively, with the rest years averaging between 5 and 6 per cent. The result further shows that 0.72 per cent was recorded in the year 1992, being the lowest in our reviewperiod.

Similar trends as observed in the educational sector were the lots of the health sector expenditure. Total government expenditure in the health sector (TEH) was also very inconsistent. Save for a N20m increase from 1981 to 1982, it suffered decreases in the following five years, reaching its lowest level of N110m in the year 1987. Thereafter, it increased sharply from N600m in 1988 to N760m in both years of 1990 and 1991, before plunging to a lower level of N340m in 1992. It first reached the billion naira mark in 1993 recording N4.22b, and dropped again to N3.05b the following year of 1994. However, the most consistent period it experienced increases was between the years 2004 – 2008, before reducing in the two years following, 2009 and 2010 respectively. It also increased between the periods of 2012 and 2013, where it recorded N235.87b, and N282.776b respectively, before declining in the remaining period, where it recorded N250.06b in the year 2016.

The highest funding in the period of review was recorded in 2012 with a total amount of N282.77b recorded as total health expenditure. Just as was observed in the case of education expenditure, the recurrent expenditure on health was higher than its capital in most of the years of review, which explains the fact that salaries, wages, overheads etc. took precedent over capital expenditure in the health sector. This further explains the lack of basic equipment and infrastructure for a successful healthcare delivery

system in Nigeria. Considering health as a percentage of total government expenditure, there is nowhere in the review period where a-two digit figure was recorded as a percentage. The average recorded was between 3 and 4 percent in the review period. In fact, it even recorded below 1 per cent in the years 1987 (0.50%) and 1992 (0.37%) respectively. The highest period where it recorded above 6 per cent was in 2008 and 2012 where it reached 6.03 per cent and 6.13 per cent respectively. These are not in consonance with internationally accepted recommendations of between 10 – 15 percent of GDP by WHO or World Bank or the 2001declaration of 15% of annual budget of African countries commitment to the health sector.

Since both the education and health sectors are similarly plagued with underfunding (especially their capital expenditure funding), it becomes very clear to see while most Nigerians seek alternatives outside the country, thus putting pressures on scarce foreign exchange that would have otherwise been better utilized. This also partly accounts for exacerbating rent-seeking and corrupt activities especially by public servants and political office holders – to meet with the high cost of education and health obligations outside of Nigeria for themselves, spouses, siblings as well as associates. These poor funding and lack of serious commitments of Nigeria to the education and health sectors have plagued both sectors with the phenomenon of brain drain as well as education and medical tourism, which are inimical to the wellbeing of the citizens and currently hurts the economy.

The chart in Figures, 1, and, 2, are very apt in showcasing the poor funding in both health and education sectors. Figure, 1, shows while total capital expenditure (TCE), increased astronomically over the years, capital expenditure on education and health (CEE and CEH) only increased very minimally as the gap between TCE on the one hand and CEE and CEH on the other, shows in the chart. Similar result is discernable in Figure, 2, where Federal government recurrent expenditure (TRE) was considered vis a vis recurrent expenditure in education (REE), and health (REH) in the chart.

Table 2: Descriptive Statistics of the Variables Employed in the Study

	CEE	CEH	REE	REH	TCE	TEE	THE	TRE
Mean	22.1728	17.5182	91.9382	55.72	362.388	114.114	73.2374	1072.904
Median	8.52	6.43	14.85	4.74	241.69	26.38	11.86	178.1
Maximum	149.25	97.2	390.42	237.08	1152.8	493	282.77	4178.59
Minimum	0.14	0.05	0.16	0.04	4.1	0.34	0.11	4.75
Std. Dev.	32.5013	24.0845	127.893	82.1376	380.699	153.285	100.880	1407.966
Skewness	2.15557	1.48789	1.29251	1.31835	0.76591	1.20772	1.10220	1.061302
Kurtosis	8.07497	4.68552	3.15136	3.14583	2.24501	3.01524	2.59314	2.526741
Jarque-Bera	64.6645	17.0571	9.77860	10.1697	4.25323	8.50883	7.32802	6.89708
Probability	0	0.00019	0.00752	0.00619	0.11924	0.01420	0.02562	0.031792
Sum	776.05	613.14	3217.84	1950.2	12683.5	3993.99	2563.31	37551.63
Sum Sq. Dev.	35915.5	19722.2	556132.	229384.	492770	798882.	346016	6740055
Observations	35	35	35	35	35	35	35	35

Source: Author's Computation from E-views Output

ADescriptive Statistics of Variables Employed In the Study

The descriptive statistics in table, 2, above indicates measures of central tendency, dispersion and shape of the data employed in the study. The capital expenditure on Education (CEE) which measures government investment in education in Nigeria has a mean value of 22.17, median value of 8.52 as well as maximum and minimum values of 149.25 and 0.14 respectively. Its standard deviation value of 32.50 shows that the distribution has a fair dispersion around its mean value. Skewness which is one of the measures of shape of a distribution has a value of 2.15 which shows that CEE is positively skewed in the period under review. The kurtosis value of 8.07 shows that the distribution of CEE is leptokurtic with 35 observations. This implies that the distribution is not normal. This was the trend for all other distributions of the variables employed in the study.

On the other hand the capital expenditure on Health (CEH) which is a measure of federal government investment in the Health Sector in Nigeria has a mean and median values of 17.52 and 6.43 respectively. It also has maximum and minimum values of 97.2 and 0.05 respectively. Its standard deviation value of 24.08 indicates a fairly large dispersion of the distribution around its mean. Its skewness and kurtosis values of 1.49 and 4.68 are indicatives of positive skewness and a leptokurtic distribution (not a normal distribution) with 35 observations.

The Recurrent Expenditure on Education (REE) which measures the federal government overheads in education has a mean value of 91.94 and median value of 14.85. It also has a maximum value of 390.42 as well as a minimum value of 0.16. Its standard deviation value of 127.89 indicates that the dispersion around its mean value is large. It has a positive skewness with a value of 3.15, andis leptokurtic in distribution with 35 observations.

The Recurrent Expenditure on Health (REH), a measure of the federal government over-head expenditure on health has values of 55.72 and 4.75 as its mean and median values respectively. It also has a maximum value of 237.08 as well as a minimum value of 0.04. Its standard deviation value of 82.13 indicates a fairly large dispersion along its mean. It has a skewness value of 1.32, which indicates positive distribution. Its kurtosis value of 1.34 shows a platykurtic distribution with 35 observations.

The Total Expenditure on Education (TEE) which is the total amount spent by the federal government on public education in Nigeria, has mean and median values of 114.11 and 28.38 respectively. The distribution also has a maximum value of 493 and a minimum value 0.34. its standard deviation value of 153.28 indicates that the distribution has a large dispersion about its mean value. The distribution also has a skewness value of 121 which is positive, as well as a kurtosis value of 3.01, indicating a leptokurtic distribution with 35 observations.

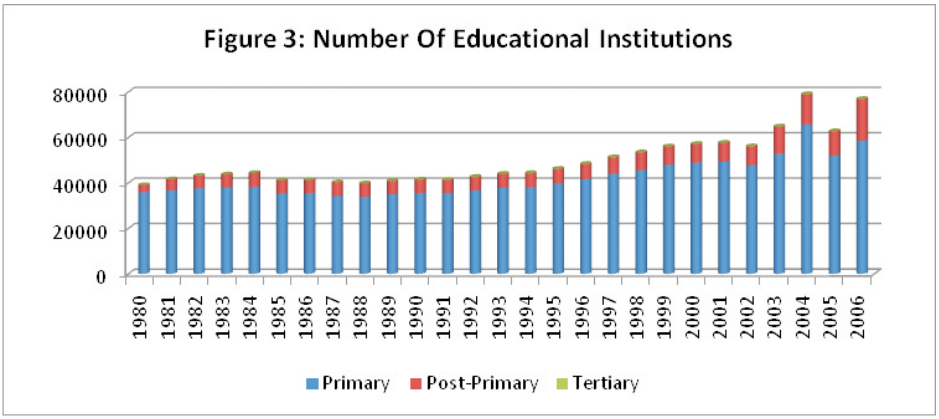
The Total Health Expenditure (TEH) which is the overall amount spent by federal government on public health in Nigeria, has a mean value of 73.24 and a median value of 178.1 its maximum and minimum values are respectively 4178.59 and 4.75. Its standard deviation value of 1407.97 shows that the TEH dispersion and its mean value is large. Its skewness value of 1.06 indicatesa positive distribution, and a kurtosis value of 2.53 showing a platykurtic distribution with 35 observations.

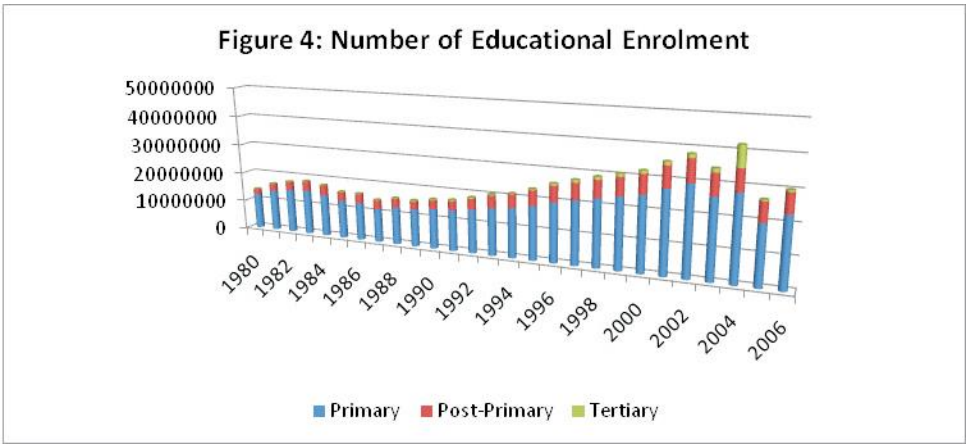
TABLE 3: Number of Educational Institutions and Enrolments in Nigeria (1980 – 2007)

YEAR	NUMBER OF EDUCATIONAL INSTITUTIONS			ENROLMENT		
	Primary	**Post-Primary**	**Tertiary**	**Primary**	**Post-Primary**	**Tertiary**
1980	35,875.0	3,218.0	13.0	12,206,291.0	1,877,057.0	57,742.0
1981	36,683.0	4,969.0	16.0	14,026,819.0	2,473,673.0	74,607.0
1982	37,611.0	5,603.0	19.0	14,964,143.0	2,880,280.0	87,066.0
1983	37,888.0	5,894.0	24.0	15,308,384.0	3,334,644.0	104,683.0
1984	38,211.0	6,190.0	27.0	14,383,487.0	3,402,665.0	116,822.0
1985	35,281.0	5,876.0	24.0	13,025,287.0	2,995,578.0	126,285.0
1986	35,433.0	5,730.0	24.0	12,914,870.0	3,094,349.0	135,783.0
1987	34,266.0	6,092.0	28.0	11,540,178.0	2,934,349.0	150,613.0
1988	33,796.0	6,044.0	104.0	12,690,798.0	2,997,464.0	219,119.0
1989	34,904.0	5,868.0	118.0	12,721,087.0	2,723,791.0	307,702.0
1990	35,433.0	6,001.0	122.0	13,607,249.0	2,901,993.0	326,557.0
1991	35,446.0	5,860.0	124.0	13,776,854.0	3,123,277.0	368,897.0
1992	36,610.0	6,009.0	130.0	14,805,937.0	3,600,620.0	376,122.0
1993	37,812.0	6,162.0	133.0	15,911,888.0	4,150,917.0	383,488.0
1994	38,000.0	6,300.0	133.0	16,683,560.0	4,500,000.0	202,534.7
1995	39,677.0	6,452.0	138.0	17,994,620.0	5,084,546.0	391,035.0
1996	41,660.0	6,646.0	138.0	19,794,082.0	5,389,619.0	689,619.0
1997	43,951.0	7,311.0	138.0	21,161,852.0	5,578,255.0	862,023.0
1998	45,621.0	7,801.0	138.0	22,473,886.0	5,795,807.0	941,329.0
1999	47,902.0	8,113.0	144.0	23,709,949.0	6,056,618.0	983,689.0
2000	48,860.0	8,275.0	144.0	24,895,446.0	6,359,449.0	1,032,873.0
2001	49,343.0	8,275.0	142.0	27,384,991.0	6,995,394.0	1,136,160.0
2002	47,694.0	8,351.0	178.0	29,575,790.0	7,485,072.0	1,249,776.0
2003	52,815.0	11,918.0	202.0	26,292,370.0	7,091,376.0	1,274,772.0
2004	65,627.0	13,333.0	215.0	28,144,967.0	7,091,376.0	6,745,186.0
2005	51,870.0	10,913.0	*75	19,861,681.0	6,398,343.0	*449,949.0
2006	58,604.0	18,338.0	*93	23,017,124.0	6,536,038.0	*606,104.0
2007	NA	NA	*93	NA	NA	727,408.0

Sources: (i) Olu, M.F. and Adenuga, A.O. (2006)
(ii) NBS (2006-2008) Annual Abstracts of Statistics

NB: * Figures are University figures only.





The chart of Figures 3 and 4 above, show the number of educational institutions as well as their enrollment between 1980 and 2016. Figure, 3, chart shows that the number of educational institutions increased from 1980 to 1984, but dropped from 1985 to 1992. It increased thereafter reaching its highest in the year 2004, reducing in 2005, before increasing again in 2006. On the other hand, the number of enrollment as depicted in Figure, 4, shows that between 1980 and 1984, it increased, after which it dropped from 1986 to 1992. However, the enrollment figure continuously increased from 1994 reaching its highest in 2004, before dropping again in 2006 below its 2003 figure. Table 3 indicates that despite the increase in enrollment at various tiers of education in Nigeria, funding of education as indicated in Table 1, in the Appendix, has not matched with these increments. For instance, ETE declined

from 7.89% in 1989 to 0.72% in 1992. Similarly, ETE also declined from 5.25% in 1995 to 4.36% in 1997. In addition, it also dropped from 6.48% in 2003 to 6.06% in 2005.

4. Some Challenges Facing Human Capital Formation process and Usage in Nigeria

It has been acknowledged by World Bank that in general, poor countries possess less knowledge than rich countries and that the difference has important implications for growth and development. The major challenge here is how can the government increase the flow of knowledge especially technical knowledge and adapt it to solving contemporary development challenges such as transportation bottlenecks, water pollution, inadequate housing, computer programming, crimes, energy and also how to increase basic knowledge about nutrition and birth control and the environment among others. The differences in the level of knowledge about technology, known as "knowledge gaps" are not only large, but increasing the income gap between the developed and less developed countries.

Be that as it may, some of the basic changes facing human capital formation and usage in Nigeria from available information and data analysis are;

i. How to bridge the huge funding deficits that plagued the two key sectors of education and health that are germane to human capital formation in Nigeria.

ii. How to mitigate the huge exodus of education and health professionals to other parts of the world and stem the tide of brain drain, and thus reduce the huge shortage of these professionals in the two sectors in Nigeria

iii. There is also the challenge of curtailing education tourism from Nigeria which creates capital flight through huge foreign exchange loss annually.

iv. We also have the challenge on how to stem the trend of out-of-school children in Nigeria which can have huge security implications for future stability in Nigerian North East in particular, and the country as a whole.

v. Another challenge is how the government can formulate and implement polies with regards to education and health sectors, in line with international agreements and treaties, entered into by the government in accordance with international best practices to meet with 21st century standards or goals.

5. CONCLUSION

The findings of this paper point to the fact that the challenges facing human capital formation process in Nigeria is a culmination of years of poor funding that is not in conformity with internationally accepted standard, and treaties entered by the government. Many reasons have been adduced as being responsible for this abysmal performance. The dearth of proper funding, opportunities, innovations creativity and ideas fuels unemployment, incompetence and poverty in Nigeria.

For Nigeria to be able to compete in a 21st century digital world, there is a serious need for radical policy reforms, and reversals of archaic programmes and policies that stand in the way of quality education and training process as well as health care delivery system in Nigeria. These bottlenecks, bureaucracies and rigidities that promote mismanagement, corruption, inefficiencies as well as waste in education and health sectors can be eliminated or mitigated with the right political will and adequate funding, since most of them are not insurmountable.

6. RECOMMENDATIONS

Based on the aforementioned concerns and challenges militating against human capital formation in Nigeria, we put forward some suggestions that will help ameliorate the situation.

i. The government at every tier must adhere to internationally accepted funding for education and health sectors, more so, since Nigeria is signatories to some of these international statues. This is key since proper funding and motivation can go a long way to curb brain drain as well as education and health tourisms that bedevil the sectors.

ii. The authority should streamline all parastatals and departments of the ministries of education and health. Shrinking them will make them more functional and productive and curb waste, mismanagement and corruption that characterize them in terms of inflated overheads, jumbo allowances paid to their personnel as well as forestall duplication of efforts. The government should commit itself to implementing the capital expenditures of education and health sectors budget in total, not just focusing on totally implementing the recurrent components of the budget on education and health alone as was the case in the study.

iii. Licenses, approval or accreditations of both private and public universities, schools and courses should be based on specific courses, specializations and programmes that are globally competitive and relevant to 21st century goal and not just replication of already over flogged areas that are best becoming obsolete in other climes.

iv. There should be laws formulated and implemented to compel political office holders to patronize Nigerian education and health institutions, save such services are not readily available in the country, this will create the vigilance that is needed for an efficient running of both institutions.

v. The issue of out-of-school children problem can be solved through enabling laws that compel parents to take their children to schools, and penalties meted out to defaulters. At least, primary and secondary school education in Nigeria should be made free and compulsory to all children of school age.

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