



## INVESTIGATING THE POTENTIALS OF RESEARCH FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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### ABSTRACT

*In Nigeria, there are a lot of potentials that can be harnessed and channeled for sustainable development which are yet to be exploited and sustained. The study is aimed at investigating the potentials of research for sustainable development in Nigeria. In a developing nation where the environment is dynamic with abundant untapped potentials, research is therefore inevitable. The built environment is a virgin opportunity with enormous challenges that have serious impact on the sustainability of the economic development of any nation. The dearth of research activities truncates the sustainability of socio-economic growth of a nation in the built environment. Research activities have been dwindling in Nigeria and the sustainability of the built environment remains an illusion. The aim of this research is to examine how research and the built environment can sustain economic development in Nigeria and across the globe. Exploratory survey from literatures was used for the purpose of this research. Results indicated that research activities are low and the level of research implementation and funding is minimal compared to UNESCO bench mark globally. Politics and corruption were identified as obstacles affecting research activities in Nigeria. The study recommends that research activities could be improved through better funding and compliance.*

**Keywords:** Funding, investigation, potentials, research, sustainable development

### INTRODUCTION

In a dynamic environment, and as a developing nation, it is difficult for institutions to think that important decisions can continue to be made by guess work hunches or by rule of thumb (Oloyede, 2010). Oloyede (2010) added that the complexity of the decision to be made and the



magnitude of the problems confronting the nations of Africa are such that systematic procedure is required in order to ensure decisions are made possible with all the facts available. These facts are obtained through research findings. According to Osuala (2000), sometimes what is required in everyday decision are not right or wrong answers but intelligent decisions made through research. The success of any entrepreneur includes identification of critical aspects of the dynamic environment, making intelligent forecasts and utilizing those forecasts. These can only be achieved through research which is the basis for science and technology.

Nigeria as a nation has realized the need to invest in science and technology so as to fit in the global economy in order to end poverty (UNESCO, 2014). According to UNESCO Science Report (2014), there was a significant development in terms of institutional and policy advancement through research.

In recent years, African countries encouraged and supported biotechnology research. These countries include South Africa, Kenya, Nigeria and Burkina Faso which all flagged off research program in biotechnology as a plan adopted by African Ministers of Science and Technology in 2005 (Chukwuemeka, 2014). This was a strategy used to strengthen research development in Africa.

Research is inevitable especially in developing countries. Research is a fundamental key to any development. It is a way of thinking, examining critically the various aspects of day-to-day professional work, understanding, and formulating guiding principles that chaperon a particular procedure and developing theory as well as testing new theories for the enhancement of best practices in any given environment (Usman, 2015).

Environmental discipline is required to foster research for sustainable economic development. Environmental sustainability is the ability to maintain rates of renewable resource, harvest pollution creation, and non-renewable resource deflection that can be continued indefinitely (Usman and Keftin, 2015). Usman and Keftin added that economic sustainability is the ability to support a defined level of economic production. This can only be achieved through research. Sustainable development as a pattern of resources used to meet needs and aspiration of the society (John, 2007). With this means, economic and the environment must be tailored together through research. Abdulkareem and Oyeniran (2011) pointed out that sustainable economic development involves knowledge and skills essential for solving today's problems and preparing for further challenges.

Sustainable economic development can be enhanced through growth domestic product (GDP). For instance, the construction industry as an environmental discipline accounts for about 5% when compared to South Africa 19%, Mexico 17.7% and Ghana 8%. This is a clear indication that Nigeria is lacking behind in terms of sustainable environment. Studies have shown that the Nigerian economy is characterized regarding jobless growth (Mailfiya, 2015). Evidently, 65% of Nigerian youths are unemployed (Usman and Keftin, 2015).

Furthermore, United Nations Educational, Scientific and Cultural Organization (UNESCO) affirmed that about 92% of the Nigerians survive on less than \$2 daily while about 71% survive on less than \$1 a day (Usman and Keftin, 2015). According to Mailafiya (2015), the Vice President of Nigeria Yemi Osinbanjo stated that 10 million Nigerians are living under poverty which constituted 62.5% out of 170 million. In addition, Nigeria is rated 158 out of 177 on Human Capital Development Index (Usman and Keftin, 2015). Other issues for economic

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sustainable development in the built environment that need redressed include acute shortage of housing, portable drinking water, power generation, unemployment and poverty reduction, The economic development of a nation is determined by its GDP. For instance, in 2013, Nigerian GDP rose from \$262.6 billion US to \$510 billion (Mailafiya, 2015). In spite of this, Nigerian growth rate in GDP is still low, more so, it is still deficient in housing. According to UNESCO (2014), sustainable development requires portable water, comfortable accommodation, good disposal system, power generation and conducive environment for livelihood (Usman *et al.*, 2014). The failure to meet the basic global standard is a minus in research activities in Nigeria. This paper therefore, examines research in environmental discipline for sustainable economic development.

## **RESEARCH DEVELOPMENT**

Research is a habit of questioning and a systematic examination of the observed information to find answers, with a view to insisting on appropriate changes for effective economic development. Studies have shown that sustainable economic development can only be achieved through research (Eze, 2013; Usman, 2015). For example, China had 862,000 researchers which is the second highest in the world after the USA with 1.3 million and ahead of Japan 675,000 and Russia 487,000 (Chukwuemeka, 2014; Usman, 2015).

In Nigeria, our limitation to research prevents the growth of industries and invariably increases the level of poverty. Research has suffered setbacks in Africa as a result of poor budgetary allocation. This could be the reason why research development attracts less investments in Africa compared to defense, education or health (Chukwuemeka, 2014). In South Africa, the budget for research development rises from 0.73% in 2001 to 0.94% in 2006. So far South Africa is ahead in scientific publications with 46% more than Nigeria 11.4% and Kenya 6.6% (Usman, 2015).

The inability to promote research development creates and stagnancy in the wheel of progress in terms of economic development of the country and as such, other countries takes advantage of these lapses to engage the services of our researchers by offering them good incentives. Hence, research activities are being crippled and its resultant effect impact negatively on the economic growth of a nation. In Nigeria today, those that are ventured into research activities do so only for promotion purposes.

### **Research in the Continent**

Research and development faces a lot of challenges in the continent; particularly on budgetary allocations to this sector. For example, research and development attracts less investment in Sub-Saharan Africa than defense, education or health (Chukwuemeka, 2014). The proportion GDP allotted to research and development averagely 0.3% on the continent, seven times less than that spent by industrialized countries on this sector. The growth of a nation is determined by Growth Domestic Product; and it all depends on research and development. In South Africa, the amount spent on research and development rises from 0.73% in 2001 to 0.94% in 2006 as a proportion of the GDP. Besides, SA leads in terms of scientific publications with 46% of the continent far ahead of Nigeria 11.4% and Kenya 6.6% (Ambe, 2013).

The inability of the continent to promote research and development as well as its inability to protect the intellectual property and low wages by its scientists was a bond of contention. In

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2009, one-third of scientists or engineering degree leaved to work in developed countries (Chukwuemeka, 2014; Oloyede, 2010). From 1990 to 2005, many qualified medical doctors and nurses from Nigeria were employed by the Saudi Arabia and American hospitals (Kalu, 2013). This scenario was as a result of the legislative inability to retain intellectual property rights and low wages paid to researchers.

Similarly, in 2007, Uganda experienced massive exit of its researchers to other countries. In a study by Ofori (2014) and Idoro (2014), 36% of Uganda's graduate, medical doctors and researchers left for abroad. This forced the Uganda Government to increase salaries for University researchers and teaching staff. In the same vein, Cameroon, Zambia and Bostwana took measures to improve salaries of its researchers.

In Nigeria our limitation to research deter the industries to grow and has increased the level of poverty. Poverty rate has worsened from about 45% in 1970 to nearly 70% in 2009. This shows that nearly 70% of our people live below \$1 a day. According to the 2010 Global Monitoring Report of the United Nations Educational, Scientific and Cultural Organisation (UNESCO), about 92% of Nigerians survive on less than \$2 daily while about 71% survive on less than \$1 a day. This means that two Nigerians' income is equal to the daily feeding of a cow in Europe.

The rate of unemployment has worsened in the last 10 years from about 15% in 2003 to at least 20% in 2009 in the total population reaching 40% among the youth. Life expectancy has deteriorated from 54 years in 1980 to 47 years in 2008. A country that produces two million barrels of oil a day, has the seventh-largest natural gas reserves of any country in the world, and recently the first in Africa but according to the United Nations, the poverty rate in Nigeria has gone up from 46 percent to 76 percent over the last 13 years. The most immediate source of the disconnect between Nigeria's wealth and its poverty is a failure of governance at the three -tier levels (Oloyede, 2010).

According to Nebo (2006) over 99.5% of the Polytechnics' time is devoted to teaching and assessing students throughout the year, without official time dedicated to doing research. Beko (2005) contended that research activities are weak compared to teaching and other engagements. These are clear indications that

- i. Researches are conducted to earn academic promotions and have no relevance to the need of the industry. Thus, most industries rely on foreign technical partners for research and development.
- ii. Researches in many institutions of learning are conducted to earn PhD. In fact, once a lecturer becomes a professor or chief lecturer, research ends.
- iii. There is no continuity between the Polytechnic and the industry to bridge the gap that exists in terms of skilled labour.
- iv. No current flows between theory and practice to meet the industry's need.

### **Built Environment**

The built environment is a generator of employment and a motivator of growth domestic product. It encompasses shelter, social amenities, services and landscape within and around the surrounding. The built environment is a unit that promotes and sustains economic development of many nations. For instance, the provision of portable water, electricity and comfortable



accommodation as well as conducive environment is a boost to socio- economic development of the built environment (UNICEF, 2014).

Nigerian population of 170m is on the increase and the basic social amenities are scarced compared to the growth of the nation. Therefore, an urgent attention is required to foster sustainability of the built environment.

Challenges of sustainable economic development in the built environment

The following are challenges that dwindle sustainable economic development in Nigeria:

- i. The rate of unemployment is on the increase and life expectancy has deteriorated as a result of lack of research (Oyedele, 2010). Beko (2005) added that research activities are in most of our institutions. It is evident that research activities are weak compared to teaching in our institution of higher learning. Research are conducted to earn promotion which have no connection to the manufacturing industries. No wonder, most industries relied on foreign partners for development. There is disconnect between theories and practice, talk less of meeting the industrial need of the nation (Usman, 2015).
- ii. Lack of authentic statistical data affects the quality of research. For instance, research can be reliable and valid when the research method is done based on standards. Unlike some public servants who do not want to disclose some information for security reasons.
- iii. Illiteracy as described in Eze (2014) reiterated that the statistics of illiterates in Nigeria as at December 2013 was 51%. In the same way, Rwanda 79%, Sudan 81%, so also Ghana, Sierra Leone, Togo and Gambia.
- iv. Funding: Most countries do not make adequate budgetary provision for funding research. Lecturers are not well motivated. Unlike other countries like Kenya who get research grant from institutions and agencies to boost the capacity building. Though the Federal Government came with modalities for sponsoring research through Tet fund intervention. Yet there is more to be done. Otherwise, Government prefer to vote huge sums of money to maintain security and allowances for political office holders (Usman, 2015).
- v. Electricity has adverse effect on the economic development of any nation. Institutions, industries and manufacturing sectors require power in carrying out their activities. However, power generation in Nigeria is going down day by day. Meaningful development can only be realistic when there is constant supply of electricity.
- vi. Infrastructural facilities are inadequate thereby making the environment not conducive for research activities. Nigeria has not met the world standards in the provision for research infrastructural facilities.
- vii. Skills Gap – Skill development arose from the need to recognize and improve tasks through conscious efforts (NIOB, 2016). According to Usman et al (2012), competence acquired by an individual, influencing employment and earnings. This art of getting knowledge and transferring it on the job must be checked in order to bridge skills gap. For instance, institute of higher learning serve as agents of change when it comes to skill development. This is done by imparting



knowledge, skills and technology for economic development. However, the needed middle class labour are not skillful to match the needed manpower requirement because most of our graduates cannot perform. Then, where is the position of research in our institutions?

### **HINDRANCES TO RESEARCH IN NIGERIA**

1. **Quality:** One of the greatest challenge facing researchers in Nigeria is lack of statistical data that is reliable. Public service officials are sensitive to official matters especially issues on security. They usually avoid the publication of empirical data about government and in some cases, government publish false statistics for political, social, economic or financial reasons.
2. **Secrecy:** In government ministries and parastatals, information that otherwise would have been for public consumption is considered secret and therefore not made public.
3. **Influence of values:** Science assumes value neutrality but most research in Nigeria involves value questions. Issues that borders on interest, authoritative allocation of values which invariably will introduce bias. This seriously affects the result of the research.
4. **Illiteracy:** According to studies by Eze (2014) that the statistics of illiteracy in Nigeria as at December 2013 was put to 51%. Similarly, Sudan 81%, Rwanda 79%, and so also Ghana, Sierra Leone, Gambia and Togo. Most of the illiterate populations are unable to respond to questions and sometimes feel reluctant to give information that might change their ways of life. Most empirical research requires the ability to read in order to answer the questionnaires accurately (Usman, 2015).
5. **Fund:** Most countries do not budget adequate funds for research. In the same vein, lecturers and those who work in research institutions are not well remunerated. On the other hand, Government prefers to vote huge sum of money to maintain security and payment of salaries and benefits to political office holders (Asakitikpi, 2006).
6. **Electricity:** Power generation in Nigeria is a serious canker worm that eat deep into the economy of the nation. Nigerian power generation does not commensurate its status as the giant of Africa and in terms of its economic growth. No development can be feasible without constant power supply. This affects research activities in any developing nation.
7. **Infrastructure:** No meaningful research activity without infrastructures and a conducive environment. This is lagging in Nigeria. Our infrastructures are inadequate and the few are not maintained.

### **Importance of Research**

The importance of research can never be overemphasized. Thus:

- a. Research is important to the Government, business, industry, civil society and economy.
- b. Research makes original contribution to advance the existing knowledge by which societies and economies can become better.
- c. Research helps policy makers and technocrats to obtain facts and figures necessary to assess competing policy options.
- d. Research provides the evidence basis for government, social, economic and development policies. Sound policy is grounded by a good research.



e. Research helps to satisfy the intellectual yearnings of man, for better understanding of social and economic phenomena (Eboh, 2009).

f. Research help in solving operational and planning problems in business, government and industry.

In summary, research techniques are used basically for professional consolidation, understanding, development and advancement.

### **Gap to be filled by researchers in Nigeria**

Tertiary institutions are established for:

- Teaching: the primary role of institutions is the transmission of knowledge and the training of minds
- Research: The central role of institutions is to conduct research that could lead to the advancement of knowledge and contribute directly and indirectly to economic progress and the quality of life.
- Community Service: Universities, Polytechnics and Colleges of Education serve as change agents by diffusing knowledge, skills and technology to the transformation of the society through enhancing the production of goods and services, better hygiene and improved efficiency.
- How much research have our Universities, Polytechnics and Colleges of Education been doing?

### **RESEARCH PERFORMANCE BY TERTIARY INSTITUTIONS**

According to Oloyede (2010), only a partial amount of tertiary institutions research reaches commercial state. He stressed that research in universities is mainly considered in terms of publications and career development and tends to have little social relevance. Chukwuemeka (2014) discovered that Nigeria has not developed revolutionary products and processes, despite claims of inventions and breakthroughs. Ofori (2014) found that basic and applied research of Nigerian universities, Polytechnics; Colleges of Education operate between 6% and 24% of the National Research Capacity. These findings indicate that Nigerian institutions of higher learning perform below average if they are to contribute to national development.

### **CONCLUSION**

In conclusion, fostering socio-economic development of any nation is based on research. Research in Nigeria is yet to be given its rightful place. However, tertiary institutions should serve train skilled workforce relevant to the need of the industry. This will boost the socio-economic growth of the nation. Government should organize trainings to disseminate research findings to the relevant industry

### **Recommendations**

- i. Adequate funding should be provided for research activities by both the public and the private sectors. Although TetFund is doing well but there is the need to increase the allocations.



- ii. Data bank should be created in all the polytechnics and institutions of higher learning for research findings.
- iii. Study recommendations to improve previous research work.
- iv. More research centers should be created and properly funded.
- v. Lecturers should engage in research for socio- economic development.

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