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HIGHER EDUCATION RESEARCH AND ECONOMIC GROWTH IN NIGERIA

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The study examined the relevance of higher education research to economic growth in Nigeria. The population consisted of lecturers in the faculty of social sciences in state and federal universities in the South-South and South-East regions of Nigeria, totaling 2286. The stratified sampling technique was used in selecting a sample of 457 lecturers from all the universities for the study. Data collection was done with the use of a structured instrument, Higher Education Research and Economic Growth (HEREG) questionnaire. One sample t-test was used in analyzing the data collected. The calculated t-values were less than the critical t, leading to the retention of the null hypotheses. It was therefore concluded that the impact of higher education research on economic growth in Nigeria is not significantly high. Besides, such research results were not given adequate patronage by the productive sector of the economy. Based on this, it was recommended that qualitative researches in the area of economic growth and development should be encouraged in the institutions through adequate funding and patronage by the Nigerian productive sector. Besides, effort should be made to ensure that research results are commercialized through linkages and collaborations with the productive sector to facilitate their utilization.
Keywords: Higher, Education, Growth, Nigeria, Economic, Research.

INTRODUCTION

One of the primary and traditional roles of higher educational institutions is to engage in basic research that could lead to the advancement of knowledge. Through research and its results, higher educational institutions are expected to contribute to the improvement of the quality of life, social, economic and technological development in the society. Bako (2005) agued that the most important yardstick for measuring the quality and relevance of higher education research is by its level of contribution to the general economic growth, development, prosperity and democratic empowerment of the citizenry. Nigeria, which has the largest number of higher educational institutions in Africa, is equally endowed with the largest human and material resources potential in the continent. The extent to which its economic development is impacted by the changing direction,

quality and quantity of research emanating from these ever expanding higher educational institutions is a pointer to the level of commitment of the institutions to the mandate for which they were established.

Research and development has become the most enduring and effective means of boosting sustainable economic development and re-enforcing competitiveness in the face of rapid growth taking place between industries, countries and peoples in the world. There is ample evidence to show that research and development generated by higher education, more than anything else, has contributed to the rise and expansion of the world knowledge economy, and the establishment, once again, of imperial knowledge hegemony of a few countries over the rest of the world in the on-going process of globalization and its uneven development. This explains why the main criteria for ranking the "world class universities" is not so much

the volume of teaching, student population or community services a university could muster; but research output measured by the breakthrough findings published in first class and medal winning journals and books, which could increase the volume and rate of knowledge accumulation. This development has made knowledge accumulation to be the most important and dominant form of today's capital accumulation, responsible for launching the advanced countries to the top of the world, by their control of the most advanced social and human capital formation, economic development and improved living conditions. Nigeria, with its abundant natural and human resources, coupled with the number of higher educational institutions, can be "transformed" into one of the world' largest economies if research and development activities are properly harnessed and utilized. This study differs from earlier researches in related areas because of its specific consideration of the demand for Higher Education Research by the productive sector of the Nigerian Economy.

RESEARCH AND DEVELOPMENT IN NIGERIAN UNIVERSITIES

Even though the main function of the first and second generation Nigerian universities was not specifically research, yet it would be interesting to see how it was accommodated and promoted to optimal level and international acclaim. The period, 1960s and 1980s, was not only the golden age of university education in the country, but also its research. In fact, it was unanimously agreed by the World Bank, the National Universities Commission, the Nigerian academic staff union, and industries that employ graduates, that in terms of quality and quantity of research output of tertiary institutions, Nigeria was the best and leading in Sub-Saharan Africa from 1960s to the late 80s (Karani, 1997; Okebukola, 2002). One index for measuring the research output was by the number and quality of published works authored and co-authored by Nigerians in academic and international journals, and by the world distribution of active serial titles emanating from the universities, which contribute to the generation, dissemination and application of scientific knowledge for development in Nigeria and

beyond (Cetto, 1998). Excellence in research and publications has made individual universities to have earned global respect and recognition in specific disciplines. The University of Ibadan was famous in medicine, education, religious studies and history; Ahmadu Bello was renowned in Engineering, Veterinary medicine, Agriculture, History, Arts and Social Sciences; Lagos was recognized in Business Administration, Law and Social studies; and Nsukka was famous in languages and literature. Evaluation by the NUC's systematic ranking of Nigerian universities according to the performance of their academic programmes through their accreditation exercises, have radically changed the above picture (NUC Quality Assurance in Nigerian Universities Vol. I, 2002).

Another way of measuring the quality of research output is through academic standard attained by a comparative analysis of the quality of graduates evaluated by labour employers and peer universities. Because of the extensive research carried out by the academic staff and the availability of teaching and research facilities, the Nigerian graduates of the early period were classified among the best in the world. This was attested to by national and international agencies, such as the National Universities Commission (NUC), World Bank, and even the academic staff themselves, as could be seen in the excerpt below:

"By the Mid 1970s the post independence investments in education and university education in particular had created enormous potential for the country. The expansion of university education occurred with increased quality of instruction recalled in the institutions. Between 1960 and 1980, graduates of Nigerian tertiary educational institutions were among the best in the European and North American Universities, and Nigerian academics proved their mettle that earned national and international acclaim and recognition. These developments created the actual possibility that Nigeria would realize her destiny as the powerhouse of African liberation and the pride of the black man and woman all over the world" (ASUU, 2002).

During the first phase of Nigerian universities, it was observed that the rate of return from investment in higher education was highest in Nigeria compared to other African countries where the statistics were available. Nigerian universities yielded the highest rate of return of 46% against 15%, the lowest between 1960 and 1980 (Hinchciffe, 1987). Consequent upon

the high rate of return generated by higher education, Nigeria was able to sustain a very high economic growth rate, development and relative prosperity within the country. In fact, the growth rate of the Gross Domestic product in 1962-63 exceeded the four per cent, which the National Development Plan envisaged by shooting up to 5.7% (FRN, 1964).

This robust state of higher education and research could be attributed to a number of favourable conditions.

First was the colonial inheritance factor, which could be seen in the institutional, infrastructural, personnel and tradition of research, handed over to pioneer colonial universities. Though the British colonialism resisted the demand to establish universities in spite of the long years of agitation and demand for them, yet it established a great deal of research institutions right from the 1920s in order to promote its economic, political and social interests and policies in Nigeria. The universities also inherited a well-trained research cadre of staff, mostly British and Americans who had conducted numerous researches in Nigeria and outside. There was also a strong tradition of research which the expatriate staff brought to bear in the Nigerian universities during the colonial period from western established universities.

The second, and very important factor that facilitated the development of higher education and research was the overall handsome funding which education generally and universities in particular received from the early post colonial governments of Nigeria. For instance, between 1950s and 1960s the regional governments devoted from 25% to 30% of their annual budgets to education (Yesufu, 1985).

The third factor was the university-institutional framework created for research in terms of allocation of resources, functions and time for academic staff. Between ten and twenty per cent of the budget of the first and second generation universities was specifically allocated to research (Yesufu, 1985).

Finally, at the National level the early universities enjoyed some relative institutional autonomy and academic freedom from the democratic regimes of the first and second Republics (1960-1966 and 1979-1983) and the neo liberalized military regimes of

Gowon-Obsanjo-Murtala 1966-1979 which enabled them to conduct research and pursue knowledge without hindrance from the states and governmental bureaucracies. There was a conducive atmosphere and environment created for the flourishing of universities in research in the country.

As generally agreed, the systematic decline and collapse of research in higher education and universities particularly started from the late 1980s and has persisted till date. Thus, the National Supervising agency of the Nigerian universities, the NUC, noted that:

> "in terms of quality and quantity, the research out-put of tertiary institutions in Nigeria was about the best in sub-Sahara Africa up to the late 1980s. The wherewithal for research such as good research training and motivation, availability of equipment, and good library facilities pre-dominated, but with the onset and acceleration of the decay in the system, these ingredients faded away. By 1996, the quantity and quality of research had declined to an all-time low level. (Oke bukola, 2002: 49).

Summarizing the factors that contributed to this decline from the late 1988 to 1996, and subsequent collapse from 1997 to date, the Nigerian Universities Commission listed the following:

- Lack of research skills in the modern methods.
- Constraint of equipment for carrying out state-of-the art research.
- Over-loaded teaching and administrative schedules which leave little time for research.
- Difficulty in accessing research funds.
- Diminishing scope of mentoring junior researchers by seasoned and senior researchers due to brain drain (Okebukola, 2002; 4).

The Research paradigm went through two phases in the development of higher education and universities in Nigeria. In the first phase, research was recognized and conducted, supported and intended to improve the productivity of labour and its specialization, and to a greater extent contribute to solving the societal problems. In the second phase, the quantity and quality of university based research has, since the late 1980s, begun to decline gradually to the current level of collapse and virtual disappearance. The kind of thinking that informed the current paradigm is that research is a luxury, at best, or a waste of funds, at

worst, and that teaching and production of manpower and other university academic activities could take place and expand without research. It is also the same thinking that informed the institutional definition and distributing of university functions, resources, funding, recruitment of staff, training and sharing of duties and schedules in which research is now completely left out. At the moment, over 99.5%, if not all 100%, of the Nigerian university activity and time are devoted to teaching and assessing of students throughout the year, without definite official time designated for doing research (Bako, 2005). Those that must do research could only do so by "stealing" time out of teaching, or their spare time, or leave, if they manage to secure it. The concept of research as an academic activity for generating knowledge for economic development has not yet dawned on the Nigerian ruling class, policy makers, university administrators and staff.

It is important to recognize that the decline of university education generally and research particularly is a reflection of the degree of chronic under funding which the universities have been subjected to in recent time. It is ironic to note while the number of universities and students' enrollment have been expanding from six universities in 1962 enrolling 3545 students, to 37 enrolling 350,000 in 1998, and in 2005 to 84 universities with about 800,000 total student population, the percentage of the National budget allocated to education and universities has been steadily declining from an average of 30% in the 1960s, 15% in the 70s and 80s, to 6% in the 1990s, and to less than 3% in the 2000s (Ukeje 2002).

As confessed by the NUC in an equipment audit it conducted on all Federal universities, it revealed that teaching and research equipment are in the advanced state of decay or are in severe insufficiency. Over 70 per cent of the laboratory equipment and library books in today's Nigerian universities, for instance, were bought and placed between 1960s and 1980 (Okebukola, 2004). This point is further validated by another survey conducted by the NUC, in which it discovers that only about 30 percent of the university student population could have adequate access to class rooms, lecture theatres, laboratories, workshops and libraries (Okebukola 2002;19).

The official figures of the research grants allocations made to the universities, according to the NUC, between 1989 and 2003 as shown in Table 1 below could be described simply as official distortions.

Table 1
Research Grant Allocations and Releases to
Universities from 1987-2003

Sl. No.	Year of Release	Allocation (Naira)	Amount Released (Naira)
1.	1987	12,776,000.00	12,776,000.00
2.	1988	20,000,000.00	17,237,875.00
3.	1989	20,000,000.00	20,000,000.00
4.	1990	24,000,000.00	22,075,371.00
5.	1991	51,266,530.00	16,645,034.00
6.	1992	14,500,090.00	17,472,972.00
7.	1993	122,182,102.00	122,182,102.00
8.	1994	132,213,817.00	98,662,255.00
9.	1995	155,534,575.00	73,973,806.00
10.	1996	153,842,000.00	50,583,686.00
11.	1997	194,013,732.00	122,020,447.00
12.	1998	215,618,453.00	149,993,549.60
13.	1999	302,735,543.00	183,501,468.00
14.	2000	448,127,780.00	612,666,910.00
15.	2001	206,410,910.00	206,410,619.00
16.	2002	–	–
17.	2003	73,435,618.00	73,435,618.72
	Total	2,146,657,150.00	1,799,637,713.32

Source: Okebukola (2004).

Going through the documents from which the above statistics were compiled, distinctions could be made exactly between research grants allocation and the actual releases, as well as between the actual releases and direct research utilization by the universities. From the research Bulletins produced by the National University Commission, for example, out of the total fund budgeted for research between 1999 and 2000, less than twenty percent were actually released to the NUC by Government, while out of those funds, less than 50% were actually released to the universities, and out of this allocation less than 3% of the money utilized for research (Bako, 2005).

Because of the shortfalls the universities have been experiencing in the payment of salaries and maintenance services, the bulk of the research grants were vied for these purposes. This is why most of the

Nigerian universities find it difficult to account for the research money received. (NUC Research Bulletin, 1997-2000). From a survey conducted, less than 10% of the academic staff in the Nigerian universities received research grants in the past one and half decades (NUC Research Bulletin, 1997–2000).

Another major constraint of Nigerian university research is that it has been increasingly delinked from the productive sectors of the economy, and surprisingly even from the community and polity problems and issues. Research has been trapped in and limited by the immediate idiosyncrasies of supervisors and graduates.

In a study on why there has been a very low demand for and the use of Nigerian university Research and Development (R&D), the finding shows more than 90% of the respondents thought poor funding for Science and Technology (S&T) prejudiced the production sector against the use of university results, poor or indifferent attitudes of the productive sector of research result (64%), poor communication links between the two sectors 64%. The lack of clear cut enabling policies was also considered an important factor (49%) (*httt.///research.yahoo.com.appliedreseaerch+NigerianUnivesitiesresearch*).

An analysis of the demand for university-based research showed that not much of the expertise of researchers across the universities was in demand in the productive sector. University-based research in Nigeria is commonly believed as unable to solve specific problems applicable to Nigeria's productive sector. It is not surprising; therefore, that industry demand for local R&D is low. Unlike some universities in the developed countries, most, if not all, universities in Nigeria have no patent office. The need for copyright protection has been ignored because few research results are ever adopted. Commercialization of research results, therefore, is still in its infancy at most Nigerian universities.

In the productive sector, there is a low level of awareness of university-based research results. In a study conducted in 2005, informal interviews and questionnaire on the demand for, and use of, university results were administered to technical professionals at 25 industrial establishments in the Lagos area. Majority of the respondents indicated that though they sought information on university-based research and innovation, no relevant information was obtained. They also asserted that they adopted research results and innovation only when they were relevant and feasible. Many of the large conglomerates indicated that there was no need for linkage between them and the university researchers (*httt.///research.yahoo.com.appliedresearch+NigerianUnivesitiesresearch*).

However, some of the firms indicated the desire to adopt research results and innovation relevant to their production systems, if such were made available. It is obvious from these responses that many firms in Nigeria do not look to universities for research and innovations and, hence, do not maintain or need to maintain any form of linkage with them. The findings of the study above corroborated that of Kumuyi and Igwe (1989), who found that only a limited number of the R&D results at institutions of higher learning ever mature into commercial innovations. It was recognized that there was little or no interaction between the universities and the productive sector. Interactions, if any, have been very limited in scope.

The picture of the research trend in Nigerian universities can be glimpsed from the above review. The bulk of this research is neither related to, nor determined by the demand and priorities of the Nigerian economy, society and polity. This is because it is almost entirely delinked from them in terms of suppositions, methodology, findings and policy applications. It has little added intellectual value for the society, and virtually adds nothing to it in terms of solving its problems or advancing its progression.

There has been very little or no collaboration between the university researchers, operating strictly from their disciplinary confines and mould. This lack of collaboration exists within and among the universities as well as within faculties of the same Universities. No attempt is made whatsoever to disseminate its findings or translate it into patents for industrial application and expansion of production. The first attempt was by NUC to organize Nigeria universities Research and Development Fair, 22nd-26th November, 2004, whose objectives were:

- To exhibit innovative research projects and out-puts from Nigerian Universities.
- To highlight innovation and creative efforts of R&D in Nigerian universities
- To provide opportunities for networking and collaboration among institutions, between institutions and industries, as well as with institutions abroad.
- To provide a focus for industry to select research output for further development for mass production and commercialization
- To provide avenues for attracting support for ongoing development oriented researches from the organized private sector and international development agencies (Nigerian University System Chronicle Vol. 12, No. 1, p. 16).

According to the communiqué of the Fair, 43 universities and a total of 592 research projects were exhibited. However, most of the objectives of the Fair were not achieved (Nigerian university system chronicle Vol. 12, No .2, December 2004).

This trend has persisted since the late 80s. As found out by Igwe (1990) most of commercializable industrial R&D in Nigeria is carried out by government-owned research institutes; only a limited amount of university research reaches a commercial state. Indeed programmes at the universities have not responded adequately to the developmental needs of Nigeria. As Musa (1988) emphasized, the bulk of research at the universities is conceived in terms of publications and career advancement and tends to have little social relevance.

Aim and Objectives

The study was carried out to examine the relevance of higher education research to economic growth in Nigeria. Specifically, the study sought to:
1. Ascertain the impact of Higher Education Research to Economic Growth in Nigeria.
2. Ascertain the demand for Higher Education Research by the productive sector of the Nigerian economy.

Hypotheses

The following null hypotheses were formulated to direct the study.

1. Impact of Higher Education Research on economic growth in Nigeria is not significantly high.
2. The demand for Higher Education Research by the productive sector of the Nigerian Economy is not significantly high.

METHODOLOGY

The survey research design was adopted for this study. This is because the researcher had to gather information regarding the variables under study in order to test the hypotheses. The population consisted of lecturers in the faculty of social sciences in state and federal universities in the South-South and South-East regions of Nigeria, totaling 2286. The universities selected for the study were: the University of Uyo; University of Calabar; University of Port Harcourt; Abia State University, Uturu; Delta State University, Abraka; and Niger Delta University, Wilberforce Island, Bayelsa. The stratified sampling technique was used in drawing a sample of 457 lecturers from the selected universities in the two geo-political zones for the study. A structured questionnaire tagged "Higher Education Research and Economic Growth (HEREG) Questionnaire" was developed by the researcher and used in collecting data for the study. The instrument was duly validated using the face and content validation methods and pilot tested to determine its reliability using the Pearson Product Moment Correlation Analysis. This stood at 0.697.

RESULTS AND DISCUSSION

The data collected were analyzed using one sample t-test.

Hypothesis 1

Impact of Higher Education Research on economic growth in Nigeria is not significantly high.

The null hypothesis states that there is no significant impact of higher education research on economic growth in Nigeria. In order to test the hypothesis, one sample t-test was used to analyze the data.

The obtained t-value was 1.03. This value was tested for significance by comparing it with the critical

Table 2

One Sample T-Test Analysis of the Impact of Higher Education Research on Economic Growth in Nigeria

N = 457

Variable	No. of Item	X	SD	t
Impact of High Education Research on economic Growth in Nigeria	5	17.34	1.92	1.03*

* Significant at 0.05 level; df = 456; critical t-value = 1.96.

t-value at 0.05 level with 456 degree of freedom. The obtained t-value (1.03) was less than the critical t-value (1.96). Hence, the result was not significant. The result therefore means that there is no significant impact of higher education research on economic growth in Nigeria.

Hypothesis 2

The demand for Higher Education Research by the productive sector of the Nigerian Economy is not significantly high.

The null hypothesis states that the demand for higher education research by the productive sector of the Nigerian economy is not significantly high. In order to test the hypothesis one sample t-test was used for the data analysis.

Table 3

One Sample T-Test Analysis of the Level of the Demand for Higher Education Research by the Productive Sector of the Nigerian Economy

N = 457

Variable	No. of Item	X	SD	t
The level of the demand for higher education research by the productive sector of the Nigerian economy	5	17.73	1.34	0.97*

* Significant at 0.05 level; df = 456; critical t-value = 1.96.

The obtained t-value was 0.97. This value was tested for significance by comparing it with the critical t-value at 0.05 level with 456 degrees of freedom. The obtained t-value (0.97) was less than the critical t-value (1.96). Hence, the result was not significant. The result therefore means that the demand for higher education research by the productive sector of the Nigeria economy is not significantly high.

DISCUSSION OF FINDINGS

Data analysis in Hypothesis one revealed the calculated t-value to be less than the t-critical, leading to the retention of the null hypothesis. By implication, the impact of higher education research on economic growth in Nigeria is not significantly high. While the result of this finding agrees with current opinion and recent studies in the area (Okebukola, 2002; Bako, 2005), it is at variance with what was obtained before the late 1980s (Karani, 1997; Cetto, 1998; ASUU, 2002).

The quantity and quality of university research in Nigeria has drastically fallen. Okebukola (2002) lists some of the factors responsible for this to include:

- Lack of research skills in the modern methods.
- Constraint of equipment for carrying out state-of-the art research.
- Over-loaded teaching and administrative schedules which leave little time for research.
- Difficulty in accessing research funds.
- Diminishing scope of mentoring junior researchers by seasoned and senior researchers due to brain drain.

This may not be contested as the lecturers aptly attest to it. Most research works in Nigerian Universities today are carried out by postgraduate studies. The lecturers venture into research because it is a condition for their promotion. Sponsored research work is scarce in our institutions of higher learning these days. Industries seem not interested in higher education research for varied reasons. While government funding is either not there or diverted to other uses. In terms of quality, most of the research works do not meet the standard required by the productive sectors due to poor funding and inexperience.

In testing hypothesis two, the situation was not different. The calculated t-value was less than the t-critical. This led to the retention of the hypothesis, implying poor demand for higher education research by the productive sector of the Nigerian economy. The finding is supported by Igwe (1990). The productive sector of the economy shows less interest in higher

education research for such reasons as poor funding of higher education research, inexperience of the researchers, lack of research skills in modern methods, and constraint of equipment for carrying out state-of-the-art research (Okebukola, 2002).

Besides, higher education research in Nigeria seems not to reflect the needs of industries and the society. There is an evident lack of collaboration between higher educational institutions and the industries (Kumuyi and Igwe, 1989). The bulk of research of higher education in Nigeria is conceived in terms of publications and career advancement and tends to have little social relevance (Musa, 1988). Only a limited amount of university research in Nigeria reaches a commercial state (Igwe, 1990).

CONCLUSION

On the basis of the findings, it is concluded that:

- Higher education research in Nigeria has not adequately addressed the issue of economic growth in the country. It is inadequate both in quantity and quality.
- There is low demand for higher education research by industries and the productive sector in Nigeria. It is conceived as having little relevance to the needs of the economic sector and the society generally.

RECOMMENDATIONS

The recommendations that follow are made based on the findings and conclusions drawn.

1. Researchers in Nigerian Higher Educational Institutions should be guided appropriately. Necessary steps should be taken to improve on the quality of research in the institutions.

2. There should be collaborations between higher educational institutions and the industrial sector of the economy to make researches relevant to the needs of the economy.

3. Research funding in higher education should not be left for the government alone. Industries and other corporate bodies should rise to the challenge of funding research in these institutions.

4. Higher educational institutions should create sufficient time for research and also should not divert funds meant for research into other uses.

5. The industrial sector should, as a matter of policy, patronize higher education research to encourage the researchers.

6. Universities should hold regular workshops and seminars for industry to disseminate their findings and discuss their applicability. They should advertise their capabilities.

7. The government should formulate a policy ensuring that some percentage of the industry's profit is spent on Research and Development.

8. Universities should sensitize potential users to the need for research and the use of available research results.

9. The productive sector of the economy should be involved in decisions about proposed research. This will help the universities identify worthwhile research and establish positive links between the productive sector and the universities.

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