

# Federal Government Funding of Research in Universities in Nigeria, the University of Benin as a Case Study

Roseline O. Osagie<sup>1</sup>

<sup>1</sup> Faculty of Education, University of Benin, Benin City, Nigeria

Correspondence: Roseline O. Osagie, Faculty of Education, University of Benin, Benin City, Edo State, Nigeria.  
Tel: 234-803-723-7669. E-mail: rosarugue@yahoo.co.uk

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## Abstract

It is increasingly evident that research is extremely critical and important if universities are to serve as engines of development in their areas of locations. For a knowledge-driven world, investment in research and development (R&D) is a sine qua non for a nation. Few studies have examined the federal government's investment in research in her universities. Furthermore, there is no available evidence of studies on the federal government funding of teaching and research equipment in universities in Nigeria. This study, therefore, investigated the federal government funding of research, teaching and research equipment at the University of Benin. Four research questions were posed to guide the study. The findings showed that less than 5% of the total recurrent revenue was allocated for research at the University of Benin during the 1992/93 to 1996/97 academic sessions. The findings indicated that the federal government is not making a robust investment in research and therefore Nigeria is not developing. Hence its economic quagmire. This paper, therefore, canvassed for the revitalization of research in universities in Nigeria as a means of fast-tracking its economic development.

**Keywords:** research, funding, economic development, federal government, university of Benin, Nigeria

## 1. Introduction

Education in general and higher education in particular are fundamental to the construction of a knowledge based economy and society (Saint et al., 2003). The universities in Nigeria are charged with the creation of knowledge and it is one of their primary mandates. In creating knowledge, a lot of research has to be undertaken by both the universities and research centers. Research is a basic tool for human development and through research countries are developed and advanced in high technology. Developed countries have been harvesting the technological spin-offs of scientific knowledge from research for national development and wealth creation (Benner, 2008). They have continued to strengthen their scientific research leadership and capacity in their universities in order to strengthen the development of a knowledge-based economy. University research is the original investigation undertaken to acquire new knowledge in the natural sciences, social sciences and humanities (Miller and Senker, 2000). In order to cope with global competitiveness, acquisition of new knowledge through research is inevitable. For the advancement of an economy is directly linked to the performance of its industries. This performance is a function of advancement in science and technology which cannot be achieved without some research.

Nigeria is largely a consuming society, a sellers' market where everything can be disposed of. If adequate research is carried out, Nigeria would be able to develop products and be less dependent on the importation of manufactured goods. Nigeria's dependence on other nations for manufactured products has grave consequences such as the wide spread poverty in the country. This contrempts of poverty can be alleviated through manufacturing industry. Manufacturing is a means of deriving man-made wealth which is sustainable (Uumuyi and Igwe, 1989). The World Bank (2002) noted that the ability of society to produce, select, adapt, commercialize and use knowledge is critical for sustained economic growth and improved living standards and stressed that knowledge has become the most important factor in economic development. The major growth drivers of the economy in particular, agriculture and manufacturing in Nigeria continue to be very weak. In an age of knowledge as key factor of production, these could be improved upon with the help of research in the universities. Supporting research, in particular, university based research is considered to be an important element in the strategies to promote and sustain economic growth in developed countries. Technological

innovations which lead to higher productivity are products of research undertaken in universities. Research is considered to be of critical importance for development and is supported by public money (UNESCO, 2006). The universities are relied upon for carrying out a major part of the public funded research in developed countries (Milner and Senker, 2000). Recent advances in information, transportation, and space technology in the advanced countries are the fruits of painstaking research in the past several decades. Hence, universities in Nigeria should make research and development their top priorities. What makes a university unique is the special service it provides for its immediate community. Such specialized services are derived from the results of research it conducts. Universities have made important contributions to the growth and development of nations through research. By producing graduates with new and current ideas, universities make important contributions towards creating innovations for growth and development of industries and government businesses, thereby promoting wealth and development (Okebukola, 2004). Universities support knowledge driven economic growth strategies and poverty reduction by generating new knowledge, building the capacity to access existing stores of global knowledge and to adapt that knowledge to local use. Technical innovations and their diffusion lead to higher productivity and most innovations are products of basic and applied research undertaken in the universities. Progress in agriculture, health, environmental sectors, science, engineering and technology is heavily dependent on the application of such innovations.

The developed countries believe in research and development (R&D). Consequently, they invest heavily in it. It is the huge expenditure of developed countries such as the United States, Canada and European countries on R&D that explains their enhanced enviable level of industrialization, economic prosperity and self-reliance (Okecha, 1988). He argued further that the huge expenditure on R&D by the fast developing countries such as South Korea, India, Brazil, Taiwan, Hong Kong and Singapore explains their current grip on industrialization, economic development and self-reliance. Given the fact that other countries invest heavily on research in their universities and noting that few studies have examined the federal government funding of research in universities in Nigeria, this study therefore investigated how the federal government has invested in funding research in her universities in Nigeria, using the University of Benin as a case study. Besides, this study investigated the federal government funding of teaching and research equipment as there is no available evidence of studies on federal government funding on teaching and research equipment in the universities in Nigeria.

## **2. Teaching and Research**

Research, teaching and learning are symbiotic. Each depends on the other, through the use of research findings in the classroom, through the use research to model ways of thinking; through teaching research methods and attitudes, having students carry out collaborative research with faculty (Nulen and Huber, 1989). Given the important influence university lecturers have on student learning, lecturers need to keep up with the latest developments in their field and they need to develop the deepest possible level of understanding of the important concepts in their specialties (Boyer, 1990). This can be done effectively through the involvement of lecturers in research. Teaching involves research where practice and reflection on that practice give ways to new knowledge (Reiman and Thies, 1993). Research is necessary for didactic classroom teaching to occur and lecturers need to gain new knowledge to cope with the complex issues they face by regularly seeking new information. Acquisition of knowledge is forever ongoing. It is never static.

According to Ramsden (2003), research in teaching has three effects. First, research influences lecturers to be aware of the latest developments in their field and reflect those issues in their course materials through developing or applying new teaching methods to be effectively delivered for student learning purposes. It should be understood that students want knowledge. Second, research revitalizes lecturers, thereby enabling them to identify effective teaching and learning methods, promoting effective teaching, widening the range of the lecturer's professional skills, providing a connection between instructional methods and results, helping lecturers apply research findings to their own instruction and enabling them to become change agents. Third, involvement in conducting research provides lecturers with a means for curriculum development. Thus, research will enable the development of school curriculum that will be designed to produce experts who will effectively tackle the country's problems. Hence, the development of an educational system that is functional and that is tailored to solve the nation's problems. It will enable lecturers to increase their interaction with students and to more effectively evaluate students' needs (Reed et al, 1992). Shaping human mind is shaping humanity and development. It is serious business and must be rigorously and doggedly pursued. A commitment to a solid foundation and sustainable education sector should be pursued by the federal government.

A major problem facing Nigeria since independence is energy. At the same time, Nigeria has abundant solar energy, gas resources, coal, wind and geothermal energy to name a few. Nigeria has abundant solid mineral resources that cannot be exploited because the education system has failed to produce the needed manpower to

explore and exploit these minerals. It is only through research endeavor that the exploration and exploitation of such minerals could be achieved. More than fifty years since crude oil was first struck at Oloibiri ( Culturelink, 1996), the Nigerian education system cannot produce the required technical manpower to man the entire oil industry. The education system is unable to produce professionals needed to process the crude oil into petrol, diesel, kerosene and other oil by-products. The oil industry is completely in the hands of foreign joint-venture partners while Nigeria seeks a mere 40 per cent local content that can hardly be met. A systematic engagement in research and development in the universities in Nigeria is the only viable option to tackle these problems. Amid the chronic energy crisis facing Nigeria, it is research that can develop a curriculum that will be tailored to produce graduates who will handle these problems. The universities should not engage in research for research sake but use research to solve the myriad problems in the public glare.

The eastern states are devastated by soil erosion while the northern states are ravaged by desertification. Lagos state is flooded annually with severe consequences. No university in these regions has developed homemade curriculum to address these problems. Unless the educational curricula are tailored to solve local needs, Nigeria cannot develop as a nation. If Nigeria is interested in space technology, then it must develop a curriculum through research in her universities to study space science and technology like other countries have done. It cannot expect other countries to develop space technology for her. That will be misguided. A sustainable research capacity development requires for the universities to expand their graduate study programs and create research environments at their institutional levels where students and their faculty find solutions to the challenges of the present and the future. This effort may demand a larger share of funding for higher education in general and a bigger allocation of higher education funds to graduate study programs. It is in evidence that the system, structure and content of education played a key role in the transformation of the emerging nations of Asia from poor to wealthy countries and in making them globally competitive countries. Considering the challenges that confront Nigeria today, the education system needs to be transformed if Nigeria is to achieve a wider transformation of her economy and society.

The supervisory and coordinating agency set up by the federal government for the universities is the National Universities Commission (NUC). The NUC serves all universities, both public and private, only as regulatory body in terms of curriculum and program approval. The NUC is also the channel through which funds are obtained from the federal government and disbursed to the public universities.

### **3. Purpose of the Study**

The governments in developed countries give high priority to research and development (R&D). They, therefore, make high expenditure for it in their universities. Few studies have examined the federal government funding of research in the universities in Nigeria. Moreover, there is no available evidence of studies on the federal government funding of teaching and research equipment in the universities. This study was, therefore, motivated by a desire to investigate the extent to which the federal government has funded research, teaching and research equipment in universities in Nigeria, using the University of Benin as a case study.

### **4. Research Questions**

In order to accomplish the purpose of this study, specific questions were raised as follows:

- 1) How much grant was available for research at the University of Benin from 1992/93 to 1996/97?
- 2) How much grant was utilized for teaching and research equipment at the University of Benin between 1992/93 and 1996/97?
- 3) Did the University of Benin comply with the NUC stipulated guidelines for fund allocation for research, teaching and research equipment?
- 4) Did the University of Benin adhere to the NUC guidelines of distributing research grants to Science and Arts?

The study highlighted the extent to which the federal government provided the University of Benin financial resources essential for the implementation of its set objectives. It also highlighted how it utilized such resources to fund research, teaching and research equipment during the period of study.

### **5. Methodology**

The study was an ex-post facto research. The data for the research were retrieved from various official records. Data were also collected through the instruments of interviews, questionnaire, analysis of budget and other official documents. The population of the study comprised all the ten faculties at the University of Benin, specifically the Deans, Directors and Heads of Departments of the various units. The population also included

those units whose functions directly or indirectly support the academic production function of the University of Benin. The sixty-eight academic units of the University of Benin comprised the sample size. Sampling was not necessary because there was the need to get the responses of every unit administrator. Data for the study were also collected using the researcher's designed questionnaire called, Financial Allocation and Utilization Instrument (FAUI) to answer the questions raised for the study. The instrument was face validated and content validated by experts in educational research in the Department of Educational Administration and Foundations in the Faculty of Education, University of Benin. Their corrections and comments were used to rework the instrument. The reliability for the instrument was not required since the data were facts already available in hard form. All the researcher did was to collect them by herself from the Bursary and records in the Academic Planning Division. The researcher personally administered the research instrument to the respondents. She went from one faculty to the other. In each faculty, it was necessary to explain to the respondents the essence of the exercise and not an indirect means of auditing the faculty or department's account or records. The data were analyzed using descriptive statistics including mean, percentages and ratios.

## 6. Results

### 6.1 Results Pertaining to Question 1

How much research grant was available at the University of Benin from 1992/93 to 1996/97?

Table 1 shows the funds allocated for research grants at the University of Benin from 1992/93 to 1996/97 academic sessions. It shows that the total amount allocated for research during the period of study was N 48,015,137 (N is the symbol for the local currency called the Naira). Table 1 further displays a pattern of research grants that did not increase or decrease continuously with each succeeding year. Rather, the pattern was an alternating sequence of rise and fall with each succeeding year.

Table 1. Research Grants Allocation at the University of Benin 1992/93-1996/97

Year	Recurrent Revenue to the University in N	Research Grant Allocation in N	%	NUC indices %
1992/93	215,593,572	9,952,433	4.6	5
1993/94	228,998,347	8,399,874	3.7	5
1994/95	248,000,359	9,327,852	3.8	5
1995/96	302,282,102	8,612,132	2.8	5
1996/97	325,634,610	11,722,846	3.6	5
Total 48,015,137				

Source: Statistical Digest, Academic Planning Division 1992-97

### 6.2 Results Pertaining to Question 2

How much grant was allocated to teaching and research equipment at the University of Benin between 1992/93 and 1996/97 academic sessions?

Table 2 presents the distribution of grants allocated for teaching and research equipment during the 1992/93 to 1996/97 academic sessions. It indicates that during the period of study, the total grants utilized for teaching and research equipment was N71,592,839.

Table 2. Grants Utilized for Teaching and Research Equipment at the University of Benin, 1992-1997

Year	Recurrent Budget N	Teaching and Research Equipment (N)	%	NUC Indices (%)
1992/93	215,093,572	531,935	0.2	5
1993/94	228,998,347	7,840,000	3.4	5
1994/95	248,000,359	15,758,000	6.4	5
1995/96	303,282,102	11,928,000	3.9	5
1996/97	325,634,610	35,534,904	10.9	5
Total 71,592,839				

Source: Statistical Digest. Academic Planning Division. 1992-1997

### 6.3 Results Pertaining to Question 3

Did the University of Benin comply with the NUC guidelines of disbursing funds for research, teaching and research equipment during the 1992/93 to 1996/97 sessions?

Table 1 and Table 2 provide the answers to this question. Table 1 shows that the University of Benin did not comply with the NUC guidelines throughout the period of study. Instead of allocating 5% of its recurrent revenue for research which is stipulated by the NUC, it utilized 4.6%, 3.7%, 3.8%, 2.8% and 3.6% from 1992/93 to 1996/97, respectively. With regards to teaching and research equipment, Table 2 indicates that the University of Benin was in compliance with the NUC guidelines when it spent 6.4% and 10.9% of its recurrent budget for teaching and research equipment in 1994/95 and 1996/97 sessions, respectively. It did not conform with the NUC guidelines in 1992/93, 1993/94 and 1995/96 sessions when it spent 0.2%, 3.4% and 3.9% of its recurrent revenue, respectively, for teaching and research equipment.

### 6.4 Results Pertaining to Question 4

Did the University of Benin adhere to the NUC stipulated guidelines of allocating research grants to Science (including Engineering) and Arts?

The University of Benin sponsored 148 research projects during the period of study, from 1992/93 to 1996/97. These comprised of 85 projects for Science (including Engineering) and 63 projects for Arts. The average Science (including Engineering) to Arts ratio for the period of study was 57% to 43%. The NUC stipulated guidelines for allocation of research grants to Science (including Engineering) and Arts should be in the ratio of 60% to 40%. Thus, the University of Benin did not comply with the NUC guidelines for research grants allocation to Science (including Engineering) and Arts during the 1992/93 to 1996/97 sessions.

## 7. Discussion of Results

The total amount allocated for research grants during the period of study was N48, 015,132 as shown in Table 1. The number of academic staff on roll then was 750. Assuming that each staff had a right to research grant, then each lecturer would have received a paltry sum of N12, 804 per academic session between 1992/93 and 1996/97. If the grant received by each lecturer is denominated in U.S. Dollar, it would amount to less than \$100 (the exchange rate then was \$1 = N130) per each year. Thus, the funding of research is very low. This finding is in line with the general funding for research in other universities in Nigeria (Oyewole, 2006). Hence, the research allocation policy of 5% of the recurrent budget is grossly inadequate and cannot enhance sustainable research and development (R&D) in universities in Nigeria. According to Fadokun (2000), the total amount expended on research annually by the federal government is approximately on average 0.02% of the Gross Domestic Product (GDP). The Organization of African Unity (OAU), Lagos Plan of Action for the economic development of Africa urged member states to improve existing and create new funding mechanisms to provide funds for the development of their scientific and technological capabilities. The Lagos Plan of Action (1980) also recommended the expenditure of at least one per cent (1%) of the GNP on Science and Technology activities by 1990. One can infer from the findings of this study that Nigeria spends far less than the one per cent (1%) of its GDP on R&D as recommended by the OAU. Yet, investments in R&D contribute to increases in national income and it is estimated that a one percentage point increase in the ratio of R&D expenditure to GNP increases the growth rate of GDP by 0.78% (Chen and Dahlman, 2004).

Table 2 indicates that the University of Benin utilized a total of N71, 592,839 for teaching and research equipment from 1992/93 to 1996/97 academic sessions. This figure is equivalent to \$550,714 (\$1 = N130). Thus, the average allocation for teaching and research equipment was \$110,143 per academic session from 1992/93 to 1996/97. This amount is grossly inadequate for teaching and research equipment. The figure is representative of the funding of teaching and research equipment in other universities in Nigeria (Fadokun, 2000). The findings also agree with Oyewole (2006) that the federal government makes little investments in research and development, particularly in high priority areas such as agriculture, natural sciences, applied sciences, health sciences, engineering and technology. The inadequate funding has affected the activities in science laboratories, which lack most basic facilities, at the University of Benin (Osagie, 2012). It has led to persistent outcries from the Academic Staff Union of Nigerian Universities (ASUU) for improved funding of universities generally and research specifically. The inadequate funding for research limits the capacity of the universities to fully contribute to Nigeria's development and integrate themselves to the global knowledge networks. The implication of this finding is that universities in Nigeria do not yet possess adequate research capabilities and funding needed to make them active beneficiaries of global knowledge, generate, cull or adapt knowledge, innovations and problem solving.

The University of Benin sponsored 148 projects from 1992/93 to 1996/97. That is, it funded on average 30 projects per academic session. There was 750 academic staff during the period of study. Therefore, the odds in favor of a lecturer carrying out a funded project was 0.04 (or 4%). This finding is in accord with the findings of a survey conducted by Fadokun (2000) that less than 10% of the academic staff in Nigerian universities received research grants in the past one and half decades. This low research output probably reflects the low priority accorded to research by the federal government of Nigeria. Research should be seen as part of the everyday life of the university community, which knowledge is employed in solving some of the problems of the country.

## 8. Conclusion

In the light of the findings of this study, the general impression is that the federal government of Nigeria has not funded research robustly in universities in Nigeria as it is done in developed and developing countries. Consequent upon the inadequate funding, the academic staff is not properly incentivized to conduct research. They need to be motivated, their confidence needs to grow and government has a duty to assist them to perform. The low research output in universities in Nigeria as indicated at the University of Benin reflects the low priority given to research by the federal government of Nigeria. It is also a testament that the society itself does not value nor recognize the economic benefits of research. The federal government must begin to see research as key to achieving the country's socio-economic aspirations. It must see the research institutions as the drivers of the economy in the campaign for economic transformation. This study, therefore, recommends that the federal government of Nigeria should have a policy of long term objectives of building a national science and technological capacity to generate scientific and technological knowledge. It will require substantial investment in science, research and development and technological innovations. Policy makers should explore avenues for university-enterprise partnership in the areas of research development.

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