

## Full Length Research Paper

# Revitalizing research in Nigerian universities for national development

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Accepted 18 May, 2009

**No nation in the world has been known to progress when educational development is neglected. In fact, no nation develops beyond progress achieved in education. Countries that treat education with levity do so at their own peril. For a knowledge-driven world as we have today, investment in research and development (R and D) is a *sine qua non*. Nigeria is not investing much on research and therefore not developing even though other factors such as large-scale corruption, visionless leadership, planlessness and lack of will power also account for the slow pace of development. This paper canvasses a revitalization of research as a means of fast-tracking development. It suggests a four-pronged strategy which includes robust funding; generating funds through investment; force and forge linkages with the productive sector rather than encourage a "delink"; providing more Internet facilities and ensuring connectivity; and sensitizing all Nigerians about the importance of research.**

**Key words:** Research, universities, development, Nigeria.

## INTRODUCTION

The Economic Team (ET) put together by the erstwhile President of Nigeria, Chief Olusegun Obasanjo, sought to investigate how nations grow as a means of fast tracking Nigeria's economic development. They studied Japan, South Korea, Taiwan, Singapore, Malaysia, Indonesia, Hong Kong, Thailand, India, China and Botswana and found six characteristics common to them according to El-Rufai (2007):

- Stable legitimate government-not necessarily democratic.
- Pragmatic tolerant societies that live in peace and harmony.
- Investment in human capital-education and health-care.
- Investment in physical capital-power, transportation and communication networks which facilitate trade and exchange.
- Sensible use of market to provide equal opportunities, clear reward systems and interventions to help the vulnerable.

Looking at these six criteria, it is not surprising why Nigeria has failed to grow. Her performances on each of the six points are abysmally poor. The Table below gives an

insight into Nigeria's poor performance on some selected economic indicators vis-à-vis other countries (Table 1).

Generally, from the Table, Nigeria appears to be the least performer on all the indicators. Even though Nigeria and Korea are among the N-11, countries that could have BRIC-like impact in rivaling the G7 group, Korea has been adjudged to have the capacity to become like the BRIC countries (Brazil, Russia, India and China). Korea's score on the indicators are better than Nigeria's.

Nigeria cannot continue to ignore these criteria if she is to come out of the economic quagmire. As argued elsewhere, we need to think of new ways of doing things if we are to survive the globalization process (Akpochafo, 2004). Nations with robust technology and economy will gain in the new world order at the expense of those with peasant and failing economy.

The paper is divided into four parts. These are:

Introduction, research and development in Nigeria (Situation analysis), The way forward and conclusion.

In handling the topic, the paper sought to achieve the following objectives:

Discuss briefly the situation of research in Nigeria; and Suggest ways of revitalizing research in Nigeria as a

**Table 1.** Nigeria's economic indicators vis-à-vis some selected countries.

Indicators	Nigeria	South Africa	Korea	Japan	U.S
GDP per capital (\$)	411	2,980	7,660	31,400	24,740
Energy consumption per capital	141	2,399	2,863	3,642	7,018
Gross enrolment rates (primary)	76	-	102	102	104
I Male	85	-	101	102	104
II Female	67	-	103	102	104
Infant mortality	191.2	69	12	06	10
Meales immunization	34	63	93	66	98
DPT	29	67	74	87	97
Life expectancy	51	63	71	79	76
Female advantage	3.2	06	7.5	6.1	6.8

Source: Zenith Economic Quarterly 3(4) October 2008 p.38

means of fast tracking development. One of the six criteria identified by the Economic Team has to do with investment in human capital. Giving adequate attention to knowledge generation has leap-frogged nations from poverty to prosperity. El-Rufai (2006) observed that:

With adequate attention to knowledge production, nations have been known to excel, to generate wealth and ensure better standard of living, greater access to life changing opportunities.

Education in general and higher education in particular, are fundamental to the construction of a knowledge economy and society (Saint et al, 2003). The universities 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 centres. The number of universities has grown astronomically in Nigeria especially with the emergence of state and private universities and Nigeria now has eighty-six (86) universities made up of 25 federal, 30 state and 31 private universities. The increased number of universities has not translated into increased generation or creation of knowledge. Anya (1999) gave similar verdict that the Nigerian universities have not contributed to "the enlargement of the productive base of the economy through innovation and wealth creation; nor have they fostered the necessary attitudinal shifts and values relevant to sustained economic growth". One agrees with Anya because knowledge has become the most important factor for economic development in the twenty-first century and nations can only ignore it at their own peril.

### Research and development in Nigeria

The developed countries believe in Research and Development (R and D) and consequently, they invest heavily on it. It is the huge expenditure of developed countries like the United States and Europe on R and D that explains their enhanced and enviable level of industrializa-

tion and self-reliance (Okecha, 1998). He argued further that the huge expenditure on R and D by some fast developing countries like Korea, India, Brazil, Taiwan, Hong Kong and Singapore explains their current grip on Industrialization and self-reliance. Nigeria and other African countries, especially the sub-Saharan ones, are not unaware of the importance of Research and Development. The Organization of African Unity (OAU) Lagos Plan of Action for the economic development of Africa in 1980 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 also recommended the expenditure of at least one percent (1%) of the GNP on Science and Technology activities by 1990. The year, 1990, has come and gone and the figures available do not show significant improvement on the expenditure of African countries on research and development compared with other countries. While other countries like the United States of America, West Germany, Japan and South Korea spend substantial amount of money on R and D, Nigeria spends poorly on same as seen in the table below. Nigeria spends far less than the 1% of GNP recommended by the OAU (Table 2).

Saint et al, (2003) reported that in 1996, OECD countries accounted for 85% of total R and D investment; China, India, Brazil and East Asia represented 11%; and the rest of the world (including Africa) only 4%. The advanced economies enjoy the benefits of R and D and are spurred to investing heavily on it. In contrast, developing countries, including Nigeria, are yet to fully appreciate this as they prefer spending more money on sports, cultural festivals and the military, leaving peanuts for R and D (Okecha, 1998).

The disparity manifests in other areas as they relate to research and development. The number of researchers per million populations in developed and developing countries shows one of the disparities and the table below says it all (Table 3).

The USA, France, United Kingdom, Japan among

**Table 2.** Expenditure on R and D of selected countries.

S/N	Countries	% on GNP on R and D
1	Nigeria	0.3
2	South Korea	2.0
3	Japan	3.0
4	West Germany	3.0
5	United States of America	2-3

Source: Okecha (2008)

**Table 3.** Number of researchers in selected countries.

S/N	Countries	Researchers per million
1	United States of America	2,500
2	France/ United Kingdom	1,500
3	Japan	1,400
4	FR Germany	900
5	Canada	900
6	Chile	246
7	India/China	200
8	Argentina	194
9	Brazil	70
10	Africa	20

Source: Okecha (1998).

others are actively engaged in research unlike the effort by Africa where only 20 persons per million are involved in rigorous research.

In a related study, the World Bank (2002) came up with the following figures for scientists and engineers engaged in research and development per million persons. Nigeria has only 15 scientists and engineers engaged in research and development per million persons. The figures for other countries are: 158 in India, 168 in Brazil, 459 in Chi-na and 4,103 in the United States of America. The critical mass of scientists, technologists and engineers are crucial for competition, innovative output and breakthroughs. If the critical mass is absent, research could easily wither or atrophy.

Another area where the difference manifests is in the scientific publications. Nigeria's scientific output compared poorly to output else where. Saint et al, (2003) gave the figures as 711 for Nigeria, 3,413 for South Africa, 14,883 for India, 310 for Indonesia and 5,440 for Brazil. They opined that Nigeria's low research output is probably a reflection of the low priority accorded research and development by government decision-makers. As if to prove this, they said Nigeria's federal university system spends only 1.3% of its budget on research. Bako (2005) is of the view that 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 of the hegemony of a few countries over the rest of the world in the on-going globalization. Unfortunately, for the past one and half decade, Nigerian universities have been expending over 98% of their current expenditure on paying salaries and allowances and 2% on maintaining services, with zero allocation for research. As for capital grants, 40% is misappropriated and the remaining 60% is looted through inflated contracts, commissions and kickbacks (Bako, 2005).

With this type of scenario, not much can be achieved and little wonder why Nigeria has stagnated economically, if not retrogressing. One can conclude that the whole idea of research as an academic activity for generating knowledge for economic development is yet to be fully appreciated by the ruling class, the policy makers and university administrators. Currently, research in the universities is funded by graduate students, staff-in-training and academic staffs are poorly paid. Bako (2005) says less than 10% of the university based research is funded externally by foreign bodies and the same percentage by the university research boards. If Nigeria hopes to achieve the dream of becoming one of the 20 strongest economies by the year 2020 (Vision 20: 2020), there's need for a paradigm shift on how best to fund research in the universities in particular and in the research institutes as well.

### The way forward

Undoubtedly, the major obstacle to vibrant research in Nigerian universities is funding. The June 2001 ASUU/FGN agreement which laid out guidelines for allocating and disbursing funds within the universities assigned 5% of recurrent revenue to research. That is on paper but in reality the university administrators renege on this. Consequently, the universities must consider new ways of funding research as reliance on government sources lead to failure. Nwakanma (2005) is of the view that Nigerian Universities should imitate American universities by having fixed endowments in stock and in investment. The initial funds could be generated from alumni, friends of the university, parents, industry and government grants. Overtime, the funds swell and proceeds can be used to hire vibrant and productive professors, fund complex research and upgrade equipment and infrastructure. This is the practice in some American universities and they have become centres of excellence academically. Peretomode (2008) gave these figures as the money held in endowment fund of some top universities (Table 4). Professor (Mrs.) Ndidi Okereke Onyuike, Director-General of the Nigeria Stock Exchange, advised Nigerian universities to use the capital market option to source funds (Vanguard of June 27, 2007, page 22). It is the view of this writer that Nigerian universities should start consider-

**Table 4.** Endowment funds of some top universities.

S/N	Name of university	World ranking	Continent	Amt in US dollars
1	Harvard University	1	USA	35.6 billion
2	Stanford	3	USA	17.2 billion
3	Columbia	7	USA	17.5 billion
4	Princeton	8	USA	15.8 billion
5	University of Chicago	9	USA	6.5 billion
6	Oxford University	10	U.K	5.0 billion
7	Yale University	11	USA	22.5 billion
8	Cornell University	12	USA	5.5 billion
9	University of Pennsylvania	15	USA	6.78 billion

Source: Peretomode (2008).

ing these options if they really mean to fulfill their mandate of creating knowledge for development. Adamolekun (2007) reveals that the University of Ibadan, Nigeria has started implementing this plan. In 1973 when the university celebrated its 25<sup>th</sup> anniversary, it launched an appeal for development projects. The realized sums of N670,000.00 (Six hundred and seventy thousand naira) was invested in shares. Annually, part of the surplus is paid to the university as dividends. The amount paid to her in 2004 was N30 million (thirty million naira) and the value of the shares at the beginning of 2005 was put at about #1.4 billion (One billion, four hundred million naira).

That demonstrates how fast invested funds can grow even though there is the global cash crunch now.

A second strategy for raising funds for research in Nigerian universities is to forge and force more linkages with the productive sector of the economy. Currently, there is a "delink" of the universities from the economy and from society. There is no effective and willing cooperation between "town and gown". The Education Tax Fund (ETF) set up by government relies on the 2% Higher Education Tax on company profit. This is forcefully extracted from the private sector and grudgingly paid to fund research in the universities. This should not be so. The universities should be more proactive in their research pursuits. If the researches focus sharply on economic, community and political problems and relevant findings, breakthroughs and output are achieved, the economy and polity will respond positively by willingly funding university research over and above the 2% limitation. University research in Nigeria is largely out of tune with modern economic and social realities. Bako (2005) reported that the Director of Academic Planning and Research at the National Universities Commission (NUC) once wrote the Chairman, Committee of Vice-Chancellors of Nigeria Universities complaining about the poor quality supervision of doctoral theses in Nigeria universities. NUC was of the view that many of them were 'poorly supervised'. Such products can only become mediocre and not ground breaking researchers and their articles are largely found in 'substandard, locally concocted and

junky journals." In the words of Bako 2005, Nigeria university researchers these days have "little added intellectual value" for society and virtually add nothing to it in terms of solving its problems or advancing its progression. The universities need to be more relevant and the public-private partnership (PPP) needs to be strengthened. Nigerian universities should also approach foreign bodies that are favourably disposed towards research. At present four Nigerian universities -Ahmadu Bello University, Bayero University, Universities of Ibadan and Port Harcourt are benefiting from the 200 million dollars international funding for African universities by MacArthur and Carnegie organizations. The Funds have the promise of providing new laboratory and library equipment, Internet facility, computers, strategic plan, new sources of funding research and staff training. There are other bodies like Rockefeller Foundation, Ford Foundation, UNESCO and the World Bank that can be tapped.

Thirdly, the leadership of the universities has to be more aggressive in the provision of Internet facilities and ensuring connectivity. Nigeria and Africa are at the bottom of the ladder in a technology-driven world. Nigerian researchers are in a global competition in the twenty-first century with 19<sup>th</sup> century tools as Nigeria university libraries are filled with obsolete titles (Akpochofa, 2007). Elsewhere, in the advanced countries, emphasis is on virtual libraries which are defined as "libraries in which computer and telecommunications technologies make access to a wide range of information resources possible (Angaye, 2005)." The NUC alerted the nation when it said that "less than 20% of nation's varsities have access to ICT (See Vanguard of September 19, 2006, page 14). This compares poorly with what obtains in the United States of America that invests heavily on R and D as shown in the Table below.

The NUC added a prediction to the alert that it will take Nigeria between 20 to 35 years to catch up with the situation in the United States. One can add that the 20 to 35 years period is possible if we start now to appreciate and provide Internet facilities and connectivity. ICT compliance is a *sine qua non* in research and development.

We therefore need to retool. Lecturers and students alike should become computer literate and make effort to own their personal computer or laptops. The relentless effort of the Digital Bridge Institute (DBI), Abuja, at ensuring that Nigerian University lecturers become computer literate is a right step in the right direction.

Finally, the issue of raising the quality and quantity of research and development in Nigeria should be everybody's concern since its positive effects rob on us all. Consequently, there is the need to rouse the consciousness of all Nigerian people; the ruling elite, the citizens, the government, communities, the industrial class and non-governmental organizations toward the importance and imperative of research and development.

Bako (2005) also shares this view. Research being the method of creating knowledge and development, meaning the act of translating new knowledge into business ideas and products (Obanya, 2002) affects all - both the high and the low, the government and the governed. The government and the ruling class should play their roles well by appreciating the strategic importance of R and D by funding properly universities, and therefore research. Communities should cooperate with researchers when they visit them to collect samples, data or to experiment. A community turned away MTN when it wanted to install a mast in the locality insisting that they be paid some money first. Illiterate persons have resisted field or extension workers from trying out new methods or technology. All hands need to be on deck and sensitization can help to achieve this.

## Conclusion

The general impression is that Nigeria has not reached where it ought to be in terms of socio-economic development. If she must be among the twenty leading economies of the world, she must start doing things right and continuously. One of the things to be done right is funding research and development robustly as done in the developed countries. Some strategies for raising the quality and quantity of research in Nigeria universities have been suggested. These are; encouraging the universities to invest in stock and other worthwhile ventures, forging and forcing more links with the productive sectors of the economy, provision of ICT facilities for staff and students in the universities and raising the level of consciousness,

sensitization of all Nigerians about the importance and benefit of research and development. It is believed that R and D can be revitalized by being better funded and supported. If this is done, Nigeria is capable of generating knowledge that can make vision 20:2020 possible.

## REFERENCES

- Adamolekun L (2007) "Challenges of University governance in Nigeria." Vanguard of 19<sup>th</sup> April, p. 37.
- Akpochafo WP (2004) "Globalization and cultural imperatives in Nigeria for sustainable development" A paper presented at the National Conference organized by the Department of Sociology and Anthropology, Obafemi Awolowo University, Ile Ife, from 16<sup>th</sup> - 17<sup>th</sup> June, on Social problems, development and the challenges of globalization. 13 pp.
- Akpochafo WP (2007) "National development and the imperatives of Educational reforms in Nigeria universities." Niger. J. Educ. Philosophy 20(1): 58-65.
- Angaye CD (2005) cited in O. Adenipekun "FG establishes virtual libraries in polytechnics and monotechnics." Vanguard of 8<sup>th</sup> December p. 59.
- Anyia OA (1999) "Relevance of Nigerian universities to the knowledge-driven economy" Education Digest, August, 19-20.
- Bako S (2005) "Universities, research and development in Nigeria: time for a paradigmatic shift," A paper prepared for the 1s<sup>th</sup> General Assembly of CODBSRIA on Rethinking African Development: Beyond impasse, towards alternatives in Maputo, Mozambique from 6<sup>th</sup> - 8<sup>th</sup> December 32 pages.
- El-Rufai N (2006) "Higher learning and the challenges of reforms in Nigeria." The Guardian of 20<sup>th</sup> March pp. 10-11.
- El-Rufai N (2007) "Nigeria: What next? (2)" Vanguard of 14<sup>th</sup> October p.38.
- Nwakanma O (2005) "Nigerian Universities: world class rubbish." Vanguard of 30<sup>th</sup> January p. 9
- Obanya P (2002) Revitalizing Education in Africa. Lagos: Stirling-Holden Publishers (Nig) Limited.
- Okecha SA (1998) Science in Africa. Lagos: Stirling-Holden publishers (Nig.) Limited.
- Okecha SA (2008) The Nigerian University: An ivory tower with neither ivory nor tower. Owerri: Edu-Edy Publishers.
- Peretomode VF (2008) What is "Higher" in Higher Education? (16<sup>th</sup> Inaugural Lecture, Delta State University, Abraka). Abraka: Delta State University.
- Saint W, Harnett TA, Strassner E (2003) "Higher education in Nigeria: A status report." Higher Educ. Policy, 16: 259-281.
- World Bank (2002) World Development Indicators. Washington, D.C: The World Bank