Collaborative Approach: Strategy for Competitive Universities in Nigeria

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Abstract

Nigeria is considered as a giant of Africa with various economic resources but however even in Africa Nigerian universities are left behind. They are facing significant challenges with regard to competing with their counterpart across the globe. The main purpose of this paper is to examine how in this scenario the collaborative approach can be used as a strategy for Nigerian universities strive through the ranking of world-class universities. The study examines forty-six federal universities in Nigeria. Primary data was used through questionnaire as an instrument for data collection. Four hundred and sixty (460) valid questionnaires were used for the analysis; Chi-Square was used in the analysis. The result of the study revealed a positive relationship between research collaboration and competitive university in Nigerian. Based on the findings it was recommended that universities should adopt collaborative approach as a strategy to have concentration of talents, additional resources and good governance for growth, high performance and competitiveness, to this end, the governing council as well as the management of Nigerian universities should include collaborative activities and programmes with renowned scholars and reputableuniversities across the globe as part of their strategy to achieve competeiveness. The paper recommends future researchers to explore on the productivity and performance of Nigerian university system.

Keywords: Collaboration, Strategy, University ranking, Competitive university.

1. Introduction

Strategic approaches are essential in establishing competitive universities, often referred to as flagship universities or world-class universities. They are prestigious universities of research that develop nation's competitiveness in the global knowledge economy. These universities trained and produced high-skilled workforce for highbrow and technological leadership that build society (Altbach, 2009).

In nowadays-global society, universities compete among themselves to get external resources from different sources, talented students and professors for talent concentration into their institutions. The competition is a long existing phenomenon since middle age period (Shin and Toutkoushian, 2011). Though, the nature and types of nowadays competition differ in different dimensions with the earlier period.

In addition, in this era of globalisation couple with the existing knowledge economy mix that create what we called competitive global environment. It is a strategic agenda that universities and other higher institutions should go international and competes globally to strive on the top list of world ranking.

Recently, there is a lot of debate on the issue of the place of Nigerian universities in the world ranking. It has drawn attention as some people were asking why the lowly place and others are faulting the criteria used in the ranking. Webometrics Ranking is a ranking body of universities that measures web presence and content. In 2015, it does not mention a single Nigerian university until after 1,600 other mentions. And it counterpart ranking body called Quacquarelli Symonds (QS) World University Ranking, which concentrates on the programme and instructional content, in its world university ranking 2015, it does not mention a Nigerian university at all either.

In addition, Nigeria is considered as a giant of Africa with various economic resources but however even in Africa Nigerian universities are left behind. For instance, In the January 2006 ranking, Nigerian universities performance was poor. Only five Nigerian universities were listed among Africa's top 100 universities. They were poorly ranked below the top 50 universities in the continent (NUC, 2006). The first among them, the University of Ibadan, ranked 57th; ObafemiAwolowo University, ranked 69th; The university of Benin, ranked 78th; University of Lagos, ranked 90th; while University of Jos, ranked 98th. South African universities dominated the ranking while universities from less endowed African countries like Uganda, Zimbabwe, Kenya and Tanzania are ranked ahead of Nigerian universities.

Furthermore, the July 2006 ranking released in September, 2006 listed only four Nigerian universities, leaving out Universities of Lagos and Jos, which ranked 90th and 98th respectively in the January, 2006 ranking. The four listed Nigerian universities ranked 53rd, 72nd 87th and 100th among top African universities.

More so, nine years later in the world university ranking 2015, only two universities in Nigeria appeared in the first top 50 universities in Africa with ObafemiAwolowo University and University of Lagos as first and second in the country in position 25th and 48th respectively. None of the Nigerian University form part of the top 2000 world universities based on the web metrics ranking 2015.

The main problems of the backward of Nigerian universities are the fact that, Nigerian universities are facing significant challenges with regard to competing with their counterpart across the globe. The main purpose of this paper is to examine how in this scenario the collaborative approach can be used as a strategy for Nigerian universities strive through the ranking of world-class universities. And based on this objective and previous studies the following hypothesis was formulated and tested: Collaboration does not have any significant relationship with university competitiveness in Nigeria.

A number of studies were done in the area of research collaboration with a bias in the university-industry collaboration (Cibulka and Kritek, 1996; George *et al.*, 2002). Few initiatives have been launched with the aim of developing collaboration among individual researchers for new and larger centres of excellence, or interdisciplinary research groups or institutions. In addition, most governments have been keen to increase the level of international research collaboration in their universities.

2. Literature Review
2.1. Nigerian Universities and the World Ranking
In the early years, the Nigerian university system was highly regarded both at home and abroad. Its products were greatly valued and accorded enviable status among their counterparts worldwide (Taiwo, 1985). Views from the system were taken with all seriousness. In effect, the nation used to look up to the university system to show the way and direction to follow. However, in recent years, this position has become altered. The confidence of the public has waned greatly. The quality of graduates from the universities has continued to be questioned by all stakeholders, particularly industries and employers who have to resort to spending lots of fortune to re-train the products of these universities (Kpolovie and Obilor, 2013). The major factors responsible for this unhealthy trend are attributed to poor funding (Kpolovie and Obilor, 2013) decadent infrastructure, the unprecedented number of strikes (Kpolovie, 2012) brain drain, among others.

This presupposes that Nigerian Universities have been affected from all fronts. There is no doubt that its rich culture and ethics have equally been negatively affected. There is no doubt that the low rating of Nigerian Universities is a product of the escalating rot in the system. In an atmosphere of brain drain, where both teachers and students are moving out in droves to teach and study in foreign countries, because of the nation's poor learning environment, Nigerian Universities cannot rank high among its peers in the world. It is true that since the inception of the Fourth Republic in May 1999, there has been a fair improvement in the funding of the Federal Government to the education sector, which when compared to the minimum standard of 26% of total annual budget, is nothing to write home about. It is pertinent to note that despite this, what is made available is grossly inadequate to scratch the numerous needs of the Universities (Kpolovie and Obilor, 2013).

At present, the Nigerian education environment and the outlook for education in Nigeria are bedevilled with many problems, some of which appear intractable and are like recurring decimals – poor funding, low quality, corruption, brain drain, false value system, teacher abuse among others (Kpolovie and Ololube, 2013). For the Universities to break even and forge ahead to accomplish their mission of producing highly qualified manpower to manage both the national and international economies of the 21st century, a critical review of the situation is most desirable. There is an urgent need for proper and comprehensive evaluation and utilitarian reformation of all Nigerian Universities (Kpolovie and Ololube, 2013) the result of which should determine what each university requires in order to raise its level to acceptable standards. In spite of the glaring weaknesses of universities in Nigeria, each of them tends to be claiming superiority over others in line with the "big fish in small pond" syndrome (Kpolovie and Ololube, 2013).

2.2. University Collaboration
University collaboration: could be defined as the working together of researchers in a university to achieve the common goal of producing new scientific knowledge. However, this begs the question of exactly how closely researchers have to work together in order to constitute 'collaboration'. At one extreme, it could be argued that the international research community is one big collaboration, that basic research is a truly global activity where, in a sense, all researchers work together to advance scientific knowledge (Subramanyam, 1983). They exchange ideas on what experiments to do next, what hypotheses to test, what new instrumentation to build, how to relate their latest experimental results to theoretical models, and so on. In these and other tasks, members of a research group will

not only talk among themselves but will also seek advice and help from others (and will often offer information in return).

Katz and Martin (1997) suggest some putative criteria for distinguishing 'collaborators' from other researchers in a university context. The collaborators will normally include the following: (a) those who work together on the research project throughout its duration or for a large part of it, or who make frequent or substantial contribution; (b) those whose names or posts appear in the original research proposal; (c) those responsible for one or more of the main elements of the research (e.g. the experimental design, construction of research equipment, execution of the experiment, analysis and interpretation of the data writing up the results in a paper). In some cases, the list of collaborators may also include: (d) those responsible for a key step (e.g., the original idea or hypothesis, the theoretical interpretation); (e) the original project proposer and/or fund raiser, even if his or her main contribution subsequently is to the management of the research (e.g., as team leader) rather than research per se. They further argued that the group of collaborators will generally exclude the following: (i) those that make only an occasional or relatively minor contribution to a piece of research; (ii) those not seen as, or treated as, 'proper' researchers (e.g., technicians, research assistants).

Nevertheless, while the above criteria for distinguishing between 'collaborators' and other researchers may apply in many research circumstances, it is all too easy to identify exceptions to virtually all the above criteria in particular fields, institutions or countries. A research collaboration, therefore, has a very 'fuzzy' or ill-defined border. Exactly where that border is drawn is a matter of social convention and is open to negotiation. Perceptions regarding the precise location of the 'boundary' of the collaboration may vary over time considerably across institutions, fields, sectors and countries.

In higher institutions, collaborations may takes different levels which include: collaboration between individual; between individuals in the same research group; between individuals or groups in the same department; between individuals or departments in the same institution; between institutions in the same sector; between institutions in the same country; between groups in the same department; between departments in the same institution; between institutions; between institution in different sectors and between institutions in different countries (Katz and Martin, 1997).

Though, collaboration varies in levels in higher institutions, but Subramanyam (1983) suggest that measuring it will be done through the analysis of multiple-authorship in research papers. One good issue of concern in the literature is the factors encouraging the formation of research collaborations in higher institutions. Smith (1958) comes up with two factors: changing patterns or levels of funding and increasing specialisation in science. While, O'connor (1970) stated the desire of researchers to increase their scientific popularity will be the sole factor encouraging the formation of research collaboration. Meadows and O'Connor (1971) have the view that the requirement is ever more complex (and often large-scale) instrumentation is the factor responsible for forming research collaborations. Beaver and Rosen (1979) point out the following factors:

a. Escalating demands for the rationalisation of scientific manpower
b. The desire of researchers to increase their scientific visibility and recognition
c. the growing professionalization of science, a factor which was probably more important in earlier years than now
d. The need to gain experience or to train apprentice researchers in the most effective way possible
e. The increasing desire to obtain cross-fertilisation across disciplines
f. The need to work in close physical proximity with others in order to benefit from their skills and tacit knowledge

Goffman and Warren (1980) cave it up by stating that the advancement of scientific disciplines which means that a researcher requires more and more knowledge in order to make significant advances, a demand which often can only be met by pooling one's knowledge with others.

Indeed, the list of possible contributing factors is almost endless. Even though some of these factors may occur more frequently than others, collaboration is an intrinsically social process and, as with any form of human interaction, there may be at least as many contributing factors as there are individuals involved.

Another issue is the source of collaboration; various authors have attempted to identity the sources of collaboration, looking especially at the role of communication and the effects of physical and social proximity on the propensity to collaborate. Edge (1979) and Stokes and Hartley (1989) have argued that co-authorship reflects mutual intellectual and social influence. However, even they agree that most collaborations begin informally and are often the result of informal conversation.De Solla Price and Beaver (1966)

And lastly, there is the literature analysing the effects of collaboration on productivity and on the impact of joint research. Research into this question seems to indicate that high productivity (in terms of published output) is indeed correlated with high levels of collaboration (Beaver and Rosen, 1979; Pao, 1980;1981).

Gordon found a significant relationship between levels of multiple authorship for papers submitted to a leading astronomy journal, and their frequency of acceptance for

publication Gordon (1980). One reason for this is that the degree of technical competence displayed in the multi-authored paper can be enhanced by overlaps existing in areas of specialized competence, and the opportunity for cross-checking and resubmission (Gordon, 1980).

Another research has shown that there are further advantages to multiple-authorship. In his study of cancer research, Lawani (1986) demonstrated that, as the number of authors per paper increases, the proportion of high-impact papers (i.e., papers earning a high number of citations) also increases, Lawani (1986). Similarly, Crane (1972) and Goffman and Warren (1980) have shown that research by larger groups tends to be more influential, while Narin and Whitlow (1990) have found evidence that internationally co-authored papers are cited up to twice as frequently as single-country papers. Diamond (1985) has even gone so far as to suggest, from his study of Berkeley mathematicians, that citations to multiple-author papers are worth more to authors in terms of the effect on their earning ability or salary than citations to single-author papers.

3. Methodology

Primary data was used through a questionnaire as an instrument for data collection. The questionnaires were distributed to and collected from respondents, mostly by hand. Respondents were asked to reflect their views on a 5-point Likert scale. The questionnaire was distributed to ten (10) academic staff (Senior Lecturer and above) from each university and a total of four hundred and sixty (460) academics staff from 46 federal universities in Nigeria were randomly selected. Chi-Square was used in the analysis as the data involves are qualitative in nature.

4.Results and Findings

The total numbers of respondents are Four hundred and sixty (460) out of which 242 are male and 217 are female. Below is the tabular representation of the respondents of the returned questionnaires:

Table-1. Respondents Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	242	52.6	52.6	52.6
	Female	218	47.4	47.4	100.0
	Total	460	100.0	100.0	

Source: Field survey, 2015

Table1 shows that 52.6% of the respondents are male while 47.4% are female. This shows that the sample is not gender bias.

Table-2. Respondent rank in the University

		Frequenc	Percent	Valid	Cumulative
Valid	Below the rank of senior	0	0.0	0.0	0.0
	Above the rank of senior	460	100.0	100.0	100.0
	Total	460	100.0	100.0	

Source: Field survey, 2014

Table 2 shows that, 100% of the respondents are above the rank of senior lecturer. This shows that their perception can be used to generalization because of their welty experience.

Table-3. Respondents perception on the relationship between collaboration and university competitiveness

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	191	41.5	41.5	41.5
Agree	190	50.4	50.4	91.9
Neutral	37	8.1	8.7	100.0
Disagree	00	0.0	0.0	
Strongly Disagree	00	0.0	0.0	
Total	460	100.0	100.0	

Source: Field survey, 2015

Table 3 above shows a general perception of respondents on the relationship between collaboration and university competitiveness. Only 8.7% of the respondents are with the neutral view. 50.4% of the respondents agree to the statement and 41.5%went for strongly agree. This means that majority of the repondents are with the view that relationship exit between collaboration and university competitiveness.

Table 4 below show the test of hypothesis: Collaboration does not have any significant relationship with university competitiveness in Nigeria.

Table-4. Test of Relationship of Collaboration and university competitiveness.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	323.084[a]	4	.000
Likelihood Ratio	328.279	4	.000
Linear-by-Linear Association	216.187	1	.000
N of Valid Cases	460		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.35.			

The result obtained from the analysis shows that the Chi-Square value is 323.084 with the P value of 0.00, that means university competitiveness is significantly influence by the level of collaboration in Nigerian context as the P value (0.00) is far less than the pre-defined level of significance (α = 0.05). Hence, we reject the null hypothesis. This implies that the alternative hypothesis is accepted indicating that research collaboration between individuals, departments, home institutions and institutions in developed countries have a positive and significant relationship with university competition.

5. Conclusion

Based on the preceding, Nigerian universities and that of other developing countries should imbibe the strategies of effective research collaboration among individual staff, groups, departments, home institutions and institutions in developed countries. These will increase the impact of the research output to the knowledge economy as the circulation moves in and around both collaborating parties. And also knowledge and the experience sheared will increase the competitive strange of the universities involve.

6. Recommendations

Based on the findings, it was recommended that Nigerian universities should adopt collaboration approach as a strategy to have insight knowledge on concentration of talents, additional resources, experience and good governance for growth, high performance and competitiveness. To this end, the governing council, as well as the management of Nigerian universities, should include collaborative activities and programmes with renowned scholars and reputable universities across the globe as part of their strategy to achieve competitiveness. The paper recommends future researchers to explore on the productivity and performance of Nigerian university system.

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