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ACADEMIC ENTREPRENEURSHIP AND ENTREPRENERIAL DEVELOPMENT IN NIGERIA: MYTH OR REALITY?

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Abstract. This paper examines the process of commercializing research output of University staff without violating the extant rules within the system as well as providing practical application of theories. The research also determines the extent to which University staff engages in entrepreneurial activities. A survey research design through convenient sampling technique was adopted for collection of primary data via closed-ended questionnaire administered to University staff across different disciplines in the selected Federal Universities in Nigeria (Obafemi Awolowo University, Ile-Ife; University of Ibadan; University of Lagos). Fifty Academics of senior lecturership status were purposively sampled in these three Universities. The data collected were analysed using descriptive and inferential statistics as appropriate to each of the research objectives. The formulated hypotheses were tested using correlation and regression analysis. It was observed from the results that, there exist a significant positive relationship between main academic responsibilities and entrepreneurial development in Nigeria. The study concluded that, encouraging proper assortment of academic and entrepreneurial activities will increase research driven production and service activities in the country, thereby stimulating more societal beneficial research and reducing unemployment in the long-run. The study therefore, recommends policy option for the encouragement of research output(s) commercialization which will ensure harmonious town and gown relationship, consequently, harnessing the full potentials of good research outputs from academics. In addition, there is need for more incubation centers across the Universities in Nigeria to stimulate nurturing and proper transition of research driven business ideas from the University to the industry.

Key words: lecturer, entrepreneur, entrepreneurial activities, new venture, universities.

1. Introduction

For two decades now, entrepreneurship has been an important and compulsory course across disciplines in the Nigerian University. As the basics, entrepreneurship must be included in the curriculum of each programme in the University and taught to students in various degree programmes. It is meant to provide the students with the motivation, knowledge as well as skills essential for launching a successful venture business during the programme or/and after graduation [5].

Academic is not synonymous to poverty as perceived by some members of the public and adequate reward for hard work could not be compromised for promotion alone that comes after publishing quality research output. As quality research outcomes are supposed not to be an end in itself, but a means to another means (venture creation for the betterment of the society). Lack of appropriate blend of town and gown as currently perceived and experienced in Nigeria, does not benefit the country aiming at becoming one of the best 20 nations in the year 2020 (less than 5 years to go), as full potentials of an harmonious relationship between the university and the industry are not optimized for its growth. Therefore, now there is need for academics to be keen in engaging with industry through proper collaboration and feedback for their research, and be more interested in the commercial issues related with transfer of research output to business idea as well as to the establishment of new venture without violating the existing laws that govern their responsibilities within the University [8].

Entrepreneurship is appropriate for all organisations, be it a profit and non-for-profit organisations, it is a primary source of innovation, which may involve the development of new visions and business methods for established firms as well as the creation of new organizations. Academic entrepreneurship will encourage innovation in the process, product and technology use by organisations through research driven outputs that are not limited to the University shelves/libraries but incubated and turned to great business ideas that encapsulate the opportunities in the Nigerian business environment. Since business environment is not static, it give rooms for changes in the environment to always evolve new opportunities and closes some old ones. Academics can use their research to provide solution for societal problem by launching businesses. Business is an organised effort that facilitates the provision and distribution of goods and services through commerce and industry for profit.

This study empirically examines the relationship between academic entrepreneurship and entrepreneurial development in Nigeria. It equally determines the influences of main academic responsibilities on new venture creation in Nigeria since entrepreneurship emerged as an important and compulsory course(s) in Nigeria Universities for all disciplines less than two decades ago. In the face dwindling revenue in Nigeria and as part of the drive towards diversification of the economic, academic institutions cannot fold harms, but support with ingenious ways at enhancing value creation through research driven economic activities for economic development and better society.

With the current fiscal realities in Nigeria, the nation can benefit more where entrepreneurship activities are research-based and tap into the opportunities in the business environment by creating jobs, invention or/and innovation of new products and services for improved quality of life, and thereby improving the economy which is part of the key role of the universities within contemporary societies, by educating large proportions of the population and generating knowledge. Although, there are studies on entrepreneurship and business development, but there is dearth of extant literature on the relevant factors that lead to the development of the entrepreneurial skills among academics in Nigeria.

Objectives of the study

The purpose of this study is to assess the level of academic entrepreneurship practices in the Nigerian Universities, while the specific objectives are to:

(i) examine the level of understanding the academic entrepreneurship concepts among academics in the selected Universities;

(ii) assess the role of university laws and ownership effects on academic entrepreneurship (commercialisation) in the society;

(iii) investigate the relationship between the main academic entrepreneurial activities and entrepreneurial development in Nigeria.

Hypothesis

H_o: there is no significant positive relationship between main academic responsibilities and entrepreneurial development in Nigeria.

H_1: there is a significant positive relationship between main academic responsibilities and entrepreneurial development in Nigeria.

2. Literature review.
Concept of entrepreneurship

There is no universal definition of entrepreneurship by scholars, but there is a consensus on the basic element in the definition.

According to M. Meyer [11], academic entrepreneur is person who turns the knowledge created by an institution into innovation, forms new firms, and creates marketable products and services. But academic entrepreneurship has been described as a process with different stages, but it starts with the researcher or student at the university level, at the laboratory and at field knowledge of research for non-laboratory oriented discipline [19].

According to R. Cantaragiu [4], there are three types of definitions for Academic Entrepreneurship: commercial, knowledge transfer and value creation. He explained the commercial understanding of Academic Entrepreneurship as wide-spread and refers mostly to university spin-offs and for-profit companies [1]. The knowledge transfer definition focuses on commercial value creation and includes "hard" (patenting, licensing, spin-off) and "soft" (publication, grant-seeking, contract research) activities while the third type of definition is value based. It focuses mainly on the social value and the process, not only the result. The value based view is "mostly encountered in social sciences and humanities related discussions of the entrepreneurial dimension of academic activities [4]. This suggests that all academic disciplines within the university system have something to benefit from the process of academic entrepreneurship. In the 21st century, where Universities are viewed from more utilitarian perspective, involving aiding through education and research the material improvement of society [16], Nigerian Universities cannot be left out in enhancing the continuous improvement of the society in their research and adequate knowledge transfer irrespective of the ownership structure (Federal, state and private) for enhancing economic wellbeing of the Nation (revenue generation, employment creation and solving society problem by supporting the provision of the needs).

Commercialisation is considered a prime example for generating academic impact because it constitutes immediate, measurable market acceptance for outputs of academic research [10]. To support commercialisation, many universities in developed countries have established specialized structures, such as technology transfer offices (TTOs), science parks and incubators [6; 17], and created supportive internal rules and procedures [18].

Another critical issue relevant to development of academic entrepreneurs is the technology transfer office (TTO), which is a subsidiary or institution within the university for managing the shifting relationship between researchers (academics), the private sector and other partners of the University [12; 3]. The TTO performs a mediating role in improving the link between science and innovation [7] or a technology intermediary that transmit(s) technological innovation from the lab bench or the university to industry [9].

Incubation centre should be another stimulus for rapid development of academic entrepreneurship in Nigeria, it is the intermediate organisation's unit which could be within or outside the university premise that provide the social environment, technological and organisational resources, and managerial expertise for the transformation of a technology-based business idea into an efficient economic organisation [12; 15].

Notwithstanding the studies on entrepreneurship in Nigeria, there is dearth of extant literature on academic entrepreneurship and its role in stimulating economic activities, generating more revenues as well as creating employment which are the major problem facing the government of Nigeria today.

Resource-based view theory

The resource-based view theory will be used to underpin this study. The resource-based view (RBV) is built upon the theory that an organisation's success is largely determined by the resources it owns and controls. According

to E.T. Penrose [14], the development and growth of organisations by looking at their internal resources, and how firms utilize them and the resources acquired externally in way to ensure maximum profit. Penrose's theory is in the idea that there are always stocks of unexploited productive services, resources and specialised knowledge in a company conducive to economic growth. Social organisations like Nigerian universities are endowed with a pool of resources (human capital, knowledge, research and solution skills) which should be used to benefit their society through academic entrepreneurship.

3. Research methods

A survey research approach is adopted through structured questionnaires, which were directly administered to the respondents (Academics) to collect the primary data used for the analysis. The respondents include 50 academics of senior lectureship status in the selected Universities in Nigeria. The combination of judgemental and convenience sampling techniques were used. The judgemental technique was used to select the three Universities and Senior lecturership status as respondents while convenient sampling technique was adopted for collection of primary data via closed-ended questionnaire administered to University staff across different disciplines in Nigeria (Obafemi Awolowo University, Ile-Ife; University of Ibadan; University of Lagos). The choice of these Universities was premised on their generation (first set of universities in Nigeria) and perceived presence of real academic culture. The research instrument was well-structured questionnaire with an interview guide. The questionnaire was divided into two sections, specifically designed to accomplish the objectives of the study and to gather data to analyse the research hypotheses. Section A contains the demographic and personal information about the respondents which include gender, age, marital status, educational qualification, department, designation and work experience. Section B contains questions related to the research questions under consideration on a 5 point Likert measurement scale. The Cronbach's alpha value for each of the construct

(entrepreneurial engagement with six items (questions), transfer of knowledge with five items, university laws and ownership effects with seven items and entrepreneurial development with five items) were obtained and they were above 0.7 which denotes a good internal reliability measures [13]. The data collected were analysed using descriptive and inferential statistics as appropriate to each of the research objectives. The formulated hypotheses were tested using correlation and regression analysis through statistical packages for social science (SPSS) Software IBM version 20.

4. Results and Discussion

Table 1 revealed summary of socio-economic characteristics of respondents that participated in the study. 80.4 % of the total respondents were male, while the remaining 19.6 % were female. Most of the respondents were within the ages of 41 to 50 years with 53.8 % of the total respondents, followed by 32.2 % of the respondents who were 51 years of age and above. The remaining 14 % of the total respondents were between the ages of 31-40 years, thus, the study had more mature respondents. For the highest qualification of the respondents, substantial part of the respondents with doctorate degrees across various disciplines, 76.9 % of the total respondents were with highest academic qualification, 19.6 % were with master's degree while the remaining 3.6 % of the respondents were with other professional qualifications. The occupational status of the respondents shows that 46.2 % are of the senior lecturership status, 31.5 % have associate professor status while the remaining 22.4 % have the highest academic position.

Table 2 revealed the descriptive statistics and correlational matrix of the academic entrepreneurship and entrepreneurial development in Nigeria. The mean value of the extent of engagement in entrepreneurial activities driven by research outputs was 3.6690 on scale of 1 to 5, where 5 stands for strongly agreed, cumulatively, it could be deduced that academics are trying to engage in some parts of entrepreneurial activities, but not that sufficient to gain mean value of agreeing absolutely to be fully engaged in entrepreneurial

activities driven by their research outputs. The standard deviation is less than one showing that the mean is stable to a reasonable extent. This is followed by transfer of knowledge and technology by academics to the industry, with mean value 3.1720 greater than average showing that respondents agreed to transfer knowledge and technology as another component of academic entrepreneurship, the standard deviation .59746, showed that significant number of the respondents have not been involved in academic entrepreneurship. On the University laws (regulation) and ownership effects on commercialisation of research output, the mean value (2.7403; $S.D = .32728$) is slightly greater than average shows that there is mixed feeling among respondents on whether the existing law and regulations in the university really encourage academic entrepreneurship. The entrepreneurship development variable also revealed a mean value of 2.5636 and standard deviation value of .68859. The deviation is high comparing to other variables in the study to reveal that many of the respondents do not agree on the items.

Table 2 further shows the type and levels of relationship between the independent variables (academic entrepreneurial engagement, transfer of knowledge and technology and Laws and ownership effect on commercialisation) and the dependent variable (entrepreneurial development). The results reveal positive and significant relationships among all the variables.

Table 1

Summary of socio-economic characteristics of the respondents

Variables	Valid label	Respondent, %	Total
Gender	Male	115 (80.4)	143 (100)
	Female	28 (19.6)	
Age	31-40 years	20 (14.0)	
	41-50 years	77 (53.8)	143 (100)
	51 years and above	46 (32.2)	
Marital status	Single	28 (19.6)	
	Married	96 (67.1)	143 (100)
	Divorced	19 (13.3)	
Educational	Master`s Degree	28 (19.6)	
	Doctorate Degree	110 (76.9)	143 (100)
	Professional Qualification & Others	5 (3.6)	
Occupation Status	Senior lecturer	66 (46.2)	
	Associate professor (Reader)	45 (31.5)	143 (100)
	Professor	32 (22.4)	

Note. Source is Field survey (2016).

Table 2

Descriptive statistics and correlational matrix on academic entrepreneurship variables

Variables	Mean	Standard deviation	Academic entrepreneurial engagement	Transfer of knowledge and technology	Laws and ownership effect on commercialisation	Entrepreneurial development
Academic entrepreneurial engagement	3.6690	.28526	1			
Transfer of knowledge and technology	3.1720	.59746	.241 **	1		
Laws and ownership effect on commercialisation	2.7403	.32728	.829 **	.341 **	1	
Entrepreneurial development	2.5636	.68859	.259 **	.740 **	.564 **	1

Note. ** – Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows a multiple regression analysis to determine the impact of academic activities on entrepreneurial development in Nigeria. The results reveal the R value of 0.875, which suggests a very strong positive and significant relationship between academic entrepreneurship activities and entrepreneurship development in Nigeria. The R^2 value is well above average, meaning that academic entrepreneurship can contribute 76.5 % to entrepreneurship development in Nigeria. In fact, we can generalize the model, as there is significant positive relationship between the variables, as represented by more than 100 % being the variation accounted for by the academic entrepreneurship as shown by the value of the adjusted R^2. In addition, it is worth noting that the Durbin Watson statistic is in the vicinity of 2 indicating the absence of autocorrelation which could have affected our model by inflating R^2 and making the model look better than it was.

Table 3

**Regression results
on Academic Entrepreneurial variables
and Entrepreneurial development**

Variable	Coefficient	t-value
Entrepreneurial engage-ment	-0.590	-8.006 **
Transfer of knowledge and technology	0.592	13.492 **
laws and ownership effect on commercialisation	0.851	11.187 **
Constant	0.719	1.819
R = 0.875 $D.W$ = 2.581	R^2 = 0.765	
F = 151.078		
Prob (F-statistic) = 0.0000		

The ANOVA in the Table 4 reveals that the overall regression model can act as a good predictor of the outcome variable, thus, with F statistic value of 151.078 significant at 1 %, the model is fit. Thus, the ANOVA shows the amount of variation in the regression model. The value of F_{stat} is 151.078, F test is the ratio of the overall fit of a regression model. A high F – test signals that a model possesses significant explanatory power, which must be compared with a critical value to determine its highness. The model is significant at 0.000 (p < 0.01), which means 1 % significant level and 99 % confidence level. Since F calculated is 151.078

and F tabulated is 3.782, that is F_{cal} is greater than F_{tab}, the null hypothesis that says there is no significant relationship between academic entrepreneurship and entrepreneurial development is hereby rejected leading to acceptance of the alternative hypothesis. Therefore, there exist is significant positive relationship between academic entrepreneurial activities and entrepreneurial development in Nigeria which is significant at 1 % level of significance.

Table 4

Analysis of variance (ANOVA) results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	51.528	3	17.176	151.078	.000
Residual	15.803	139	.114		
Total	67.331	142			

Note. 1. Dependent Variable: Entrepreneurial development. 2. Predictors: (Constant), laws and ownership effects on commercialisation, Transfer of knowledge and technology, Entrepreneurial engagement.

5. Conclusion and Recommendations

It is evident from the results that academic entrepreneurship contributes significantly to entrepreneurship development in Nigeria. Thus, academic entrepreneurship is a reality, which should encourage and strengthen to contribute optimally to the nation's development within the confines of the laws. It was observed from the results that there exist a significant positive relationship between main academic responsibilities and entrepreneurial development in Nigeria. Therefore, encouraging proper assortment of academic and entrepreneurial activities will increase research driven production and service activities in the country, thereby stimulating more societal beneficial research and reducing unemployment in the long-term. The study therefore, recommends policy option for the encouragement of research output(s) commercialization which will ensure harmonious town and gown relationship, and consequently, harnessing the full potentials of good research outputs from academics. In addition, there is need for additional incubation centers across the Universities in Nigeria to stimulate nurturing and proper transition of

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АКАДЕМИЧЕСКОЕ ПРЕДПРИНИМАТЕЛЬСТВО И РАЗВИТИЕ БИЗНЕСА В НИГЕРИИ: МИФ ИЛИ РЕАЛЬНОСТЬ?

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Аннотация. В данной статье рассматривается процесс коммерциализации исследований сотрудников университета, а также их практическое применение. Исследование также определяет степень, в которой сотрудники университета участвуют в предпринимательской деятельности. Обзор исследования проводится с помощью метода выборки для сбора первичных данных с помощью анкетирования сотрудников университета по различным дисциплинам в отдельных федеральных университетах в Нигерии (Обафеми Аволово, Иле-Ифе, Ибаданский университет, Университет Лагоса). Пятьдесят научных сотрудников были отобраны в данных университетах. Сформулированные гипотезы были протестированы с использованием корреляционного и регрессионного анализа. Было отмечено, что существуют значительные позитивные отношения между основными академическими достижениями и развитием предпринимательской деятельности в Нигерии. В исследовании делается вывод, что стимулирование академической и предпринимательской деятельности позволит сократить безработицу в долгосрочной перспективе.

Ключевые слова: преподаватель, предприниматель, предпринимательская деятельность, новое предприятие, университеты.

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