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THE DETERMINATION OF THE RELATIONSHIP BETWEEN ENTREPRENEURSHIP EDUCATION AND ENTREPRENEURIAL INTENTIONS OF STUDENTS IN DEVELOPING ECONOMIES

The object of the research is the relationship between entrepreneurship education and the entrepreneurial intention of students in developing economies. The paper aims at the provision of better understanding of premises for policy making in Higher Educational Institutions of developing economies towards enhancing the growth of entrepreneurship.

Data was collected from the students of the multi-campus National Open University of Nigeria via an adapted structured questionnaire. The study utilized the non-parametric method of Structural Equation Modelling with the aid of PLS 3 software.

The major finding of the study is the existence of a causal relationship between Entrepreneurship Education and Entrepreneurial Intention of the students of Higher Institutions in developing economies that is in line with several studies conducted in other developing economies. It further affirms the key role of entrepreneurship education in inspiring students' inclination towards entrepreneurship.

It recommends, amongst other things, that policymakers of Universities and other Tertiary institutions should provide, in an early stage, a modified mandatory entrepreneurial program structured to shape and develop student's entrepreneurial Intentions.

Keywords: *developing economies, Higher Educational Institutions, Nigerian universities, entrepreneurship education, entrepreneurial intention.*

1. Introduction

The track records of entrepreneurs in employment generation cannot be overemphasised. Taking United States of America, as a sample, where small businesses alone created 1.9 million jobs in 2015, employing 58.9 million people, which is equivalent to 47.5 percent United States total employees [1]. Moreover, unemployment rate has been declining from 5 percent, as at December 2015 down to 4.7 percent in December 2016, to 4.3 percent in May 2017 and 3.8 percent in May 2018 [2]. Similarly, in the United Kingdom, SMEs alone employ 16.3 million people nationally, this represents 61 percent of the entire working population [3], at the same time unemployment rate has been dropping from 5 percent as at December 2015, 4.5 percent in March 2017 and down to 4.2 percent in February 2018 [4].

While entrepreneurship is playing a vital role in reducing unemployment in various parts of the world, the case is different in many developing Nations. In Nigeria for instance, with 96 % of businesses as SMEs representing about 90 % of the manufacturing/industrial sector in terms of number of enterprises [5], the country has about 41 million SMEs [6], but their contribution to the country's GDP is far less than expected. Consequently, the unprecedented increase in unemployment trend in the country is of serious concern to the government. In 2014 unemployment rate has escalated from 6.4 percent in fourth quarter of 2014, to 14.2 percent in the fourth quarter of 2016, and 18.8 percent in the third quarter of 2017, and an increasing figure of 22.7 percent in the second quarter of 2018 to 28.6 percent in as at the second quarter of 2020, and its highest peak of 33.3 percent in the first quarter of 2022 [7].

In an effort to decrease unemployment, several Nigerian governments have given attention to entrepreneurship as a panacea to unemployment. In view of this, the Federal Government in 2006 directed Nigerian Higher Education Institutions (HEIs) to include Entrepreneurship Education (EE) as a compulsory course for all students with effect from the 2007/2008 academic session. Other programs by the government include the creation of an Agency solely responsible for the promotion and development of SMEs – the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) established in 2003, with the aim to facilitate the promotion and development of the Micro, Small and Medium Enterprises (MSMEs) sector in an efficient and sustainable manner. Despite these programs, many graduates still fail to take entrepreneurship as an option [8]. One of the possible causes of failure of these programs is that they address only the output end. Besides, even the educational system that addresses the output end lays more emphasis on content and knowledge acquisition for its sake [9].

Despite the fact that various previous studies have proved entrepreneurial education (EE) as a major factor to grow and develop the passion, spirit and entrepreneurial behaviour among the younger generation [10–12], many graduates failed to take entrepreneurship as an option. Thus, an indicating that apart from Entrepreneurship education, other factors such entrepreneurial knowledge [13], entrepreneurial skills [14] and entrepreneurial competency [15] may also have impact in inculcating entrepreneurial intention. Besides, the author of [16] argued entrepreneurial intention can only be possible when mixed with Entrepreneurship Education. In this vein, it is safe to conclude it is not just education that is required but Entrepreneurial education. This was also the conclusions of the authors of [17, 18]. However, despite these large number of studies, the authors of [19, 20] posit that the impact of this variables are yet to be fully understood and utilized in developing economies.

There are studies abound that have found entrepreneurship to be a product of many variables such as:
– Risk Attitude [21];
– Entrepreneurship Education [16];
– Entrepreneurial Intention [10];
– self-efficacy [11] among others.

Most of these studies proved entrepreneurial education to be major factor to influence entrepreneurial Intention of the younger generation. However, despite the large number of studies on such variables in other countries, (e. g. [21] in Japan; [22] in Zadar, Croatia) the impact of Entrepreneurship Education on student's entrepreneurial Intention is yet to be fully understood and utilized in developing economies [23], such as in Nigeria.

This article, therefore, aim to examine the relationship between entrepreneurship education and student's entrepreneurial intention and to determine the extent to which entrepreneurial education affects entrepreneurial intention. This study is significant in policy implementation on future development of entrepreneurial programs for undergraduates.

Research on entrepreneurial intention has gained significant attention and grown rapidly in recent years, particularly at the tertiary level [19]. Entrepreneurial intention is the willingness of individuals to perform entrepreneurial behaviour, to engage in entrepreneurial action, to be self-employed, or to establish new business [24, 25]. Entre-

preneurial activities are however intentional based [26] in which entrepreneurs start with some extent of entrepreneurial intention before they turned out to become ones. While entrepreneurial intention is related to various determining factors, its relationship with these factors has indeed altered a lot in recent years [27].

Research on entrepreneurship education has gained significant acceptance in many countries especially in recent years. Empirical evidence has shown that entrepreneurship education is an effective means in inspiring students' intention towards entrepreneurial career [28]. Entrepreneurship education is the scope of curricular lectures or courses that provides students with entrepreneurial competencies, skills and knowledge in pursuing entrepreneurial career [29]. Entrepreneurship education has been considered one of the most important factors in growing and developing entrepreneurial behaviour among the younger generation [30, 31], with many previous studies confirming this relationship. The study of the authors of [32] in Malaysia, [33] in China, and [34] in Vietnam, all found entrepreneurship education to significantly affect entrepreneurial intention. However, despite the fact that entrepreneurship education has been seen as an influencing factor to intentions, simple empirical comparisons are not particularly revealing [35]. A clear example of this is the study of the authors of [36] which found boys at a neighbouring sports school without any entrepreneurship education to have a greater intention of starting up a business, than girls with entrepreneurship education. A recent study of the authors of [37] on Iranian students also reveals education to have no significant impact on student's attitude towards entrepreneurship.

However, several studies try to measure the benefit of entrepreneurship education on real entrepreneurial action rather than intention. A clearer explanation of this is the longitudinal research of the author of [38], which took over ten a year's period under scrutiny with 64 graduates in the research sample, all of the graduates who had undergone entrepreneurship education finally became entrepreneurs. Another interesting study is that of the author of [19] conducted in Netherland, which found entrepreneurship education affect positively the intention to become an entrepreneur, while the intention to become an entrepreneur further affects entrepreneurial behaviour at last. Thus, *the object of the research* is the relationship between entrepreneurship education and the entrepreneurial intention of students in developing economies.

2. Research methodology

The research utilizes a descriptive survey design which tries to collect information from a representative group upon which inferences are drawn about the behaviours of the entire target population. Its main aim is to find reasons why a particular activity is happening [39]. This is because it enhances rapid collection of data, economical, efficient, as well as provides an accurate means of assessing information about a population.

The population of the study consist of students in National Open University, Kano Study Centre. Specifically, the population consists of all students undergoing various programs in the university. The current total student enrolment of the national Open University is approximately 399,260 [40]. However, the study limited its population Kano study Centre only with enrolment of 4,388 students [40].

The study will utilize a stratified convenience sampling which is a non-probability sampling technique. Stratified Convenience sampling is a method in which for convenience's sake, the population is divided into subgroups (called strata) based on the relevant characteristic (in this case Faculty of students). And students are sampled from each faculty accordingly. Students that happen to be readily available at the time of data collection are selected in the sample for each faculty. It is sampling by obtaining people or units that are conveniently available. Sample size was drawn based on the Krejcie and Morgan table for determining sampling size. With a population of 4,388 students, sample size will be 354 individuals.

An adapted, well-structured questionnaire consisting of closed ended questions will be used as data collection instrument. The data from the questionnaire was coded and analyzed using Partial Least Squares (PLS) software. The PLS analysis provides results for both the structural model (hypothesized relationships) and the measurement model (reliability and validity of indicators) [41]. This software has some advantages over others as it has the ability to accommodate both reflective and formative constructs and also has a minimal concern on data normality and sample size as well as very effective for exploratory studies, according to the author of [42, 43]. It also has the ability to simultaneously evaluate the relationship between the measurement model and the structural model as the two basic steps when using PLS [44].

3. Research results and discussion

3.1. Measurement model. The measurement model is a reflective model that involves three basic validities: indicator loadings, internal consistency, as well as convergent and discriminant validity. The model indicates reliable internal consistency (reliability and validity of indicators) through assessing psychometric properties of the model.

Convergent validity is the extent to which a set of variables meets in measuring the concept on the construct. Table 1 above presents all loadings to be above 0.50, the values of the average variance extracted are also above 0.5. This proves the adequacy of the measurement model when relate to convergent validity.

Table 1

The result of convergent validity analysis

	Indicators	Loadings	Cronbatch_Alpha	CH	AVE
Entrepreneurship education	EE1_1	0.816	0.888	0.917	0.69
	EE2_1	0.876	–	–	–
	EE3_1	0.802	–	–	–
	EE4_1	0.856	–	–	–
	EE5_2	0.801	–	–	–
Entrepreneurial intention	EI1_1	0.704	0.867	0.898	0.558
	EI2_2	0.766	–	–	–
	EI3_1	0.799	–	–	–
	EI4_1	0.761	–	–	–
	EI5_1	0.755	–	–	–
	EI6_1	0.75	–	–	–
	EI7_1	0.686	–	–	–

Note: result of data analysis from PLS; *EE* – entrepreneurship education; *EI* – entrepreneurial intention; *CH* value of 0.917 for EE and 0.898 for EI; Average variance extracted (AVE) value of 0.69 for EE and 0.558 for EI respectively

Discriminant validity explains the extent items in a construct differ from one another. Table 2 provides result of discriminant validity by testing the square root of the average variance extracted (*AVE*).

Table 2

Discriminant validity by testing the square root of the average variance extracted

Discriminant validity	EE	EI
EE	**0.831**	–
EI	0.568	**0.747**

Note: result of data analysis from PLS; *EE* – entrepreneurship education; *EI* – entrepreneurial intention

Table 2 indicated (in bold) the values of the intercorrelation of the study's construct which are lower than the square root of the Average variance extracted (AVE), thus fair to say the measurement model is achieved.

The idea of cross loading is to see if constructs are significantly loaded in within the construct they represent. Ideally an item should have higher loadings in the construct it measures than in other constructs. In Table 3 all items are significantly loaded in their respective constructs than in other constructs.

Table 3

Cross loading of constructs

Constructs	EE	EI
EE1_1	**0.816**	0.464
EE2_1	**0.876**	0.489
EE3_1	**0.802**	0.402
EE4_1	**0.856**	0.505
EE5_2	**0.801**	0.487
EI1_1	0.489	**0.704**
EI2_2	0.493	**0.766**
EI3_1	0.419	**0.799**
EI4_1	0.43	**0.761**
EI5_1	0.347	**0.755**
EI6_1	0.397	**0.75**
EI7_1	0.364	**0.686**

Note: result of data analysis from PLS; *EE* – entrepreneurship education; *EI* – entrepreneurial intention

In Table 2 the bolded texts indicate an item designed to measure a particular construct have a higher loading in the construct it is designed to measure than in other constructs as expected, Items should load more in their parent home (construct), rather than in the other constructs. This further proves the validity of the measurement model.

3.2. Structural model. The structural model assessment on the other hand explains the causal relationship that exists between constructs of the study. The variance explained (R^2) and the path coefficient are the main process in which the hypotheses of the study are vindicated [42]. The *R* Square and *R* Square Adjusted show how well the combination of independent variables predicts the dependent variable (Table 4).

Table 4

Coefficient determination (R^2) and Effect size (F^2)

R Square	0.551
R Square Adjusted	0.547
Effect size (F^2)	0.087

Note: result of data analysis from PLS

The coefficient of determination explains how well independent variable explains the dependent variable. R^2 value of 0.551 suggests entrepreneurship education to explain 55 percent variation in entrepreneurial intention. This is considered moderate according to the classification the author of [42].

The effect size (F^2) explains the effect of the independent variable on the dependent variable. F^2 value of 0.087 posits 87 percent effect which is classified large.

Table 5 presents the Path coefficient for Hypothesis Testing with a beta value, T Statistics, and a P value of 0.240, 3.802 and 0 respectively ($ß=0.24$; $t=3.65$; $p=0$). Beta value of 0.24 posits entrepreneurial intention to be increasing with 24 percent as Entrepreneurship Education increases.

Table 5

Path Coefficients for Hypotheses Testing

Hypothesis	Beta	Standard Deviation	T Statistics	P Values	Decision
$EE{\rightarrow}EI$	0.240	0.063	3.802	0.000	Accepted

Note: result of data analysis from PLS; EE – entrepreneurship education; EI – entrepreneurial intention

T value of 8.617 is considered significant. This is in consistent with previous findings of the authors of [11, 37, 45].

3.3. Discussion and recommendations. This study affirms the key role of entrepreneurship education in inspiring students' inclination towards entrepreneurship and indicate that universities and higher learning institutions are platform in developing and exploring potential entrepreneurs. The findings of this research is in line with previous studies enumerated above. This direct relationship between entrepreneurship education and entrepreneurial intention is however insightful for policy makers, thus in order to facilitate new venture creation, boost economic development and reduce unemployment, youth need the knowledge of entrepreneurship, and this will encourage them to be self-employed, entrepreneurial and productive.

Universities and other tertiary institutions are however advised to provide in an early stage a modified mandatory entrepreneurial program which will shape and develop student's entrepreneurial intention.

However, even though intention is the immediate antecedent of behaviour [46], this study only examines entrepreneurial intention not the actual entrepreneurial behaviour. This made part of its limitation, future researchers are therefore advised to conduct a longitudinal research which will study real entrepreneurship action rather than intention.

Future studies are however advised to expand sampling location to include universities throughout Nigeria and consider variation in ethnic groups so as to obtain result more fit for generalization. Finally, researchers are advised to employ analysis not used in this research such as the heterotrait-monotrait (HTMT) ratio of correlations and

the Stone Geisser test of predictive relevance (Q2) so as to obtain result with high accuracy.

4. Conclusions

1. A direct positive relation between Entrepreneurship Education (EE) and students' Entrepreneurial Intention (EI). Beta value of 0.24 ($ß=0.24$; obtained in Table 5) implies that the more EE increase, the more EI increases by 24 percent.

2. The study further found EE to explain a 55 percent variation in students' EI (as obtained an R^2 value of 0.551 in Table 4). This can however be expressed as EE moderately affects students' EI since [43] classified the R-square of 0.19, 0.33 and 0.67 as weak, moderate and substantial respectively.

3. However, the study found EE to also have an 87 percent effect on the dependent variable EI (as obtained in Table 4 an F^2 value of 0.087) thus EE can be said to be a significant determinants of the dependent variable EI.

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