

Investigating the level of entrepreneurial orientation and desire for self-employment of students in selected tertiary institutions, North-East Nigeria

Manishimwe Theoneste

Ndifreke Clinton-Etim

School of Business and Entrepreneurship

American University of Nigeria

Keywords

Entrepreneurial Orientation, Entrepreneurship Education, Students, Tertiary Institutions, Self-Employment.

Abstract

Entrepreneurial orientation resulting from entrepreneurship education in tertiary institutions has produced mixed findings in the developed context, especially in Northeast Nigeria, where the insurgency has been disrupting education over the years. This study investigated the level of entrepreneurial orientation (EO) of students in Yola, a region in Northeast Nigeria grappling with the onslaughts of the Boko Haram insurgency. This quantitative study examined the difference between the level of Entrepreneurial Orientations of Students before (BEO) and after taking entrepreneurship modules (AEO) while relying on primary data collected from three different categories of tertiary institutions in Nigeria (a polytechnic, a college, and a university) through a structured questionnaire. Relevant literature was reviewed to enrich the understanding of the researcher on different extents of the study. In the absence of a sample frame in the target population, a sample size of 270 students was selected based on the research eligibility criteria. Out of this sample, 191 respondents filled and returned the questionnaires.

Descriptive statistical analysis and Structural Equation Modelling (SEM) were used to analyze the data collected. The level of Entrepreneurial Orientation among students was measured to determine how students were innovative, proactive, risk-taking, and competitive aggressive before and after taking entrepreneurship modules. A significant difference between the level of EO before and after taking entrepreneurship modules, a meaningful relationship between the entrepreneurial orientation of students, and desire for self-employment after graduation was indicated. SEM results showed a significant positive impact of entrepreneurial orientation on students' willingness to self-employment after graduation. This research enriched the literature with a new understanding of entrepreneurial orientation. It provided modest empirical findings pertinent to policymakers interested in advancing Entrepreneurship Education (EE) in tertiary institutions.

Based on the findings regarding factors affecting the entrepreneurial orientation of students, the study recommends solutions for improving and developing an effective entrepreneurial orientation strategy in tertiary institutions.

Acknowledgement

We acknowledge Prof. Lukman Raimi for his insightful criticisms and consistent encouragement, which aided the completion of the writing of this paper.

Introduction

Entrepreneurship development has emerged as an influential agenda for the economic growth and development of a nation, increasing the number of entrepreneurs (Ferreira et al., 2016). Tertiary institutions play a crucial role in producing entrepreneurs, especially students who graduate with entrepreneurial mindset, capabilities, and attributes. A study found that entrepreneurship education is a vital factor for individuals in founding businesses, greater control of an individual's destiny, money-making, increasing individual satisfaction, and creating a legacy for families. The research at Tun Abdul Razak University found that students are strongly inclined to entrepreneurship (Popli and Rao, 2010). The

research conducted at a local youth skill development institute shows a strong relationship between course modules and the entrepreneurial orientation of students (Sangmyung Lee, 2015). Students' attitudes towards goals mediate the relationship between entrepreneurship education through the university environment, university roles and entrepreneurial intentions, and entrepreneurial orientation. Thus, tertiary institutions should make extra efforts to make teaching methodologies and the curricula more interesting, creative, and innovative to reduce any adverse effects (Rengiah, 2016).

However, the entrepreneurial culture still needs to be strengthened, as the tertiary institutions' graduates are still seeking to be employed rather than starting their businesses. In developing countries, tertiary institutions are continuously facing challenges such as the lack of financial and mentoring capacities and lack of engagement of students from non-business disciplines. In today's fast-changing, intense, and dynamic business environment, the entrepreneurial orientation's importance manifests fast diffusion all over the strategic literature. A substantial number of strategic research have aligned on the importance of entrepreneurial behavior and top management in determining organizations' performance (Lumpkin and Dess, 1996). However, there has been a scarcity of research scrutinizing how the implementation of entrepreneurial orientation in tertiary institutions has enhanced innovation, creativity, and increased job creation and performance of firms due to the change in the level of EO, which leads to the sustainable development of the country. Purwana, Suhud, and Wibowo (2018) proposed that young entrepreneurs need to be empowered to steer an ever-altering economy successfully.

In Nigeria, the federal government directed that Entrepreneurship Education (EE) be offered in tertiary institutions. This directive was introduced to create a positive entrepreneurial mindset and develop the ability of students to identify, evaluate and generate ideas for uniquely solving business-related problems, towards enhancing job-creating mentality instead of the job-seeking mentality (Mansor and Othman, 2011; Popli and Rao, 2010). In 2006, presidential directives to introduce entrepreneurship education into curricula from the 2007/2008 academic session of Nigerian tertiary institutions were given to the National Universities Commissions (NUC), National Commission for Colleges of Education (NCCE), and National Board for Technical Education (NBTE) through the Federal Ministry of Education. Generally, this has influenced the entrepreneurial mindset, intention capacities, and competencies (Oshinowo and Raimi, 2016).

Furthermore, entrepreneurial orientation has been well researched in developed countries with several findings (Sijabat, 2018). However, in developing countries like Nigeria, research on entrepreneurial orientation is just emerging and still very few. In line with the federal government of Nigeria's directives to introduce entrepreneurship education (EE) in tertiary institutions since 2006, this research helps governments, especially developing nations and interested private sectors, understand and improve EO's level in tertiary institutions.

Tertiary institutions today are gaining a lot of attention across the globe due to their vital contribution to economic development. Developed countries have emphasized primary, secondary, and tertiary education while emerging countries, including Nigeria, neglect higher education; instead, primary and secondary education is prioritized. It has been argued that the number of tertiary institutions does not reflect the quality of education in developing countries, especially in Africa. However, the focus on the quality dimension of education is still emerging (Kimenyi, 2011). For this reason, it is critically important to investigate the impact of entrepreneurship education through the understanding of the change in the level of entrepreneurial orientation of students before and after taking entrepreneurship education. Therefore, this research helps the governments, interested private sectors, especially tertiary institutions' managers and owners, to understand and improve entrepreneurial orientation. The keys to measuring the level of EO and its impact on students' desire for self-employment after their graduation are; innovativeness, risk-taking, proactiveness, and competitive aggressiveness are. Thus, the research problem this study intended to investigate stated in a broad question is: "To what extent has the goal of incubating entrepreneurial orientation of students been achieved, how it can be improved, what is its impact on students' desire for self-employment, and what are the factors affecting entrepreneurial orientation in Nigeria?"

Literature review

Entrepreneurial orientation

Entrepreneurial Orientation was operationalized as proactiveness, risk-taking, innovativeness, and competitiveness aggressiveness (Rank and Streng, 2018). Kirzner's concept of entrepreneurship states that an entrepreneur is riding pressure to meet the dynamic needs and wants of the market. The competitive behavior of entrepreneurs is operational in restoring the equilibrium of the market. Therefore, an entrepreneur is exceptionally progressive in introducing new enterprising ideas that can change markets' character. Entrepreneurial orientation has been seen as an idea that has to be studied on several levels. EO is searching for new commercial possibilities such as approaches, practices, and activities on the business level. The behavior of the company and entrepreneur is probable to comply with the identical orientation in entrepreneur-led corporations ((Weber et al., 2014). Single entrepreneurial orientation does not deal with some crucial alternatives that can ignore an entrepreneur's essential attitudes, such as the leading approaches of introduction cost, risk-taking, and the nature of cooperation. Single entrepreneurial orientation has been further evolved using several entrepreneurial orientations; imitative entrepreneurship, progressive entrepreneurship, and co-innovative entrepreneurship (Koe, 2015). In the context of entrepreneurship, schooling, and self-development, the conscious or subconscious choice between specific entrepreneurial activities influences personal growth and capabilities. Therefore, the individual progressive orientation is a good foundation for entrepreneurial ventures in business surroundings, where innovative differentiation is the primary prerequisite for development and maintaining nearby or international competitive advantage (Arzubiaga et al., 2019). A vital feature of an innovator's competence is to apprehend the market by commercializing their progressive ideas. Innovativeness is supported by new product and era development or innovative approaches to re-define enterprise boundaries and uniquely combine present enterprise ideas. Martins et al. (2015) explained business opportunities of value innovations as the focus on new markets and new methods discovered through competition stacked in the fierce opposition of the "red oceans." In the previous studies of entrepreneurship and strategic management, positive elements were mixed to create a brand-new concept of strategic entrepreneurship (Kauranen and Kraus, 2011) and identify the linkages between entrepreneurship and strategic direction.

The Entrepreneurial Strategic Posture (ESP), a unidimensional construct of EO, was first conceptualized by (De Clercq et al., 2014), with three dimensions: proactiveness, risk-taking innovativeness. They were discovered particularly in small businesses as the keys to their performance in challenging business environments (Agyei and Marfo-Yiadom, 2011). Later on, the new measurement scale of EO was developed with two dimensions, autonomy and competitive aggressiveness (Rahman, Civelek, and Kozubikova, 2016). They promulgated the EO's new scale as a multidimensional construct, and they suggested that dimensions be examined independently as independent variables.

Entrepreneurial orientation and entrepreneurship education

Over time, researchers investigated entrepreneurial orientation, attitude, and mindset across industries which provides experimental proofs (Ngan, 2020). In the investigation of Feșteu and Turlakova (2020), they found that students who are provided with an organized and enriched entrepreneurship program and curriculum exhibited a high level of entrepreneurial orientation. Ibidunni et al. (2020) investigated the entrepreneurship orientation in Turkish institutions, and the respondents were found to have entrepreneurial qualities such as locus of control, hazard propensity, inventiveness, and self-confidence. Also, they found a solid entrepreneurial slant implication that entrepreneurship training is still needed to impact students' attitudes. Similarly, Fems (2020) investigated entrepreneurial intentions in Nigerian tertiary institutions using structural comparison demonstration. It was found that students have a different level of entrepreneurial purposes based on their differences in school modules and teaching mode. Udayanan (2019) demonstrated the vitality of school administration as a reflection of the quality of education offered by schools. He, therefore, considered entrepreneurship training as a crucial way to instill an entrepreneurial mindset. It was found that business school students have a high level of entrepreneurial orientation. They are more capable and receptive to the needs of the industry and the flow of the business (Ekpoh and Edet, 2011). Contrary, the finding of Taatila on measuring the entrepreneurial orientation of university students demonstrated that entrepreneurial desire differs among students'

academic programs while the actual entrepreneurial orientation does not (Taatila and Down, 2012). Individuals desire to become entrepreneurs for different reasons. Despite the economic growth in general, greater control, greater satisfaction, more money, and the ability to leave a legacy for children and family are the main perceptions regarding the potential benefits of becoming an entrepreneur (Belenzon, 2019).

A high level of entrepreneurial orientation cannot be achieved without taking any strategic plan to support the governmental directives given to tertiary institutions. Treating IEO as a holistic construct, it was discovered that male undergraduate business students from the U.S., Hong Kong, India, and Turkey scored better IEO than their female counterparts (Colombo et al., 2015). Unlike the previous study of IEO of college students (Koe, 2015), they showed higher risk-taking, innovation, proactiveness, and entrepreneurial rationale after completing an entrepreneurship route. Students of tertiary institutions rated risk-taking the lowest. The authors argued that risk-taking became a problem indeed for a few capability entrepreneurs. It was found in the Finnish university that students with entrepreneurial experience scored better for all elements of EO than non-entrepreneurial experienced students. Also, they diagnosed that male student had been greater risk-taking and proactiveness than women, and college students with working experience had been greater progressive and seasoned-active than college students without working experience.

Oshinowo and Raimi (2016) found that entrepreneurship education has a significant influence on student's entrepreneurial intention, entrepreneurial mindset, entrepreneurial capacities, and competencies, which are the critical factors for EO. They concluded by saying that there is a need for capacity building for lecturers, policymakers to focus on critical areas such as funding, industry collaboration, improved curriculum development, and quality assurance that integrates entrepreneurship education with the country's needs (Lindberg et al., 2017). Curriculum development is the precondition for further development of the students' creative and innovative thinking and entrepreneurial orientation. According to them, creative training must be imbibed by institutions. With creativity, individuals can view problems from different perspectives (Raimi and Sofoluwe, 2013). Thus, the integration of entrepreneurship in education systems must be intensified by institutions to increase their productivity. Based on the stated previous findings, the following null hypothesis was tested: *H₀₁: There is no significant difference between the level of Entrepreneurial orientations of students before (BEO) and after taking entrepreneurship modules.*

Entrepreneurial orientation and self-employment

Different internal and external factors such as encouraging legal provisions for start-up businesses, security issues, encouraging government policies, financial resources, and the country's economy were found to affect the entrepreneurial orientation of students while in institutions or after their graduation. It was found that governance and infrastructural deficits negatively affect all the efforts of Entrepreneurship Development Centres (EDCs) in learning, teaching, mentoring, and business plan development (Raimi and Ajiboshin, 2018). The research carried out at the Umeå School of Business and Economics Sweden on enhancing entrepreneurship's mindset indicated a significant positive enhancement of the students' Opportunity Recognition (OR) and Individual Entrepreneurship Orientation (IEO). An intervention personalized to enhance students' EO capabilities can positively affect their mindsets (Lindberg et al., 2017). Bolton and Lane's (2012) findings show reliability and validity of innovativeness, proactiveness, and risk-taking. Also, these factors are statistically correlated with entrepreneurial intention. Being a risk lover and having the willingness to take a risk positively affects entrepreneurial intentions while living risk-free negatively affects the growth rate of entrepreneurial orientation (Cho and Lee, 2020), which confirmed the importance of entrepreneurship education. It was suggested that tertiary institutions should carefully design the entrepreneurship education curriculum to enhance students' entrepreneurial orientation and increase entrepreneurial intention (Koe, 2016).

Hisrich said that entrepreneurship is a planned and intentional behavior, and its importance to national development is undeniable (Grichnik and Hisrich, n.d). It is, therefore, understandable that entrepreneurship knowledge is essential in developing a sustainable and significant number of entrepreneurs for the nation (Mellor, 2008). Regardless of the growing trend, all college students are not oriented entrepreneurially, nor should they necessarily expect them to be. However, some display a high level of interest in new venture creation (Boldureanu et al., 2020).

The collected information from teenagers studying entrepreneurship expressed a consistent desire for self-employment (Srivastava and Thomas, 2017). The meta-analysis of achievement motivation and entrepreneurship among forty-one students showed that individuals who pursued entrepreneurial careers scored significantly higher on achievement motivation than individuals who sought other types of employment (Efi, 2014).

Graduates' unemployment has been the primary reason for many social problems such as fraud, armed robbery, and so forth (Hajimichael, 2016). The inadequate curricula that do not meet today's world market have also been pinpointed to be responsible for graduates' unemployment (Jun 2017). Non-motivational factors such as availability of opportunities and resources, time, and capabilities also affect an entrepreneurial orientation, leading to the increase of graduates' unemployment. Therefore, entrepreneurial orientation may be considered a crucial ability that individuals acquire through learning. It is essential to look at students' entrepreneurial orientation to enhance self-employment (Ekpoh and Edet, 2011). Entrepreneurial activities positively impact the world economy (Lindberg et al., 2017), and self-employment has become every person's dream. Raimi and Sofoluwe (2013) discovered that entrepreneurship development could be an effective tool for stimulating employment poverty reduction and the fast-tracking realization of universal primary education. Based on the previous findings, this study hypothesizes that:

H₀₂: There is no significant impact of entrepreneurial orientation of students and desire for self-employment after graduation in North-East, Nigeria.

H_{02a}: There is no impact of entrepreneurial orientation of students (before taking entrepreneurship modules) and desire for self-employment after graduation in North-East, Nigeria.

H_{02b}: There is no impact of entrepreneurial orientation of students (after taking entrepreneurship modules) and desire for self-employment after graduation in North-East, Nigeria.

Research Methods

This quantitative research employed the descriptive research approach to generate objectives. The target population of the 3 categories of tertiary institutions (such as a polytechnic, a university, and a college), a sample size of 270 registered students who were taught entrepreneurship modules was selected using a convenient sampling technique. After that, questionnaires were self-administered to respondents physically. A total of 191 responses with 67, 64, and 60 responses from the American University of Nigeria, State Polytechnic Yola, and Federal College of Education Yola were obtained. Researchers use this technique to select respondents to be sampled based on their knowledge and professional judgment (Creswell, 2012). The Statistical analysis software SPSS V20 was used to manage, reduce and simplify data, select and analyze the collected data to meet the research objectives. The research instrument with three (3) sections: the section of EO scale, the section of factors affecting EO, and the section of identifiers were scrutinized, vetted, and content-validated by the academic professional. To ensure the reliability of the research instrument, Cronbach Alpha was used to measure the reliability of the 49 items of the instrument. After the test, the result indicated the coefficient of 0.67, which falls into the acceptance criteria that ranges between 0.65 and 0.8. The structural equation modeling was also used to understand the impact of entrepreneurial orientation (innovativeness, proactiveness, risk-taking, and competitiveness aggressiveness) on a desire for self-employment after graduation. To achieve in-depth responses, participants were given enough time to read, understand and fill the questionnaire. In terms of data handling and analysis, human error is poorly involved in statistical software analysis. The shallower low risk for the misinterpretation of results, thereby generating accurate and reliable conclusions.

Findings and discussion**Results and discussions 4.0. Descriptive Results**

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| No Extent at all | 3 | 1.6 | 1.6 | 1.6 |
| Very Low Extent | 11 | 5.8 | 5.8 | 7.3 |
| Low Extent | 61 | 31.9 | 31.9 | 39.3 |
| Average Extent | 107 | 56.0 | 56.0 | 95.3 |
| High Extent | 9 | 4.7 | 4.7 | 100.0 |
| Total | 191 | 100.0 | 100.0 | |

Table 1: Desire to be self-employed after graduation; Before taking entrepreneurship modules.

Table 1 indicates 9 respondents corresponding to 4.7% desire to be self-employed after graduation to a high extent; 107 respondents corresponding to 56% desire to be self-employed after graduation to an average extent; 61 respondents corresponding to 31.9% desire to be self-employed after graduation to a low extent; 11 respondents corresponding to 5.8% desire to be self-employed after graduation to a very low extent and 3 respondents corresponding to 1.6% do not desire to be self-employed after graduation.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Average Extent | 54 | 28.3 | 28.3 | 28.3 |
| High Extent | 63 | 33.0 | 33.0 | 61.3 |
| Very High Extent | 74 | 38.7 | 38.7 | 100.0 |
| Total | 191 | 100.0 | 100.0 | |

Table 2: Desire to be self-employed after graduation; After Taking Entrepreneurship Modules.

Table 2 indicates respondents corresponding to 38.7% desire to be self-employed after graduation to a very great extent; 63 respondents corresponding to 33% desire to be self-employed after graduation to a great extent; 54 respondents corresponding to 28.3% desire to be self-employed after graduation to an average extent. The finding shows a significant improvement in the desire for self-employment of students as a result of the implementation of entrepreneurship modules in tertiary institutions. Table 1 shows that 39.3% of students were at a low extent and below before taking entrepreneurship modules (BEM), but all respondents (100%) were at the average extent and above after taking entrepreneurship modules (AEM).

Results of ANOVA test

| | | Sum of Squares | df | Mean Square | F | Sig. | |
|---------------|--------------------------|----------------|---------|-------------|---------|-------|-------|
| BEO AEO | Between Groups | Linearly | 476.113 | 1 | 476.113 | 9.273 | 0.003 |
| | Deviation from Linearity | 1007.73 | 26 | 38.759 | 0.755 | 0.798 | |
| Within Groups | | 8317.64 | 162 | 51.343 | | | |
| Total | | 9801.47 | 189 | | | | |

Table 3: ANOVA Result (Hypothesis two testing)

From the table (3) ANOVA result, it is appropriate to conclude that the mean of before Entrepreneurial Orientation (BEO) and mean of after Entrepreneurial Orientation (AEO) is significantly

different ($F_{189} = 9.273$, $p < 0.003$), and therefore, there is a significant difference between the level of Entrepreneurial orientations of students before (BEO) and after taking entrepreneurship modules (AEO).

Regression analysis

The ANOVA results also showed a good fit for the data. $F(1, 191) = 12.469$ and $p\text{-value}(0.00) < 0.05$ for Entrepreneurial Orientation (EO) and desire for self-employment before graduation and FP; $F(1, 191) = 29.981$ and $p\text{-value}(0.00) < 0.05$ for EO and desire for self-employment after graduation indicate that there have been EO practices activities before the implementation of entrepreneurship modules in tertiary institutions, and those activities including entrepreneurship modules had a significant positive influence on their desire.

Entrepreneurial orientation and desire for self-employment before taking entrepreneurship modules

From table 4, the unstandardized coefficient, B, for innovativeness, proactiveness, risk-taking, and competitiveness aggressiveness was equal to 0.021, 0.090, -0.054, and 0.033, respectively. This means that for each effort made by tertiary institutions to engage students in innovative, proactive, risk-taking, and aggressive competitive activities, there is an increase in students' desire for self-employment of 0.021, 0.090 and 0.033, and a decrease of 0.054. However, only proactiveness activities significantly impact their willingness to self-employment with a $p\text{-value} 0.000 > 0.05$, with an insignificant constant of 0.895. Respondents who are mostly managers indicated strong customer orientation in their organizations. The negative impact of risk-taking or the insignificant impact of the other entrepreneurial orientation measures may be due to the internal (such as lack of technical expertise, lack of qualified teachers of entrepreneurship, level of business activities in school, enriched entrepreneurship books in the school library, lack of reliable electricity, poor buyer behavior towards made-in-Nigeria products and higher learning institutions policies) or external factors (such as poor buyer behavior towards made-in-Nigeria, lack of reliable electricity, lack of financial resources, the poor state of the Nigerian economy, lack of encouraging government policy, lack of encouraging legal provisions for start-up businesses in Nigeria, level of corruption in Nigeria, level of insecurity in Nigeria, high cost of production, rapid rate of technological changes) affecting the development of students risk-taking abilities. Specifically, students' risk-taking ability was very critical. Based on this factor analysis of innovativeness, proactiveness, risk-taking, and competitiveness aggressiveness, the following is the regression equation:

$$DSE = 0.895 + 0.021I + 0.090P - 0.054R + 0.033A$$

Where, DSE = Desire for Self-Employment, I = Innovativeness, P = Proactiveness, R = Risk-taking and A = Competitiveness Aggressiveness.

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|--|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| (Constant) | .895 | .581 | | 1.542 | .125 |
| Innovativeness items BEM | .021 | .022 | .066 | .972 | .332 |
| Proactiveness items BEM | .090 | .016 | .466 | 5.534 | .000 |
| Risk-taking Items BEM | -.054 | .039 | -.118 | -1.362 | .175 |
| Competitiveness aggressiveness items BEM | .033 | .024 | .101 | 1.396 | .164 |

Table 4. Coefficients for dependent variable: desire for Self-employment BEM

Entrepreneurial orientation and desire for self-employment after taking entrepreneurship modules

From table 5, the unstandardized coefficient, B, for innovativeness, proactiveness, risk-taking, and competitiveness aggressiveness was equal to 0.094, 0.166, -0.052, and -0.022, respectively. This means that for each effort made by tertiary institutions to engage students in innovative, proactive, risk-taking, and aggressive competitive activities, there is an increase in students' desire for self-employment of 0.094 and 0.166 and decreased 0.052 and 0.022. Innovativeness and proactiveness factors significantly impacted the students' willingness to self-employment with a $p\text{-value} > 0.05$. In contrast, Risk-taking and

competitiveness aggressiveness factors have an insignificant negative impact on their desire. Based on this factor analysis of innovativeness, proactiveness, risk-taking, and competitiveness aggressiveness, the following is the regression equation:

$$DSE = -2.475 + 0.094I + 0.166P - 0.052R - 0.022A$$

Where, DSE = Desire for Self-Employment, I = Innovativeness, P = Proactiveness, R = Risk-taking and A = Competitiveness Aggressiveness.

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|--|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| Constant | -2.475 | 1.094 | | -2.263 | .025 |
| Innovativeness items AEM | .094 | .026 | .215 | 3.601 | .000 |
| Proactiveness items AEM | .166 | .018 | .560 | 9.141 | .000 |
| Risk-taking Items AEM | -.052 | .029 | -.112 | -1.800 | .073 |
| Competitiveness aggressiveness items AEM | -.022 | .029 | -.045 | -.757 | .450 |

Table 5. Coefficients for Dependent Variable: Desire for Self-employment AEM

After implementing the entrepreneurship module, the overall level of entrepreneurial orientation has increased, and the entrepreneurial orientation activities either before or after the implementation were impacting the students' desire for self-performance after graduation. The risk-taking ability of students is still a critical issue, although the level of competitiveness aggressiveness of students seems not to decrease over time. This shows that the entrepreneurship education strategy in tertiary institutions in Nigeria is effective as expected. There is a need for more efforts in improving the level of entrepreneurial orientation of students, especially in the area of risk-taking and competitiveness aggressiveness. Some challenges are responsible for this less effectiveness of entrepreneurship education in tertiary institutions. The results from respondents show that both internal and external factors affect their entrepreneurial orientation. The lack of technical expertise, lack of qualified teachers of entrepreneurship, level of business activities in school, enriched entrepreneurship books in the school library, lack of reliable electricity, poor buyer behavior towards made-in-Nigeria products and higher learning institutions policies, poor buyer behavior towards made-in-Nigeria products, lack of reliable electricity, lack of financial resources, the poor state of the Nigerian economy, lack of encouraging government policy, lack of encouraging legal provisions for start-up businesses in Nigeria, level of corruption in Nigeria, level of insecurity in Nigeria, high cost of production and rapid rate of technological changes affect their EO (innovativeness, proactiveness, risk-taking and competitiveness aggressiveness) at a high and the same extent.

This result supports the finding of Boldureanu (2020), who found that tertiary institutions are continuously facing challenges such as the lack of interest in becoming entrepreneurs among university graduates because of the lack of financial support, mentoring, and the lack of engagement with non-business disciplines. According to Kristová and Malach (2017) on Entrepreneurship Education: Enabling teachers is a critical success factor, they recommended that educating staffs should be provided professional development. It was also found that governance and infrastructural deficits negatively affect all Entrepreneurship Development Centers (EDCs) efforts put in learning, teaching, mentoring, and business plan development (Ribeiro-Soriano and Mas-Verdú, 2015). The authors suggested that further research may investigate the level of entrepreneurial orientation based on gender differences and compare the level of entrepreneurial orientation between business students and non-business students.

Conclusions, Implications, and Limitations

The study concludes that the Entrepreneurial Orientation (EO) level has improved since the implementation of the entrepreneurship curriculum. As a result of that, the level of students' desire for self-employment was boosted. This means that they aspire more to own businesses after graduation instead of the government employment opportunities. However, the effectiveness of entrepreneurship education in tertiary institutions is not satisfactory, especially in risk-taking and competitiveness aggressiveness. Some external and internal factors are still affecting entrepreneurship education. By

considering the vital role of entrepreneurial orientation in the development of a country, the study redounds to the benefit of society. The greater demand for jobs creation justifies the need for more and effective entrepreneurs. The study findings may help government, private, and public tertiary institutions examine and improve entrepreneurship education and pedagogy. Besides, this research enriches the literature. It provides modest empirical findings and evidence on this crucial issue, particularly regarding the level of entrepreneurial orientation before and after entrepreneurship orientation and self-employment as studied from various tertiary institutions.

Given the preceding findings, the following recommendations are critical for improving the level of entrepreneurial orientation in tertiary institutions in Nigeria; When carrying out this research, the private university, namely, the American University of Nigeria, has business centers. Every semester, students develop new business ideas, and the winners get funds from the university to implement them. Therefore, the universities should engage students with practical entrepreneurial activities in schools to develop an entrepreneurial mindset and enhance entrepreneurship knowledge. This action will highly prepare them for the business challenges after graduation. Tertiary institutions should put more effort into risk-taking and competitiveness aggressiveness activities. Universities should hire qualified teachers of entrepreneurship who have professional expertise in the career. They should also buy enriched entrepreneurship books in the school library to enhance the teaching and learning process. National Universities Commissions (NUC) should reinforce institutions to align entrepreneurship education curricula with real-world start-up challenges by providing students with technical expertise and required entrepreneurship materials. There is still a gender gap in education, especially in emerging economies; future researchers should focus on gender-based entrepreneurship education in tertiary institutions.

References

- Agyei, S. K., and Marfo-Yiadom, E., 2011. Dividend policy and bank performance in Ghana. *International Journal of Economics and Finance*, 3(4). <https://doi.org/10.5539/ijef.v3n4p202>.
- Arzubiaga, U., Castillo-Apraiz, J., and Palma-Ruiz, J. M., 2019. Competitive advantage development in family firms by transforming entrepreneurial orientation into CSR. *Handbook of Research on Entrepreneurial Leadership and Competitive Strategy in Family Business*, pp.112-128. <https://doi.org/10.4018/978-1-5225-8012-6.ch006>.
- Belenzon, S., 2019. Businesses named after founders enjoy greater returns. *Entrepreneur and Innovation Exchange*. <https://doi.org/10.32617/395-5cc6dfea44edc>.
- Boldureanu, G., Ionescu, A. M., Bercu, A., Bedrule-Grigoriuță, M. V., and Boldureanu, D., 2020. Entrepreneurship education through successful entrepreneurial models in higher education institutions. *Sustainability*, 12(3), pp.1267. <https://doi.org/10.3390/su12031267>.
- Cho, Y. H., and Lee, J., 2020. A study on the effects of entrepreneurial orientation and learning orientation on financial performance: Focusing on mediating effects of market orientation. *Sustainability*, 12(11), pp.4594. <https://doi.org/10.3390/su12114594>.
- Colombo, M. G., Mohammadi, A., and Lamastra, C. R., 2015. Innovative business models for high-tech entrepreneurial ventures. *Business Model Innovation*, pp.169-190. <https://doi.org/10.1093/acprof:oso/9780198701873.003.0009>.
- De Clercq, D., Sapienza, H. J., and Zhou, L., 2014. Entrepreneurial strategic posture and learning effort in international ventures: The moderating roles of operational flexibilities. *International Business Review*, 23(5), pp.981-992. <https://doi.org/10.1016/j.ibusrev.2014.03.001>.
- Efi, A. E., 2014. Role of higher institutions in promoting entrepreneurship and small business in developing nations. *International Journal for Innovation Education and Research*, 2(9), pp.15-22. <https://doi.org/10.31686/ijier.vol2.iss9.233>.
- Ekpoh, U. I., and Edet, A. O., 2011. Entrepreneurship education and career intentions of tertiary education students in Akwa Ibom and Cross River states, Nigeria. *International Education Studies*, 4(1). <https://doi.org/10.5539/ies.v4n1p172>.
- Fems, K. M., 2020. Entrepreneurship education in Nigeria tertiary institutions and its impact on students' entrepreneurial career intentions. A study of students at federal Polytechnic Ekowe. *Open Science Journal*, 5(4). <https://doi.org/10.23954/osj.v5i4.1112>.
- Ferreira, J. J., Fayolle, A., Fernandes, C., and Raposo, M., 2016. Effects of Schumpeterian and Kirznerian entrepreneurship on economic growth: Panel data evidence. *Entrepreneurship and Regional Development*, 29(1-2), pp.27-50. <https://doi.org/10.1080/08985626.2016.1255431>.
- Feșteu, D., and Turlakova, N., 2020. Entrepreneurship education programme - Students' opinions. *Series V - Economic Sciences*, 13(62)(2), pp.177-190. <https://doi.org/10.31926/but.es.2020.13.62.2.19>.

- Grichnik, D., and Hisrich, R. D. (n.d.). International entrepreneurship: The case of the unified Germany. *Jahrbuch Entrepreneurship* 2004/05, pp.77-100. https://doi.org/10.1007/3-540-26823-5_5.
- Hajimichael, M., 2016. Graduate unemployment in post-haircut Cyprus: Where have all the students gone? *Academic Labour, Unemployment and Global Higher Education*, pp.117-132. https://doi.org/10.1057/978-1-137-49324-8_7.
- Ibidunni, A. S., Mozie, D., and Ayeni, A. W., 2020. Entrepreneurial characteristics amongst university students: Insights for understanding entrepreneurial intentions amongst youths in a developing economy. *Education + Training*, 63(1), pp.71-84. <https://doi.org/10.1108/et-09-2019-0204>.
- Jun, K., 2017. Factors affecting employment and unemployment for fresh graduates in China. *Unemployment - Perspectives and Solutions*. <https://doi.org/10.5772/intechopen.69809>.
- Kimenyi, M. S., 2011. Contribution of higher education to economic development: A survey of international evidence. *Journal of African Economies*, 20(3), pp.14-49. <https://doi.org/10.1093/jae/ejr018>.
- Koe, W., 2015. Individual entrepreneurial orientation (IEO) of university students. *ADVANCES IN BUSINESS RESEARCH INTERNATIONAL JOURNAL*, 1(2), pp.39. <https://doi.org/10.24191/abrij.v1i2.10064>.
- Koe, W., 2016. The relationship between individual entrepreneurial orientation (IEO) and entrepreneurial intention. *Journal of Global Entrepreneurship Research*, 6(1). <https://doi.org/10.1186/s40497-016-0057-8>.
- Kraus, S., Kauranen, I., and Henning Reschke, C., 2011. Identification of domains for a new conceptual model of strategic entrepreneurship using the configuration approach. *Management Research Review*, 34(1), pp.58-74. <https://doi.org/10.1108/01409171111096478>.
- Kristová, K., and Malach, J., 2017. The impact of school education and family environment on pupils' entrepreneurial spirit and attitude to entrepreneurship. *The New Educational Review*, 49(3), pp.101-114. <https://doi.org/10.15804/tner.2017.49.3.08>.
- Raimi, L., and Ajiboshin, I. O., 2018. The tertiary institutions and entrepreneurship development. *International Journal of Sustainable Entrepreneurship and Corporate Social Responsibility*, 3(1), pp.17-34. <https://doi.org/10.4018/ijsecsr.2018010102>.
- Langkamp Bolton, D., and Lane, M. D., 2012. Individual entrepreneurial orientation: Development of a measurement instrument. *Education + Training*, 54(2/3), pp.219-233. <https://doi.org/10.1108/00400911211210314>.
- Lindberg, E., Bohman, H., Hulten, P., and Wilson, T., 2017. Enhancing students' entrepreneurial mindset: A Swedish experience. *Education + Training*, 59(8), pp.768-779. <https://doi.org/10.1108/et-09-2016-0140>.
- Lumpkin, G. T., and Dess, G. G., 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. *The Academy of Management Review*, 21(1), pp.135. <https://doi.org/10.2307/258632>.
- Mellor, R., 2008. *Entrepreneurship for everyone: A student textbook*. SAGE.
- Mansor, M., and Othman, N., 2011. CoBLAS: Inculcating entrepreneurial culture among higher education institutions' students. *International Journal of Social Science and Humanity*, pp.86-91. <https://doi.org/10.7763/ijssh.2011.v1.15>.
- Martins, L. L., Rindova, V. P., and Greenbaum, B. E., 2015. Unlocking the hidden value of concepts: A cognitive approach to business model innovation. *Strategic Entrepreneurship Journal*, 9(1), pp.99-117. <https://doi.org/10.1002/sej.1191>.
- Ngan, N. T., 2020. Using AIC in model choice about entrepreneurial attitude orientation. *International Journal of Psychosocial Rehabilitation*, 24(02), pp.87-96. <https://doi.org/10.37200/ijpr/v24i2/pr200313>.
- Oshinowo, B., and Raimi, L. (2016). Exploring Entrepreneurial Mindset of Students in Tertiary Institutions in Lagos State: Implication for Improvement of Entrepreneurship Curriculum. Proceeding at the UNILAG Annual Research Conference and Fair. Yaba Lagos, Nigeria.
- Popli, G. S., and Rao, D. N., 2010. A study of entrepreneurial orientation and inclination for entrepreneurial career of engineering students. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1530288>.
- Purwana, D., Suhud, U., and Wibowo, A., 2018. Big-five personality of tertiary students and entrepreneurial intention. *Advanced Science Letters*, 24(10), pp.7180-7183. <https://doi.org/10.1166/asl.2018.12436>.
- Rahman, A. R., Civelek, M. C., and Kozubikova, L. K., 2016. Proactiveness, competitive aggressiveness and autonomy: A comparative study from the Czech Republic. *Equilibrium*, 11(3), pp.631. <https://doi.org/10.12775/equil.2016.028>.
- Rank, O. N., and Streng, M., 2018. Entrepreneurial orientation as a driver of brokerage in external networks: Exploring the effects of risk taking, proactivity, and innovativeness. *Strategic Entrepreneurship Journal*, 12(4), pp.482-503. <https://doi.org/10.1002/sej.1290>.
- Raimi, & Sofoluwe. (2013). Entrepreneurship Education and Employment Stimulation in Nigeria. *Afro Asian Journal of Social Sciences*.
- Rengiah, P., 2016. The effectiveness of entrepreneurship education in developing entrepreneurial intentions among Malaysian university students: (a research finding on the structural equation modeling). *European Law Review*, 8(6), pp.01-01. <https://doi.org/10.21859/eulawrev-08063>.
- Ribeiro-Soriano, D., and Mas-Verdú, F., 2015. Special issue on small business and entrepreneurship: their role in economic and social development. *Entrepreneurship and Regional Development*, 27(3-4), pp.255-257.

<https://doi.org/10.1080/08985626.2015.1041252>.

- Sijabat, F. N., 2018. Entrepreneurial orientation, barriers, business networks, and internationalization readiness: A conceptual framework for the SMEs. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 8(3). <https://doi.org/10.6007/ijarafms/v8-i3/4533>.
- Tautila, V., and Down, S., 2012. Measuring entrepreneurial orientation of university students. *Education + Training*, 54(8/9), pp.744-760. <https://doi.org/10.1108/00400911211274864>.
- Udayanan, P., 2019. The role of self-efficacy and entrepreneurial self-efficacy on the entrepreneurial intentions of graduate students: A study among Omani graduates. *Entrepreneurial Business and Economics Review*, 7(4), pp.7-20. <https://doi.org/10.15678/eber.2019.070401>.
- Weber, S., Trost, S., Wiethe-Körprich, M., Weiß, C., and Achtenhagen, F., 2014. Intrapreneur: An entrepreneur within a company. *Becoming an entrepreneur*, pp.279-302. https://doi.org/10.1007/978-94-6209-596-0_16.
- Ijaeseog, and Sangmyung L., 2015. The relationship between entrepreneurial education and entrepreneurial intentions: Focusing on moderating effects of entrepreneurial orientation and environmental factors. *Asia-Pacific Journal of Business Venturing and Entrepreneurship*, 10(3), PP.61-74. <https://doi.org/10.16972/apjbve.10.3.201506.61>.