Effects of Entrepreneurial Self-Efficacy on the Relationship Between Entrepreneurial Education and Entrepreneurial Intention of Female Students in Kaduna State University

[1]Nurudeen Jimoh, [2]Salisu Umar PhD, [2]Suleiman A. Karwai PhD & [3]Zubair Mohammed PhD

[1]Department of Business Administration, Kaduna State University, Kaduna, Nigeria
[2]Department of Business Administration, Ahmadu Bello University, Zaria, Nigeria
[3]Department of Banking and Finance, Ahmadu Bello University, Zaria, Nigeria
Email: nur.jimoh@gmail.com, salumar2002@yahoo.com & zubairu3070@gmail.com,

Abstract

The lingering yearning for white-collar jobs, and graduate joblessness as well as low level of female entrepreneurial intention necessitates this study. Therefore, the study examined the effects of entrepreneurial self-efficacy on the relationship between entrepreneurial education and entrepreneurial intention of female students in Kaduna State University**.** The study used the partial least square structural equation modelling (PLS-SEM) as a technique to run and analyse the data collected from University female students using a sample of 418 students. The findings of the study showed that the relationship between entrepreneurial education, entrepreneurial self-self-efficacy and entrepreneurial intention (EI) were found to be positive and significant. Also, entrepreneurial self-self-efficacy moderates the relationship between entrepreneurial education and EI. The study concludes that entrepreneurial self-efficacy plays a significant role and is very critical in developing entrepreneurial intention which is a strong predictor of entrepreneurial behaviour and subsequent venture creation. Thus, the study recommends among others that KASU's management and other policymakers should focus on enhancing female students' confidence in their abilities to successfully execute those tasks necessary for entrepreneurship, as it is capable of strengthening the acquired entrepreneurship knowledge towards forming EI which has direct effect on becoming self-employed.

Keywords: enrepreneurship education, entrepreneurial self-efficacy, entrepreneurial intention, total early-stage entrepreneurship activity and unemployment.

Introduction

Entrepreneurship intention (EI) has grown to become a consolidated field of study within the entrepreneurship discipline as far back as 1990's which, notwithstanding huge research that had documented myriad of factors as predictors of EI, more studies are still needed to enhance better comprehension of the construct and for mapping the future context of entrepreneurship, particularly for young people such as undergraduate students (Turulja, Veselinovic, Agic & Passic-Mesihovic, 2020; Fayolle & Linan, 2014). This is because EI is a reliable predictor of entrepreneurial behaviour since measuring the actual behaviour usually proved challenging (Wu, 2010).

Research on entrepreneurship suggests that entrepreneurial intentions of females have been established to be the source of economic growth and development across the globe. For instance, Sajjad, Kaleem, Chani and Ahmed (2020) argued that female entrepreneurship is vital and very

essential for economic growth and development. Thus, any nation that desired to enhance its economic growth and development, should support female to independently own their businesses which must be preceded by developing an intention (Sajjad, Kaleem, Chani & Ahmed, 2020). This is because female owned businesses are regarded as the fastest rising entrepreneurs in the world (Patil & Deshpande, 2018).

According to Price water house Coopers (2020) report, Nigerian female entrepreneurs account for 41% ownership of micro-businesses in the country with 23 million female entrepreneurs operating in this area of business. This places Nigeria among the highest entrepreneurship rates globally. However, the high-level participation of female entrepreneurs in Nigeria is mostly driven by necessity due to absence of sufficient formal employment for the women in comparison to their male counterpart. Therefore, the intentionality of female students who are the future female entrepreneurs cannot be neglected. Moreover, it was revealed that Nigeria's gross domestic product (GDP) could raise by 23% (or 229 billion US dollar) by 2025 if women participation in the economy is equivalent to that of men (Growing Economies Through Gender Parity, 2020).

In spite of the vital role of female entrepreneurs, there is very little success rate for this group of entrepreneurs due to societal attitude that restricts female from running certain types of entrepreneurial activities, in addition to obstacles initiated by the system that confine female entrepreneurs operating at a lower level contribute to the low representation of female entrepreneurs (Farah, 2014). Other factors such as family responsibilities, marital status and religion could also inhibit success of female entrepreneurs (Panda, 2018). The religion, societal and cultural barriers may affect an individual's inclination to engage in new venture creation and hence, dampens individual's entrepreneurial intention. This is because intention has been acknowledged to portray individual's disposition to engage in new business creation or growth (Davidsson, 2004). Therefore, comprehending the factors that account for developing entrepreneurial intention and subsequent venture creation is critical in clarifying entrepreneurial behaviour (Shane & Venkataraman, 2000).

One of those factors as identified in previous literature is entrepreneurship education (EE) (Entrialgo & Iglesias, 2016; Fayolle & Gailly, 2015). This might likely be due to the rising rate of unemployment and poverty permeating the global economies (Asikhia & Williams, 2012). Entrepreneurship education (EE) is a means to stimulate entrepreneurship intention by inculcating the curiosity to become an entrepreneur (Gerba, 2012). This education in universities is targeted at instilling entrepreneurial skills and mind-set in students to stimulate entrepreneurial intentions or contemplations of entrepreneurship as a career choice by undergraduates (Middleton, 2010). Notwithstanding the inclusion of entrepreneurship education as a mandatory course to all undergraduate students in Nigerian universities, the yearning for white-collar jobs and graduate joblessness has continued to be on the rise.

It was also revealed that 56.1 per cent Nigerians were unemployed and underemployed in the fourth quarter of 2020 (NBS, 2021). This is the highest rate recorded since the year 2014. In a nutshell, the increasing rate of unemployment implies that the few available jobs are been chased by many graduates. For instance, in 2017, Nigerian Immigration Service said about 1.2 million applicants were struggling for 1,112 available slots (Premium Times, 2017). Also, the unemployment and underemployment of female's population is far higher than their male counterpart. In 2020, 59.4 per cent of females were unemployed and under employed, while 53.6 of males were unemployed and underemployed.

In addition to the lingering problem of unemployment, the low level of EI is another source of concern. For instance, the Global Entrepreneurship Monitor (GEM) 2015 report which is the last GEM's report from 2015 to date (2021) that featured Nigeria revealed that the EI of female across all African nations stood at 47% which is low in comparison with 52% of their male counterpart. The report further indicated that the EI of Nigerian female stood at about 41% which is equally low when compared with 57%, 68% and 70% of the Uganda, Botswana and Malawi's female EI respectively (Kelley *et al*, 2015) Another central indicator of GEM is the Total Early-stage Entrepreneurship Activity (TEA) rate, which "measures the percentage of the adult population (18 to 64 years) in the process of starting a business and those who have recently started one". It was revealed that the Nigerian female TEA stood at 6% which is still very low in comparison with other African countries like Uganda, Zambia and Cameroon with 47%, 41% and 39% respectively (Kelley *et al*, 2015).

The low level of EI and TEA of these female folks may have resulted to the low business ownership for this group of people, as intention precedes venture creation. A report by World Bank indicated that share of business owned by Nigerian female stood at 33.6% which is very low when compare with the 66.4% businesses owned by their male counterparts (World Bank, Doing Business Data, 2021).

Individuals are also required to possess a strong self-belief in their abilities so as to thrive in achieving particular goals (Wood & Bandura, 1989). Entrepreneurial self-efficacy (ESE) is the degree of an individual's conviction that he/she is capable of successfully executing the numerous roles and tasks of entrepreneurship (Lee, Chang, & Lim, 2005). It was posited that self-efficacy is the most significant factor influencing behaviour both directly and indirectly (Bandura, 2012).

Furthermore, extant literatures have not well established the relationship between entrepreneurship education and entrepreneurial self-efficacy in relation to female students' entrepreneurship intention. Several studies reported contradicting findings on the relationship between entrepreneurship education and entrepreneurial intention. For instance, Jakubiak & Buchta (2016); Ojogbo, Idemobi & Ngige (2016); Ramoni (2016); Oyugi (2015); Hussain & Norashidah (2015) and Küttim, Kallaste, Venesaar & Kiis (2014) established that entrepreneurial education positively and significantly predicts entrepreneurial intention. While others like: Popescu, Bostan, Robu, Maxim and Diaconu (2016), Michell & Tendai (2016), Irena and Dina (2015) found entrepreneurial education not having significantly impact on entrepreneurial intention. With these contradicting results, no conclusion can be drawn. Therefore, as suggested by Baron and Kenny (1986), where there are contradicting or weak findings between exogenous and endogenous variables, a typical moderating variable can be introduced to balance and strengthen the relationship. Thus, this study investigates the effects of entrepreneurial self-efficacy on the relationship between entrepreneurial education and entrepreneurial intention of female undergraduate students in Kaduna State University. To achieve the aforementioned objective, the following hypotheses were formulated to for the study:

Ho_1: Entrepreneurial education has no significant effect on entrepreneurial intention (EI)

Ho_2: Entrepreneurial Self-efficacy does not moderate the effect of EE on EI

Ho_3: Entrepreneurial Self-efficacy has no significant effect on entrepreneurial intention

Conceptual Clarifications

Entrepreneurial Intention

Entrepreneurial intentions have been viewed from different perspectives by different scholars. Dohse and Walter (2010) in agreement with Dell (2008) defined entrepreneurial intentions as the willingness of an individual to express entrepreneurial behaviour and involve in entrepreneurial activities correlated with self-employment initiatives and new venture start-ups. EI have been described as an individual prognosis of future activities and objectives to be executed to come-up with one's own business (Ajzen, 1991; Fini, Grimaldi, Marzzochi, Sobrero, 2009). It was also defined as a conscious state of mind that precedes action and directs it toward the aim of establishing an enterprise (Shook, Priem & Mcgee, 2003). Thompson (2009) sees EI as an individual conviction of a person who anticipates opening a new business enterprise.

Entrepreneurial Education (EE)

Oduwaiye (2009) sees entrepreneurship education as the scope of lectures, curricular and programmes that endeavour to provide students with the required entrepreneurial competencies, aptitudes, technical know-how and skill geared towards the pursuit of a career in entrepreneurship. This implies that the acquisition of essential knowledge, skill, aptitude and know-how, with respect to the process of entrepreneurship is vital for successful business take-off (Ejere & Tende, 2012).

Entrepreneurial Self-efficacy (ESE)

Entrepreneurial self-efficacy (ESE) is the degree of an individual's conviction that he/she is capable of successfully executing the numerous roles and tasks of entrepreneurship (Lee, Chang, & Lim, 2005). Boyd and Vozikis (1994) see ESE as an individual's belief in his/her ability to perform the role and task of an entrepreneur with successful outcomes. Positive entrepreneurial intention tends to be associated with persons with higher entrepreneurial self-efficacy (Pihie & Akmaliah, 2009). This is in agreement with Wilson, Kickul and Marlino (2007) who found that persons with a superior self-confidence and beliefs in their abilities that they possess unique capabilities with respect to establishing and running a business venture are likely to have higher entrepreneurial intention.

Entrepreneurial Education (EE) and Entrepreneurial Intention (EI)

Extant literature has established a positive and significant relationship with intention to start a venture and become self-employed. For instance, Dohse and Walter (2010) argued that entrepreneurial knowledge – courses thought have a positive relationship with intention to be self-dependent. In the same vein, entrepreneurial education had also been proved to positively influenced entrepreneurial intentions (Ramoni, 2016; Hussain & Norashidah, 2015; Oyugi, 2015). On the other hand, studies such as Popescu, Bostan, Robu, Maxim and Diaconu (2016), Michell & Tendai (2016), Irena and Dina (2015) found entrepreneurial education not having significant impact on entrepreneurial intention. Entrepreneurship education provides students with analytical power to enhance business opportunities and make such opportunity more rewarding than others (Dohse & Walter, 2010).

Entrepreneurial Self-efficacy (ESE) and Entrepreneurial Intention (EI)

Numerous studies positively correlate entrepreneurial self-efficacy with resolution to create and nurture business ideas in the field of entrepreneurship, some of these studies include: Utami (2017), Hsu, Wiklund and Cotton (2017), Hatak and Snellman (2017), McGee and Peterson (2017). Entrepreneurial self-efficacy had been found to influence entrepreneurial motivation,

intention, behaviour and performance; in addition to being a major expected outcome of entrepreneurship education and training. (Obschonka, Hakkarainen, Lonka, & Salmela-Aro, 2017; Uy, Chan, Sam, Ho, & Chernyshenko, 2015).

Theoretical Framework

The study was underpinned by theory of planned behaviour (TPB); this theory was advocated by Ajzen (1991), and regarded as one of the most useful models that explained the entrepreneurial intentions of students. The theory suggests that intentions are the best predictors of behaviour; consequently, entrepreneurial intentions are regarded as the principal point in comprehending entrepreneurial process (Kruger, 2004). This theory comprises of three basic elements: attitude towards behaviour, subjective norm and perceived behavioural control. Attitude towards behaviour signifies the extent to which an individual has a favourable or unfavourable evaluation of becoming an entrepreneur (Ajzen, 2002).Subjective norm is the perceived social pressures to perform or not to perform a specific behaviour towards entrepreneurship; it is grounded on the belief that that some vital individual will approve or fail to approve the prospective entrepreneur's actions of commencing a new venture (Ajzen, 2001).Perceived behavioural control signifies the perceived ease or difficulty in relation to one's capability of executing entrepreneurial behaviour (Liñán & Chen, 2009). It can be contended that when people see great opportunities for commencing a business venture in their environs, they tend to have more favourable expectations about the possible result of an attempt to launch a business venture and this implies that such people will also have a more positive attitude and self-confidence in utilising the entrepreneurial education acquired towards forming a business venture.

Research Methodology

The study employed survey research design which was a cross-sectional in nature. Self-administered questionnaires were used to obtained primary data from the respondents. The population of the study were the female final year students of Kaduna State University whom were (1,311) in number (Information and Computer Technology (ICT) unit, 2020). Krejcie and Morgan, (1970) sample size table was used to arrived at the sample size of (299) which is the average of 297 and 302 for a population of 1,300 and 1400 respectively. In line with the suggestion of Hair, Wolfinbarger, Ortinau and Bush (2008) that a sample size could be increased by 40 to50 per cent so as to handle the tendency of missing questionnaires as well as disobliging subjects. The sample size was increased by 40% and the new sample size amounted to 418. Out of the 418 questionnaires distributed, 274 were filled and returned, 22 had more than 7.7% missing values and were deleted. Thus, 252 valid questionnaires were used for the analysis. Proportionate stratified random sampling technique was employed because the sample was drawn from various faculties of the universities which served as stratum that constitute the population.

The instrument for measuring entrepreneurial education were five (5) items adapted from Souitaris, Zerbinati, and Al-Laham (2007) and has a Chronbach's alpha of 0.71. Also, eight (8) items that measured ESE were adapted from Zhao, Seibert & Hills (2005) with a Chronbach's alpha of 0.78. Moreover, six (6) items that measured entrepreneurial intention were adapted from the work of Linan and Chen (2009) with Chronbach's alpha of 0.78. Structural Equation Modelling using Smart-PLS 3.0 statistical software was used for data analysis.

Data Analysis

Assessment of SEM Path Model Results

This study ustilised a two-step process to report the results of SEM path, this isin line with the suggestion of Henseler, Ringle and Sarstedt (2013). The two-step process utilised in this study include: the assessment of a measurement model, and the assessment of a structural model (Hair *et al*, 2018 and Henseler, 2013)**.**

Measurement model assessment encompasses determining individual item reliability, internal consistency reliability, convergent validity, content validity and discriminant validity (Hair *et al*, 2018).

Individual Item Reliability

Assessment of individual indicators' reliability was achieved by evaluating the outer loadings of individual construct's measure (Hair *et al*, 2018). The outputs indicated that except for two items EE5 and ESE5, all other outer loadings met the recommended threshold of 0.5 and above (Hair et al, 2014). However, in line with the suggested rule of thumb, items with loadings between .40 and .70 are also acceptable (Hair et al, 2014) provided their deletion or otherwise did not improve the AVE and composite reliability. It was noted that of the 16itemsthat measured the constructs of the study, 14 items were retained as they had a loading between 0.627 and 0.868.The two items EE5 and ESE5 were deleted because their loadings were below the established threshold. The precise values of the outer loadings were presented in Table 1.

Internal Consistency Reliability and Convergent Validity

Cronbach's alpha and composite reliability were used to assess the internal consistency/ reliability. In addition, both the Cronbach's alpha and composite index are utilised to test reliability because Cronbach's alpha is a conservative measure of reliability, likely to results in comparatively low values, whereas, composite reliability is likely to overestimate the internal consistency values and this might result to a logically higher reliability estimates (Hair *et al*, 2012). In other words, Cronbach's alpha presumes that all indicators are similarly reliable, and have equal outer loadings on the construct. However, the weakness of this conjecture is the fact that PLS-SEM ranks the indicators in relation to their individual reliability (Hair *et al,* 2018). On the other hand, the second alternative measure of internal consistency reliability is known as composite reliability. This measure emphasised on the distinct outer loadings of the indicators. It is thus, appropriate to cogitate both (Hair *et al,* 2018). In this regards, the rule of thumb states that any outer loading with a value of an indicator of 0.70 and above will be retained, otherwise discarded.

Table 1 :Items Loadings, Average Variance Extracted, Reliability

ITEM	LOADINNG	AVE	COMPOSITE RELAIBILITY	CRONBAC H'S ALPHA
EE1	0.87	0.65	0.88	0.82
EE2	0.85			
EE3	0.80			
EE4	0.69			
EI1	0.66	0.52	0.87	0.81
EI2	0.73			
EI3	0.75			
EI4	0.76			
EI5	0.71			
EI6	0.72			
ESE1	0.77	0.53	0.82	0.70
ESE2	0.85			
ESE3	0.65			
ESE4	0.63			

Table 1 presented the result of reliability and validity, the composite reliability and the croanbach alpha values for all the latent construct examined indicated that they were all above the suggested threshold of 0.7 (Hair *et al*, 2014, Henseler *et al*, 2009). Precisely, as indicated in the table 1, the values for the latent constructs for the two test of reliability employed ranged from 0.70 to 0.88, thus, indicating higher level of reliability (Hair *et al*, 2014).

In addition to the reliability test, convergent validity was also assessed, convergent validity measures the extent to which two measures of the same concept are correlated (Hair *et al*, 2014). This was achieved by examining the value of the average variance extracted (AVE). All the AVE values as showed in table 1 exceeded the threshold of 0.5 (Hair *et al*, 2014, Henseler *et al*, 2009). The minimum value was 0.52; this suggests that convergent validity was achieved.

Next is the examination of the discriminant validity which implies the degree to which a construct is really distinct from other constructs (Hair *et al*, 2014). *Heterotrait-Monotrait Ratio (HTMT) of* correlation was employed as suggested by Henseler *et al* (2015). They contended that even though, the Fornell-Larcker criterion and the cross-loadings are the leading methods mostly employed by

researchers for assessing discriminant validity, they do not reliably detect the lack of discriminant validity in common research situations Henseler *et al* (2015). The results of the study indicated that the HTMT ratio values are lower than the benchmark of 0.85 suggested by (Kline, 2011), thus discriminant validity was established. Table Two presented the HTMT ratio criterion for establishing discriminant validity.

Table 2: ***Discriminant Validity (Heterotrait-Monotrait Ratio (HTMT)***

Variable	1	2	3	4
1.ESE *Education				
2. Education	0.06			
3. Eintention	0.19	0.83		
4. EselfEfficacy	0.04	0.71	0.66	

Assessment of Significance of the Structural Model

In this section, all the hypotheses formulated were tested for validation as shown in table 3.

Table 3 (Hypothesis Test (direct and moderating relationship)

Hypotheses	Relationship	Beta Value	STDEV	T-Stat	P-Value	2.5%	97.5%	Decision
H01	Eeduc -> EI	0.57	0.05	11.51	0.00**	0.47	0.67	Rejected
H02	ESE -> EI	0.19	0.05	3.56	0.00**	0.09	0.29	Rejected
H03	Educ *ESE -> EI	0.15	0.05	3.13	0.00**	0.06	0.24	Rejected

*****p<.05; **p<.01**

Table 3 presents the result of the hypothesis one (H01) which indicated a significant positive relationship between entrepreneurial education and entrepreneurial intention (EI) (t= 11.51, p < 0.01). Also, result of hypothesis H02 showed a significant positive relationship between entrepreneurial self-efficacy and entrepreneurial intention (t= 3.56, p< 0.01). Similarly, for the indirect relationships, the finding for hypothesis H03 presented evidence for moderating effects of entrepreneurial self-efficacy on the relation between entrepreneurial education and entrepreneurial intention (t= 3.13, p <0.01).

To further buttress the significance of the moderating relationship, the confidence interval method is also relevant because the hypotheses may not be supported when there is zero between the lower bound and upper limit of the confidence interval that relies on bootstrapping standard error (see Hair *et al*, 2014; Hayes & Preacher, 2013). It was further noted by Hair *et al* (2017) that instead of just reporting the significance of a parameter, it is imperative to also report the bootstrap confidence interval that provides added information on the stability of a coefficient estimate. The Smart PLS 3.0 has automatically generated the confidence interval estimation at 2.5 percent lower level (LL) and 97.5 percent upper level (UL) as presented in Table 3.

Assessment of Variance Explained in the Endogenous Latent Variables

Coefficient of determination (*R*-squired) value indicates the degre of variation in the endogenous variable(s) that can be explained by one or more predictor variable. However, the acceptable level of *R2* value is research context specific. (Hair *et al*, 2011), advocated an R-squared value of 0.10 as a minimum acceptable level. Table 4 presented the *R*-squared values of the endogenous latent variables.

Table 4. R Squared

Dependent Variable	R Square (R^2)
Entrepreneurial Intention	0.508 (51%)

The research model indicated that the exogenous variables explain 51% of the total variance in the endogenous variable (EI).

Discussion of the findings

The major objective of this study is to examine the effects of entrepreneurial self-efficacy on the relationship between entrepreneurial education and EI of female students in Kaduna state university. Results from the collected data signified that entrepreneurial education has a positive and significant influence on entrepreneurial intention. These findings are in agreement with the studies of Jakubiak and Buchta (2016), Ojogbo, Idemobi and Ngige, (2016), Ramoni (2016) and Oyugi (2015) which found a positive and significant relationship between entrepreneurial education and EI; and contradict the findings of Popescu *et al* (2016), Michell and Tendai (2016) and Irena and Dina (2015). Also, a significant positive relationship was established between entrepreneurial self-efficacy and EI. This finding is in line with the study of Utami (2017), Hsu, Wiklund and Cotton (2017) and Hatak and Snellman (2017). This implies that entrepreneurial education and entrepreneurial self-efficacy are very critical in predicting entrepreneurial intention of university students which may ultimately leads to actual venture creation.

Similarly, the study also established that entrepreneurial self-efficacy moderates the relationship between entrepreneurial education and EI. This result suggests that possessing self-confidence and self-conviction in executing those tasks/activities that are necessary in succeeding in entrepreneurial endeavours is very vital in enhancing and strengthening the acquired entrepreneurship education towards developing EI which is necessary for venture creation. This further implies that regardless of the level of entrepreneurial education acquired, a great sense of self-conviction in one's abilities to efficiently executing entrepreneurial tasks will go a long way in strengthening the mind-set of female students that have acquired entrepreneurial education towards forming an intention to engage in venture creation. The aforementioned view is further buttressed by Chen *et al* (1998) who stressed that students with a superior sense of self-efficacy in effectively carrying out entrepreneurial responsibilities, for instance, management, financial control, innovation, marketing and risk taking have higher mind-set to becoming entrepreneurs than those with lower conviction in their entrepreneurial capabilities and aptitudes.

In addition to the assessment of the R^2 value of the dependent variable of this model (i.e., entrepreneurial intention), the assessment of F^2 i.e. the effect size which stipulates the relative effect of a particular exogenous latent variable on the latent endogenous variable based on the changes in the R^2 value due to the exclusion of the former (Chin, 1998). Table five presents the values of the F^2as follows:

Table 5: Assessment of effect size: F-Square

Construct	f^2(EI)	Effect size
Entrepreneurship education	0.47	Large
Entrepreneurial self-efficacy	0.05	Small

Table 5 depicted that entrepreneurial education has a large effect size on the endogenous variable. Also, entrepreneurial self-efficacy shows a small effect on entrepreneurial intention. This obviously implies that moderation exists between the exogenous and the endogenous variable (entrepreneurial intention) as the moderator (entrepreneurial self-efficacy) absorbed a significant weight of the exogeneous variables.

Aside the evaluation of the level of the R^2 value as a measure of predictive relevance, it is imperative to assess the Stone-Geisser's Q^2 value (Geisser, 1974; Stone, 1974). This criterion signifies the predictive relevance of a model (Hair *et al*, 2014). Hence, a model with the Q^2 higher than zero is presumed to have predictive relevance (Henseler *et al*, 2009). Therefore, the higher the Q^2 the greater the predictive relevance of the exogenous latent variables on the endogenous latent variable (Duarte & Roposo, 2010). The Q^2 value obtained using the blindfolding procedure is presented in Table 6.

Table 6: Predictive relevance on endogenous variables: Q-square

	SSO	**SSE**	**Q^2 (=1-SSE/SSO)**
Eintention	1512	1130.537	0.252
EselfEfficacy	1008	1008	

As presented in table 6, it is glaring that cross-validated redundancy (Q^2) is greater than zero. This simply signifies the existence of a path model predictive relevance on entrepreneurial intention (Chin, 1998; Hair *et al*, 2014; Hayes, 2009).

Conclusion

This study concludes that entrepreneurial self-efficacy is a critical factor in strengthening and enhancing the entrepreneurial education of female students in Kaduna state university towards entrepreneurial intention formation. This factor plays a significant role in developing entrepreneurial intention which is a strong predictor of entrepreneurial behaviour and subsequent venture creation.

Recommendations

In line with the above findings, the following were recommended:

i. KASU's management and other policymakers should focus on enhancing female students' confidence in their abilities to successfully execute those tasks necessary for entrepreneurship, as it is capable of strengthening the acquired entrepreneurship knowledge towards forming EI which has direct effect on becoming self-employed.

Contribution to Knowledge

i. This study contributes to entrepreneurship literature by documenting moderating effects of entrepreneurial self-efficacy on the relationship between entrepreneurial education and entrepreneurial intention of female undergraduate students which is very rare in the extant literature.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human* Decision Processes, 50, 179–211.

Ajzen, I. (2001). Attitudes. *Annual Review of Psychology* 52, 27-58.

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology,* 32(4), 665–683.

Asikhia, O.A. & Williams, O.O. (2012). The role of counselors in the implementation of the new secondary school curriculum. Towards facilitating entrepreneurships development, *Ogun Journal of Counseling studies,* 3,30-37

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management,* 38, 9–44.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology,* 51, 1173-1182.

Boyd, N. & Vozikis, G.S. (1994), The influence of self-efficacy on the Development of Entrepreneurial intentions and actions. *Entrepreneurship, Theory and Practice, 63-77.*

Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of business Venturing, 13*(4), 295-316.

Chin, W. W. (1998). Commentary: issues and opinion on structural equation modeling. *MIS Quarterly,* 19(2), 7-16.

Davidsson, P. (2004). Researching Entrepreneurship. Springer, New York.

Dell, M. S. (2008). *An Investigation of Undergraduate Student Self-Employment Intention and the Impact of Entrepreneurship Education and Previous Entrepreneurial Experience.* A PhD Thesis Presented at School of Business University, The Australia.

Dohse, D. & Walter, S.G. (2010). The role of entrepreneurship education and regional context in forming entrepreneurial intentions (No. 2010, 18). Document de treball de l'IEB

Duarte, P.A.O. & Roposo, M.L.B. (2010). A PLS model to study brand preference: an application to the mobile phone market.

Ejere, E.S.I. & Tende, S.B.A. (2012). *Entrepreneurship and New Venture Creation*. In E. Chuta (Ed.). Small Enterprises and Entrepreneurship Development Dakar: Amalion Publishing. ISBN: 9782359260144.

Entrialgo, M. & Iglesias, V. (2016). The Moderating role of entrepreneurship education on antecedents of entrepreneurial intention. *International entrepreneurship and Management Journal,* 12(4)

Farah, A.I. (2014). *Factors influencing women participation in entrepreneurial activities in Mandera Township, Mandera Central Division, Kenya.* Unpublished Research Thesis submitted in partial fulfillment of the requirement for the Degree of Master of Arts in Project Planning and Management, School of Continuing and Distance Education, University of Nairobi, Kenya.

Fayolle, A. & Gailly, B. (2015). Assessing the impact of entrepreneurship education programmes: a new methodology. *Journal of European Industrial Training,* 30(9), 701-720. doi:10.1108/03090590610715022

Fayolle, A. & Liñán, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research, 67*(5), 663-666. doi: 10.1016/j.jbusres.2013.11.024

Fini, R., Grimaldi, R., Marzocchi, G. L. & Sobrero, M. (2009). The foundation of entrepreneurial intention. *Journal TheDepartemen of Management of the University of Bologna*.

Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika,* 61(1); 101–107.

Gerba, D.T. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia.*African Journal of Economic and Management Studies*, 3(2): 258–277.

Global Entrepreneurship Monitor (GEM) (2015), Retrieved from: http://www.gemconsortium.org.

Growing Economies Through Gender Parity (2020). Retrieved from: new%20papers/Growing%20Economies%20Through%20Gender%20Parity.html. Accessed on 27, May 2021

Hair, J. F., Wolfinbarger, M. F., Ortinau, D. J., & Bush, R. P. (2008). *Essentials of marketing research* (2nd ed.). New York: McGraw-Hill/Higher Education

Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, *26*(2), 106-121

Hair Jr, J. F., Matthews, L. M., Matthews, R. L., &Sarstedt, M. (2017). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123

Hair, J. F., Sarstedt, M., Ringle, C. M., &Gudergan, S. P. (2018). Advanced Issues in Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks, CA: Sage

Hatak, I. &Snellman, K. (2017). The influence of anticipated regret on business start-up behaviour', *International Small Business Journal* 35(3), 349–360.https://doi. org/10.1177/0266242616673421

Hayes, A. F. (2009). Beyond Baron and Kenny: statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408–420. doi:10.1080/03637750903310360.

Hayes, A. F. & Preacher, K.J. (2013). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology*, 451–470. doi:10.1111/bmsp.12028

Henseler, J., Ringle, C. M. & Sinkovics, R.R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing* (pp. 277-319). Emerald Group Publishing Limited

Henseler, J., Ringle, C.M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115–135.

Hussain, A. & Norashidah, H. (2015). Impact of entrepreneurial education on entrepreneurial intention of Pakistani Students. *Journal of Entrepreneurship and Business Innovation*, *2*(1), 43-53. doi:10.5296/jebi.v2i1.7534

Hsu, D.K., Wiklund, J. & Cotton, R.D. (2017). Success, failure, and entrepreneurial reentry: An experimental assessment of the veracity of self-efficacy and prospect theory. *Entrepreneurship Theory and Practice* 41(1), 19–47. https://doi.org/ 10.1111/etap.12166

Information and Computer Technology Unit (2020). Kaduna State University, Kaduna, Ngeria

Jakubiak, M. & Buchta, K. (2016). Determinants of entrepreneurial attitudes in relation to students of economics and non-economics. *Studia i Materialy*, *2*(1), 17-30. doi:10.7172/1733-9758.2016.21.2

Kelley, D., Brush, C., Greene, P., Herrington, M., Ali, A., & Kew, P. (2015). Global entrepreneurship monitor special report: women entrepreneurs. *Global Entrepreneurship Monitor*, 1–158.

Kline, R.B. (2011). Principles and Practice of Structural Equation Modeling (5th ed.). New York: The Guilford Press.

Krejcie, R.V. & Morgan, D.W. (1970). Determining sample for research activities. *Educational and Psychological Measurement, 38*, 607–610.

Kruger, M.E. (2004). *Creativity in the entrepreneurship domain.* PhD thesis, Department of Business Management, University of Pretoria.

Küttim, M., Kallaste, K., Venesaar, U. &Kiis, A. (2014). Entrepreneurship education at university level and students‟ entrepreneurial intentions. *Procedia - Social and Behavioral Sciences*.doi: 10.1016/j.sbspro.2013.12.910*110*,658-668.

Lee, S.M., Chang, D., & Lim, S.B. (2005). Impact of Entrepreneurship Education: A Comparative Study of the U.S. and Korea. *International Entrepreneurship and Management Journal* 1: 27–43. doi:10.1007/s11365-005-6674-2

Liñán, F. & Chen, Y. (2009). Application of a Specific Instrument to Measure Entrepreneurial Intentions. *Entrepreneurship: Theory and Practice*, *33*(3), 593–617.

McGee, J.E. & Peterson, M. (2017). The long-term impact of entrepreneurial self-efficacy and entrepreneurial orientation on venture performance. *Journal of Small Business Management*, Advance online publication. https:// doi:10.1111/jsbm.12324

Michelle, K. & Tendai, C. (2016). The Association of Entrepreneurship Education and Entrepreneurial Intention among University Students in the Eastern Cape Province of South AfricaI. *International Journal of Educational Sciences* 12, 200-211. DOI - 10.1080/09751122.2016.11890427

Middleton, K.L.W. (2010). *Developing Entrepreneurial Behaviour: Facilitating Nascent Entrepreneurship at the University*. A Thesis submitted at the Division of Management of Organizational Renewal and Entrepreneurship, Department of Technology Management and Economics, Chalmers University of Technology, Gothenburg, Sweden.

National Bureau of Statistics (2021). Labor Force Statistics: Unemployment and Underemployment Report. *Labor Force Statistics Unemployment and Underemployment Report*, 1–88. Retrieved from https://www.proshareng.com/news/Nigeria Economy/Unemployment-Rate-

Obschonka, M., Hakkarainen, K., Lonka, K., & Salmela-Aro, K. (2017). Entrepreneurship as a twenty-first century skill: Entrepreneurial alertness and intention in the transition to adulthood. Small Business Economics, 48 (3), 487-501

Oduwaiye, R.O. (2009). Entrepreneurship Education in Nigerian Universities: Implementation and Way Forward. *Advances in Management*, **8(1)**: 60–67.

Ojogbo, L.U., Idemobi, E.I. & Ngige, C.D. (2016). The Impact of Entrepreneurship Education On The Development of Entrepreneurial Career Intentions and Actions. *International Journal of Enterprenuership*, 1(1), 27-49.

Oyugi, J.L. (2015). The mediating effect of self-efficacy on the relationship between entrepreneurship education and entrepreneurial intentions of university Students. *Journal of Entrepreneurship, Management and Innovation*, *11*(2), 31–56.

Panda, S. (2018). Constraints faced by women entrepreneurs in developing countries: *Review and ranking. Gender in Management* 33(4), 315-331.

Patil, P. & Deshpande, Y. (2018). Women entrepreneurship: a road ahead, *International Journal of Economics, Business, and Entrepreneurship*, 1(1), 155-159.

Pihie, Z. A. L., & Akmaliah, Z. (2009). Entrepreneurship as a career choice: An analysis of

entrepreneurial self-efficacy and intention of university students. *European Journal of Social Sciences*, 9(2), 338-349

Popescu, C. C., Bostan, I., Robu, I. B., Maxim, A., & Diaconu (Maxim), L. (2016). An analysis of the determinants of entrepreneurial intentions among students: A Romanian case study. *Sustainability (Switzerland)*, *8*(8), 1–22.

Premium times (2017). Retrieved from: https://www.premiumtimesng.com/news/headlines/238 912-exclusive-1-2-million-applicants-jostle-1112-nigeria-immigration-jobs.html.Accessed on 24 May, 2021

PricewaterhouseCoopers: Impact of Women on Nigeria's Economy (2020): Retrieved from new%20papers/impact-of-women-nigeria-economy%20pwc.pdf. Accessed on 13 June, 2021.

Ramoni, S.A. (2016). Determinants of entrepreneurial intention among Nigerian University Graduates.*World Journal of Social Sciences*, 6(1), 45-59.

Sajjad, K. & Ahmed, C. (2020). Worldwide role of women entrepreneurs in economic development. *Asia Pacific Journal of Innovation and Entrepreneurship*, ahead-of-print(ahead-of-print), –. doi:10.1108/APJIE-06-2019-0041

Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, *25*, 217-226.

Shook, C.L., Priem, R. L., & McGee, J. E. (2003). Venture creation and the enterprising individual: a review and synthesis. *Journal of management*, *29*, 379-399.

Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*. 22(4), 0–591.

Stone, M. (1974). Cross-validation choice and assessment of statistical prediction. *Journal of Royal Statistical Society*, 36(2), 111–147.

Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship: Theory and Practice*, *33*(3), 669–694.

Turulja, L., Veselinovic, L., Agic, E., & Pasic-Mesihovic, A. (2020). Entrepreneurial intention of students in Bosnia and Herzegovina: what type of support matters? *Economic Research-EkonomskaIstraživanja*, DOI: 10.1080/1331677X.2020.1730216

Utami, C.W. (2017). Attitude, subjective norms, perceived behaviour, entrepreneurship education and self-efficacy toward entrepreneurial intention of university student in Indonesia', *European Research Studies* 20(2), 475–495.

Uy, M., Chan, K., Sam, Y., Ho, M., & Chernyshenko, O. (2015). Proactivity, adaptability and boundaryless career attitudes: The mediating role of entrepreneurial alertness. *Journal of Vocational Behavior*, 86,115-123

Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory & Practice, 33*(3), 387-406.

Wood, R. & Bandura, A. (1989). Social cognitive theory of organisational management. *The Academy of Management Reiew*, 14(3), 361-384

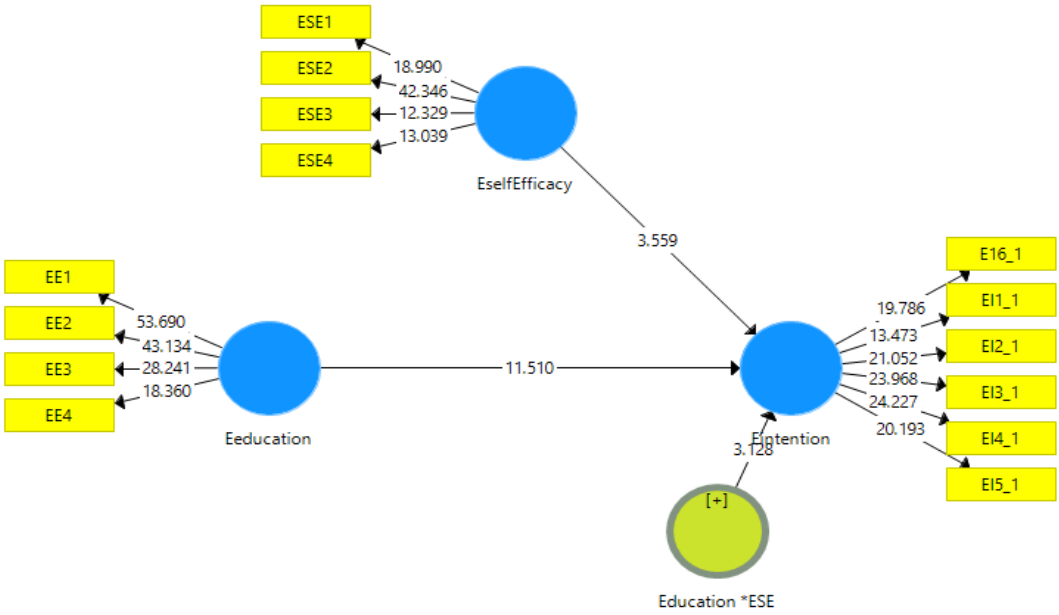
World Bank Doing Business Data (2021). Retrieved from: https://www.doingbusiness.org/en/data. Accessed on 23 May, 2021

Wu, J. (2010). The impact of corporate supplier diversity programs on corporate purchasers'

intention to purchase from women-owned enterprises: An empirical test. *Business & Society*, 49(2), 359–380.

Zhao, H., Seibert, S., & Hills, G. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, 90, 1265–1272.

Structural Model



Moderating Graph