

Influence of Entrepreneurial Self-efficacy on Relationship among Entrepreneurship Education and Entrepreneurial Career Option

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Abstract

The study aimed at exploring the mediating effect of entrepreneurial self-efficacy on the relationship between entrepreneurship education and entrepreneurial career option among university students. Smart-PLS (2.0) was used to analysis the data obtained from a sample of 432 students at six federal universities in northern Nigeria. The study found a significant positive relationship between entrepreneurial knowledge and entrepreneurial career option, but the study also found a significant negative relationship between entrepreneurial skills and entrepreneurial career option. Furthermore, the study found that entrepreneurial self-efficacy significantly mediates the relationship among entrepreneurial knowledge, entrepreneurial skills and entrepreneurial career option. The study provided suggestion for future research.

Keywords: Entrepreneurial career option, entrepreneurship education, entrepreneurial Knowledge, entrepreneurial skills, entrepreneurial self-efficacy.

1. Introduction

Educational system plays an important role in developing entrepreneurial skills, competencies and attitudes in numerous ways which in turn encourages prospective entrepreneurial career choice. Equally, entrepreneurship education is considered as the most effective means of embedding entrepreneurial culture in nation's educational system by fostering students' entrepreneurial self-efficacy; and thereby increasing the supply of future graduate entrepreneurs (Jones, Miller, Jones, Packham, Pickenell, & Zbierowski, 2011; Sesen, 2013). Conversely, Ogundeji (2014) identified entrepreneurial self-efficacy as an important factor that stimulates entrepreneurial career option; hence the need to be prudently reflected in entrepreneurial training.

In addition, policy makers are predominantly concerned on the effect of entrepreneurship education on the graduates' career decision, and subsequently how it can be influenced by policy measures (European Commission, 2003). Consequently, over the past decade there has been a significant increase in entrepreneurship programs worldwide designed to cultivates entrepreneurial culture at all levels of the educational system. Karimi, Chizari, Biemans and Mulder (2010) propose that participation in taught entrepreneurship education can have a positive influence on attitudes towards entrepreneurship as career option. Therefore, the main objective of this study is to empirically test the mediating effect of entrepreneurial self-efficacy on the relationship between entrepreneurship education in term of entrepreneurial knowledge and entrepreneurial skills, and entrepreneurial career option among university graduates. The study also generates statistical inference on the direct relationships among the latent variables and makes suggestions for future research.

2. Literature Review

Entrepreneurial career option (ECO) is defined as a conceptual process that orients the person's decision to turn into entrepreneurship as a career choice (Boyd & Vozikis, 1994; Gupta & Bhawe, 2007). Accordingly, Moriano, Gorgievski, Laguna, Stephan and Zarafshani (2012) seen ECO is a conscious and precise decision made for preference of entrepreneurship as career. Whilst, Liñán (2008) emphases that ECO depends on individuals' personal attitude, their perceived control over the firm-creation behaviour, and the perceived social pressure to become (or not) an entrepreneur. Consequently, entrepreneurial career decision is frequently influenced by a multiple number of factors such as the dynamic career environment, individual traits, financial aspects, educational elements, family related issues and role models (Douglas & Fitzsimmons, 2008; Liñán & Chen 2009; Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011; Kroon & Meyer, 2001; Von Broembsen, Wood & Herrington, 2005; Zhang, Duysters & Clodt, 2013).

Entrepreneurship education (EE) is view as series of activities which aims to enable an individual to assimilate and develop knowledge, skills, values and understanding which allow a broad range of problems to be defined, analysed and solved (Chang & Rieple, 2013; Neck & Greene, 2011). EE aims at cultivating in students entrepreneurial mind-sets, behaviours, skills and capabilities, thus generates future entrepreneurs. The programme was developed as a result of a belief that entrepreneurship can, and should, be taught (Chang & Rieple, 2013; Fiet, 2000; Henry, Hill, & Leitch, 2005), rather than been predetermined by genes, as some have promoted (Baumol, 1983; Katz, 1981; Kuratko, 2005).

Generally, substantial academic efforts have been intensive upon EE in recent years, assisting the field to progress and to gain momentum (Giacomin, Janssen, Pruett, Shinnar, Llopis & Toney, 2011; Gibb, 2011; Goksel

& Aydintan, 2011; Jones, 2010; Matlay, 2010; Nabi, Holden & Walmsley, 2006; Volkmann, Wilson, Mariotti, Rabuzzi, Vyakarnam & Sepulveda, 2009). Previous studies highlight the importance of EE in promoting entrepreneurial career among graduates (Draycott & Rae, 2011; Gibb, Haskins & Robertson, 2009; Lourenc,o & Jayawarna, 2011). Many of these studies that reported a positive and significant relationship between the two constructs includes Abdulai (2015); Ellen (2010); Engle, Dimitriadi, Gavidia, Schlaegel, Delanoe, Alavarado, He, Buame and Wolff (2010); Hattab (2014); Iakovleva, Kolvereid and Stephan (2011); Liñán, Urbano and Guerrero (2010); Molaei, Zali, Mobaraki and Farsi (2014); Naktiyok, Karabey & Gulluce (2010); Rae and Woodier-Harris (2013); Wang, Wei, & John, (2011).

Furthermore, entrepreneurial self-efficacy (ESE) which is seen as the degree to which one believes that he or she is able to successfully start a new business venture (Segal, Borgia, & Schoenfeld, 2005; Wilson, Kickul & Marlino, 2007). Several studies have established ESE to be a strong driver for entrepreneurial career activities (Drnovsek, Wnisset & Cardon, 2010; Markman, Balkin & Baron, 2002; Nwankwo, Kanu, Marire, Balogun & Uhiara, 2012) and expected to influence individual choices, goals, emotion, effort, and persistence (Gist, Stevens & Bavetta, 1991). Accordingly, Zhao, Seibert and Hills (2005) identified that increased self-efficacy yields greater entrepreneurial career intentions. In addition, ESE appears to be an important antecedent of entrepreneurial career (Barbosa, Gerhardt, & Kickul, 2007; Linan, *et al.*, 2005; Mushtaq, Hunjra, Niazi, Rehman & Azam, 2011).

Accordingly, prior studies found positive and significant association between ESE and entrepreneurial career choice (Chen, Greene & Crick, 1998; Douglas and Shepherd, 2002; Krueger, Reilly & Carsrud, 2000). Thus, indicating higher ESE is associated to entrepreneur career and new venture creation (Frazier & Niehm, 2006; Krueger & Brazeal, 1994; Segal, *et al.*, 2005). Therefore, this study investigates the mediating effect of entrepreneurial self-efficacy on relationship between entrepreneurship education and entrepreneurial career option among the final year university students. Consequently, the study developed the following hypotheses:

Hypothesis 1: Entrepreneurial knowledge has a positive influence on entrepreneurial career option.

Hypothesis 2: Entrepreneurial skill has a positive influence on entrepreneurial career option.

Hypothesis 3: Entrepreneurial knowledge has a positive influence on entrepreneurial self-efficacy.

Hypothesis 4: Entrepreneurial skill has a positive influence on entrepreneurial self-efficacy.

Hypothesis 5: Entrepreneurial self-efficacy has a positive influence on entrepreneurial career option.

Hypothesis 6: Entrepreneurial self-efficacy mediates the relationship between entrepreneurial knowledge and entrepreneurial career option.

Hypothesis 7: Entrepreneurial self-efficacy mediates the relationship between entrepreneurial skills and entrepreneurial career option.

3. Methodology

3.1 Participants and procedures

The study used a sample of 432 final students specialised in different academic field including agricultural science, business, engineering and technology. The survey sample was drawn based on stratified random sampling technique from six federal universities in the Northern Nigeria. In conducting the survey, the questionnaire forms were personally administered by the researchers with the help of research assistants at the various universities, whom ensured efficiency of the data collection process. Tables 1, presents the demographic profile of the respondents.

3.2 Instrumentation and Measures of Variables

The survey instrument used different measurement of variables that were adopted from various sources. Table 2 presented the summary of the measures of variables and its sources.

3.3 Method of Data Analysis

Smart-PLS version 2.0 was employed to run multivariate data analysis in order to evaluate the model and also to test the hypotheses formulated for the study. The PLS-SEM approach was used in the study for its ability to assess the measurement model as a whole and analyse the relationship between the latent variables and their measures (Hair, Black, Babin, & Anderson, 2010). The study used PLS-SEM approach to assess the measurement model via PLS-SEM algorithm and then evaluated the structural model via Bootstrapping and reported the results as such.

4. Results

4.1 Measurement Model

In this study, the measurement model was used to evaluate the reliability and validity of the construct measures using PLS-SEM Algorithm (see Figure 1). Accordingly, Hair, Hult, Ringle, and Sarstedt, (2013) suggest that reliability and validity are the two prime criteria used in PLS-SEM analysis to assess the goodness outer model. As shown in Table 4, the composite reliability ranged from 0.85 to 0.88 for the first order constructs, thereby satisfied the threshold of 0.70 and above (Hair *et al.*, 2014). In addition, the result revealed that average variance

extracted (AVE) ranged from 0.51 to 0.53 which are all above the threshold of 0.50, thereby satisfying the convergent validity for all the latent constructs (Hair, *et al.*, 2013).

In table 5, the AVEs are displayed on the diagonal side (in bold) and the squared inter-construct correlations are off the diagonal side of the table. The result established that all the AVEs are higher than the squared inter-constructs correlations; this also fulfilled the requirement for discriminant validity. To further justify the discriminant validity in the study, the indicators cross loadings were assessed. The result revealed that all indicators loadings were greater than their corresponding cross loadings (see Table 5). Hence the study confirmed the reliability and validity of the latent variables (Hair *et al.*, 2014).

4.3 Structural Model

The study assessed the structural model using path coefficient and the R^2 value (Hair, Sarstedt, Ringle, & Mena, 2012). PLS bootstrapping was applied using 5000 subsample to establish the significance of the path coefficients in the study (Figure 2). Table 6 and 7 show the results of the hypotheses test, path coefficients, t-values and p-values.

In table 6, hypothesis 1 predicts a positive relationship between EEK and ECO, nevertheless the result reveals there is a positive and a significant relationship between EEK and ECO ($\beta = 0.389$, $t = 6.498$, $p < 0.00$); therefore, H_1 is hereby supported. The result also indicates a significant and positive relationship between EES and ECO ($\beta = 0.2173$, $t = 3.132$, $p < 0.00$); hence supporting H_2 . The result also reveals that a positive and significant relationship exist between EEK and ESE ($\beta = 0.216$, $t = 4.459$, $p < 0.00$); therefore supporting H_3 . Similarly, the result indicates that the relationship between EES and ESE is positively significant ($\beta = 0.574$, $t = 12.385$, $p < 0.00$); henceforth supporting the H_4 . In addition, the result suggests that there is a positive and a significant relationship between ESE and ECO ($\beta = 0.376$, $t = 4.516$, $p < 0.00$); therefore, H_5 is hereby supported.

In addition, table 7 shows the results of indirect relationship as assumed in hypothesis 6 and 7 of the study. Hypothesis 6 assumed ESE mediates the relationship between EEK and ECO, in this direction the result reveals the t-value of 3.00 ($\beta = 0.082$, $p < 0.00$) which is higher than threshold of 1.64 and above at 0.05 level of significance (Hair *et al.*, 2010); hence accepting H_6 . The result discloses t-value of 4.28 ($\beta = 0.216$, $p < 0.00$) on relationship between EES, ESE and ECO. This is also higher than threshold of 1.64 and above at 0.05 level of significance (Hair *et al.*, 2010), indicating that ESE mediates the relationship between EES and ECO. The study also assessed the R^2 of the two endogenous constructs (ESE & ECO) (see Figure 2). The results reveal moderate R^2 values which signify meaningfulness of the results for interpretation.

5. Discussion

The objective of this study is to empirically test the mediating effect of ESE on the relationship between EEK and ECO, EES and ECO among the final university students. The results of the current study showed that majority of the respondents were at the age bracket between 18 to 29 years (83%), while those at the age bracket of 30 and above constituted 17%; male respondents represented about 66% of the total respondents and female counterpart represented 34%. In this study, 46% of the respondents are studying business, 23% agriculture, 20% technology and 11% engineering. In addition, 65% of the respondents have their parents self-employed against 35% whose parents were not self-employed. Similarly, 70% of the respondents have closed relative self-employed against 30% of the respondents with no closed relative self-employed.

The results for hypotheses tested using PLS bootstrapping among the latent variables are shown in Tables 6 and 7. The analysis highlighting direct relationships between the latent variables (H_1 to H_5) were statistically tested using one tailed test; the results show that the relationships are statistically significant ($p < 0.001$). Therefore, the results of the study demonstrate that hypotheses H_1 to H_5 are supported. In line with the prior studies such as Abdulai (2015); Chen, *et al.*, (1998); Douglas and Shepherd, (2002); Draycott and Rae, (2011), EEK, EES, and ESE play important roles in ECO.

Similarly, the results of mediation test as shown in Table 7, reveal that ESE can mediate the relationship between EEK and ECO; hence H_6 is accepted. In addition, the results of the analysis also reveal that ESE can mediate the relationship between EES and ECO; indicating the acceptance of H_7 . Therefore, these suggest that the rate of ECO can be increase by adopting the teaching methods that improve the students' ESE.

6. Conclusion

The study addressed the role of entrepreneurial knowledge, entrepreneurial skills on entrepreneurial self-efficacy and entrepreneurial career option. Empirical evidences of the relationships between entrepreneurial knowledge and entrepreneurial career option; entrepreneurial skills and entrepreneurial career option; and entrepreneurial self-efficacy and entrepreneurial career option were statistically significant. In addition, entrepreneurial self-efficacy was found to mediate the relationship between entrepreneurial knowledge and entrepreneurial career option; and entrepreneurial skills and entrepreneurial career option. Henceforth, the implications for entrepreneurship researchers and educators are to find and adopt teaching methods that boots students' entrepreneurial self-efficacy

which in turn increases the rate of entrepreneurial career option.

Acknowledgement

The authors would like to recognise the effort of Tertiary Education Institution Fund (Ted-Fund, Nigeria) for the scholarship and research fund.

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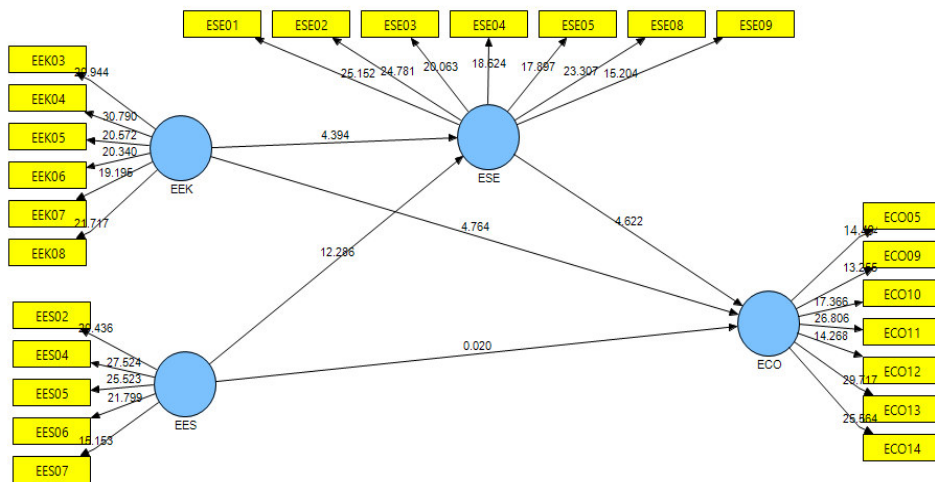


Figure 1: PLS-SEM Algorithm

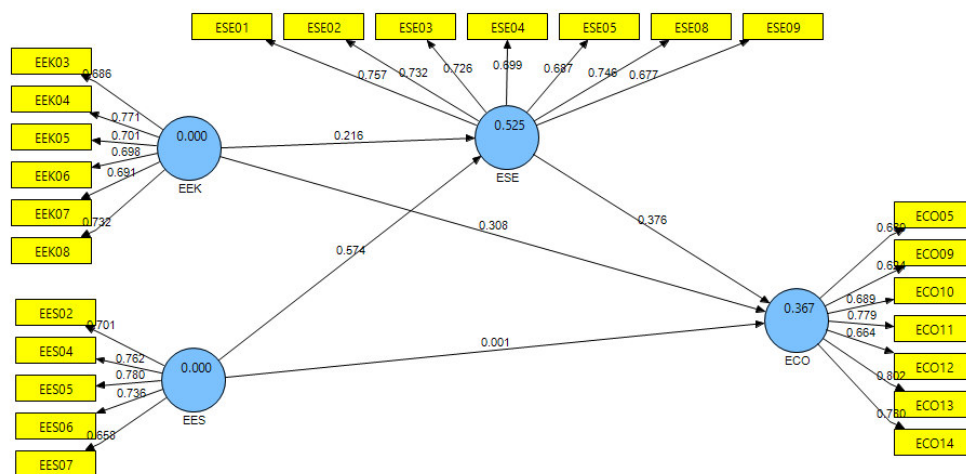


Figure 2: PLS-SEM Bootstrapping

Table1. Demographic profile of the respondents (n = 432)

Demographic variable	Category	Frequency	Percentage (%)
Age	18-29	358	82.87
	30-39	63	14.58
	40-49	9	2.08
	50 & above	2	0.46
Gender	Male	285	65.97
	Female	147	34.03
Area of study	Business	199	46.06
	Agriculture	98	22.69
	Engineering	48	11.11
	Technology	87	20.14
Parent self-employed	Yes	280	64.81
	No	152	35.19
Closed relative self-employed	Yes	303	70.14
	No	129	29.86
Occupational experience	Self-employed	99	22.92
	Civil servant	66	15.28
	Working for others	47	10.87
	Apprenticeship	46	10.65
	Unemployed	174	40.28

Table 2: Summary of measures of variables

Variables	No. of items	Cronbach's alpha	Sources
Entrepreneurial career option	14	0.78	Jane, <i>et al.</i> , (2003), Theng and Boon (1996).
Entrepreneurial knowledge	8	0.86	Liñán (2008).
Entrepreneurial skills	8	0.92	Weber, <i>et al.</i> , (2009).
Perceived Desirability	7	0.82	Liñán (2008).

Note: All variables were measured on a 5-point Likert scale.

Table 3: Descriptive Statistics of latent variables

Construct	Mean	Std. Deviation
Entrepreneurial career option	4.01	1.08
Entrepreneurial knowledge	3.83	0.95
Entrepreneurial skills	3.79	0.98
Entrepreneurial Self-efficacy	4.06	0.90

Table 4: indicators loading, internal consistency and average variance extracted (AVE)

Construct	Indicator	Loading	Composite Reliability	AVE			
Entrepreneurial career option	ECO05	0.68	0.88	0.518			
	ECO09	0.62					
	ECO10	0.69					
	ECO11	0.78					
	ECO12	0.66					
	ECO13	0.80					
	ECO14	0.78					
Entrepreneurial Knowledge	EEK03	0.69	0.86	0.510			
	EEK04	0.77					
	EEK05	0.70					
	EEK06	0.70					
	EEK07	0.69					
	EEK08	0.73					
	Entrepreneurial skills	EES02			0.70	0.85	0.531
		EES04			0.76		
EES05		0.78					
EES06		0.74					
EES07		0.66					
Entrepreneurial Self-efficacy		ESE01	0.76	0.88	0.516		
		ESE02	0.73				
	ESE03	0.73					
	ESE04	0.70					
	ESE05	0.69					
	ESE08	0.75					
	ESE09	0.68					

Table 5: Square root of AVE and correlation of latent variables

	1	2	3	4
ECO	0.720			
EEK	0.519	0.714		
EES	0.449	0.596	0.729	
ESE	0.549	0.558	0.703	0.718

Table 6: Path coefficients and hypotheses testing (Direct relationship)

Hypothesis	Path	Beta	Standard Error	T-value	P-value	Decision
H ₁	EEK -> ECO	0.3891	0.0599	6.4977	0.00	Accepted
H ₂	EES -> ECO	0.2173	0.0694	3.132	0.00	Accepted
H ₃	EEK -> ESE	0.2162	0.0485	4.4588	0.00	Accepted
H ₄	EES -> ESE	0.5743	0.0464	12.3845	0.00	Accepted
H ₅	ESE -> ECO	0.3759	0.0832	4.5159	0.00	Accepted

Note: Significant at 0.01 (1-tailed).

Table 7: Path coefficients and hypotheses testing (Indirect relationship)

Hypothesis	Path	Beta	Standard Error	T-value	P-value	Decision
H ₆	EEK -> ESE-> ECO	0.082	0.027	3.00	0.00	Accepted
H ₇	EES -> ESE-> ECO	0.216	0.051	4.28	0.00	Accepted

Note: Significant at 0.01