



Impact Of Entrepreneurial Career Option on The Entrepreneurial Intention of Pakistani University Students: The Mediating Role of Entrepreneurial Education

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ABSTRACT

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The primary objective of this study is to examine the impact of pursuing an entrepreneurial career on the entrepreneurial aspirations of Pakistani university students. In addition, the study examined the impact of entrepreneurial education as a moderating factor. Using a quantitative research methodology, the cross-sectional technique was employed to analyze the issue of this study. The information was gathered via a self-administered questionnaire. This study's sample size was 300, regarded as a good sample size. Using the Statistical Package for the Social Sciences (SPSS) platform, the preliminary and fundamental analyses, which included finding and replacing missing values, assessing normality, and identifying and handling outliers, were conducted.

In addition, it was utilized to generate descriptive statistics for demographic data and research variables, such as frequency, mean, and standard deviation. The hypotheses were evaluated using Partial Least Squares (PLS) route modeling, and the mediating function of entrepreneurial education was investigated. According to the study's conclusions, a student's choice of a professional job depends on their career choice. This professional route may be managerial or entrepreneurial. Numerous causes can motivate individuals to pursue self-employment. This paper discusses the theoretical, methodological, and practical contributions. This study expands the TPB and SEE frameworks to provide relevant information on entrepreneurial education and EI.

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Background

Due to its significant contribution to the economy through job creation, creativity, and social development, entrepreneurship has emerged as a significant research area (Filser et al., 2019; Setini et al., 2020). For over a century, the presence of entrepreneurs has been a key to economic growth in leading economies such as the USA, Japan and Germany (Babkin et al., 2020). Entrepreneurship can range from the basic act of beginning a firm to a more complicated definition that includes independence, creativity, innovativeness, initiative, and risk-taking (Arruti & Panos-Castro, 2020). As a result, opportunity identification is the start of entrepreneurship, and the method is deliberate (Anjum et al., 2020).

Entrepreneurship is associated with surviving the present economic trend in many nations. Therefore, it has become a worldwide issue of national importance (Umadia Sr & Kasztelnik, 2020). It contributes to the economic success of several nations by producing jobs, fostering innovation, and fostering originality. Therefore, innovation and creativity contribute to the success of enterprises, the production of new goods and services, and the increase of investment capital and economic growth. Entrepreneurship is responsible for healthy business competition and, as a result, a competitive market environment, thereby increasing and sustaining national economies, especially in the face of rising globalization tendencies (Cheah & Ho, 2019). Moreover, studies have demonstrated a direct correlation between entrepreneurial activity and economic growth; supporting entrepreneurship is a government policy goal.

Moreover, entrepreneurial intention models have gained popularity since they are believed to predict individuals' entrepreneurial actions (Farrukh et al., 2018a). Some researchers emphasize the importance of comprehending entrepreneurial event events prior to venture creation Vodă and Florea (2019), claiming that entrepreneurship is an intentional and calculated choice. Autio et al. (1997); N. F. Krueger (2007), and N. Krueger (1993) state that intention-based models provide consistent and appropriate support to comprehend the entrepreneurial process (2000) better. Therefore, to better comprehend the entrepreneurship process, it is more necessary to analyze the thinking that accompanies entrepreneurial attitudes, cognitive structures, goals, and behaviors (N. F. Krueger, 2007).

In addition, comprehending the entrepreneurial process necessitates a comprehension of entrepreneurial intentions (EIs), which precedes entrepreneurial behavior Babkin et al. (2020)). Additionally, EI is the apex of displaying entrepreneurial behavior (Neneh, 2019). Esfandiar et al. (2019) define EI as a state of mind that directs one's attention toward achieving a certain goal or objective, whereas EI is characterized as individual involvement or the desire to start a business (Esfandiar et al., 2019). In contrast, EI models give a fair and necessary framework for gaining a deeper knowledge of the entrepreneurial process (Sriyakul & Jermstipparsert, 2019). Therefore, understanding the causes of EI is useful for interpreting entrepreneurial behavior (Maamari & Majdalani, 2017).

Given entrepreneurship's significant contribution to any economy, entrepreneurship education has gained considerable attention in recent years, particularly from various governments (Khalifa & Dhiaf, 2016). This may be observed in the global growth and improvement of school curricula and promoting of entrepreneurship and new venture

formation activities (Ndou et al., 2019). Consequently, higher education institutions have responded to government mandates to educate entrepreneurs in order to develop the skills necessary for self-employment and to meet the demand of business sectors for individuals with the knowledge and skills necessary to integrate into the corporate world (Anjum et al., 2020) Enhancing graduate entrepreneurial education is becoming increasingly important for many developing nations, not just as a means of fostering venture formation and development, but also as a foundation for national competitiveness and economic success (Ahmed et al., 2020).

In terms of growth, Pakistan has been categorized as making modest development in terms of, among other things, wealth creation and employment creation (Zafar & Mustafa, 2017). The Pakistani unemployment rate has increased from 0.8% in 2010 to 4.65% in 2020. The high unemployment rate in Pakistan has caused the country's leadership anxiety. By 2021, approximately 5 percent of Pakistanis, or over 13 million individuals, will be unemployed (International Monetary Fund, Year).

Table 1

Graduate Unemployment (GUE) rate in Pakistan

Year	Graduate Unemployment (GUE) rate (%)
2017-2018	14.9
2018-2019	16.5
2019-2020	21.05

In Pakistan, Graduate Unemployment (GUE) has reached 16.5 percent as of 2019. Graduates are graduating, but the market can't handle the influx (see table 1.1.). According to the study, the average unemployment rate for the same time period was 9.54 percent. During this time period, GUE achieved its greatest value of 20.1 percent in 2019-2020. With 4.9 percent in 2007-2008, GUE was at its lowest point. For the period 1999-2019, the average yearly rise in the GUE was 0.74 percent, resulting in GUE. The government bears the blame since it has made establishing institutions a simple procedure and has failed to keep track of the number of students accepted by universities. We can control the number of students admitted and govern the construction of new universities. This will significantly reduce the problem of graduate unemployment..

According to the 2017-18 Labour Force Survey, 8.78 million young people aged 20 and up have a bachelor's degree. 5.97 million are "economically active," whereas 0.97 million are jobless. According to these numbers, graduates have a substantially higher unemployment rate than the national average of 5.8%. However, according to the government's annual plan for 2020-21, Covid-19 and fiscal limitations have driven the overall unemployment rate up to 9.56 percent. Meanwhile, according to the Economic Survey, roughly 21.71 million individuals were either made unemployed or unable to work due to the Covid-19-related lockdowns.

Hypothesis Development

Entrepreneurial Career Option, Entrepreneurship Education (EE), and entrepreneurial intention

Ajzen (2011); Bird (1988) have done considerable work by presenting models and theories addressing purpose and describing the relationship between individuals and their behavior, which clearly describe the entrepreneurial phenomenon. According to the

literature, an individual's intentions can be used to forecast his or her professional choice and job-searching activity. In addition, EIs can be used to predict and explain individuals' career choices (Falck et al., 2012).

Gorman et al. (1997) examined current literature on EE and reported an indirect effect of EE on entrepreneurial career (Gorman et al., 1997). Similar studies analyzing and measuring EIs among students, particularly those who had participated in EE programs, have also been undertaken.

In the study conducted by Jones et al. (2008), 50 Polish university students were questioned before and after their participation in the Entrepreneurship Education program. The study indicated a correlation between the entrepreneurial careers of students and EE. Abuzuhri (2019) explored the relationship between investment, EE, and risks in the context of Nairobi, Kenya. The study determined the relationship between a person's level of education and his entrepreneurial activities, i.e., the higher the level of education, the greater the individual's entrepreneurial activities. In addition, poor levels of education are one of the reasons why entrepreneurial endeavors fail and firm growth is slow (Abuzuhri, 2019). In a similar study, Rauch and Hulsink (2015) studied the impact of EE on the entrepreneurial intentions of college graduates.

Rauch and Hulsink (2015) contributed to the research by quantifying the influence of EE on graduates' propensity to pursue an entrepreneurial career. They gathered samples from 2,300 university students in Malaysia for this purpose. Utilizing self-administered questionnaires, data were evaluated. This study found that individuals with formal or informal education in entrepreneurship have a better propensity and potential to choose entrepreneurship as a career path. The study by Maresch et al. (2016), on the other hand, investigated the significance and role of EE in changing the attitude of third-year students toward entrepreneurship. Thus, establishing EE initiatives at universities is essential for encouraging students to pursue entrepreneurship.

In a separate study conducted by Shinnar et al. (2018), the effects of EE on the entrepreneurial aspirations of university students were observed. Linen's model was utilized to examine this, and 376 students from an Egyptian private institution were questioned. 171 out of 376 students were enrolled in business programs, 156 in engineering programs, and 48 in computer science degree programs. According to the study, many students from all three faculties intend to pursue an entrepreneurial career. However, most disengaged students were from engineering fields that lacked EE.

Similarly, Khalifa and Dhiab (2016) examined the role of EE in entrepreneurial career intention in another study. This study was also meant to establish a theoretical framework for describing EE and its significance. The aim of students to pursue entrepreneurship as a career might be advantageous, as it can lead to a drop in the unemployment rate in Indonesia. According to the data, students with a higher EE are more likely to pursue an entrepreneurial career (Sánchez, 2013).

Munir et al. (2019) did a comparative study to assess EE across nations and determine the effects of EE programs in various nations. The study revealed that EE varies between countries. For the development of EE programs, social values should also be considered. In another comparative study, Nabi et al. (2017) studied the entrepreneurial mentality and

EE of students from Poland, France, and Germany. The relationship between EE and EC intents was beneficial for Polish and French students and negative for German students (Georgescu & Herman, 2020).

In a further study, the effect of EE on an individual's entrepreneurial choice was examined among persons from the United States and Europe. This was accomplished using the data of over 10,000 individuals from the United States and 27 European nations. In addition, a variables contribution approach was utilized. According to reports, there is a considerable positive correlation between entrepreneurial decisions and education. The survey also indicated that the higher the education level, the greater the likelihood of pursuing an entrepreneurial profession. In a similar study, Van Woerkom et al. (2016) investigated the connection between an entrepreneurial career and EE (EE). For this study, 189 students from three Ukrainian universities were questioned. Using hierarchical multiple regressions to analyze the data, they discovered that the students polled for this study possessed a more intense entrepreneurial mindset. In addition, a clear correlation was discovered between entrepreneurial mindsets with greater intensity and EE. Students who participated in the study had a greater interest in pursuing an entrepreneurial career than those who did not.

Moreover, students with a greater entrepreneurial attitude were more worried and invested. In a study conducted by Munir et al. (2019), samples of university students from 12 nations were analyzed to determine their EIs. The results verified Ajzen (2011) theory of planned behavior, allowing for accurately predicting students' EIs in each country.

In addition, in a study conducted in Poland by Henry and Lewis (2018), the researchers evaluated students' entrepreneurial motives and attitudes. They randomly selected students from the university's business and finance school and created semi-structured data. The results indicated that EE influenced the participants' decision to pursue an entrepreneurial career in Poland. Solesvik (2013) investigated the association between entrepreneurial mindset and entrepreneurial incentives in a study conducted in Ukraine. Three Ukrainian universities provided data for this study, and 321 students were surveyed. The findings indicated that entrepreneurial impulses have a considerable favorable effect on students' entrepreneurial attitudes. Individuals' participation in entrepreneurship is increased by variables such as autonomy, independence, financial gain, growth, family security, recognition of opportunities, and self-fulfillment, according to Zaman et al. (2020). Individuals with greater EI are also more inclined to consider entrepreneurship.

Collins et al. (2004) performed a meta-analysis utilizing 41 publications. They discovered a substantial positive correlation between entrepreneurial ambitions and entrepreneurial career selection. Additionally, Otache (2019) attempted to establish a connection between entrepreneurial career goals, entrepreneurial ideas, and EE factors. Students from the University of Tehran, specifically those enrolled in the Engineering and Behavioral Science program, were employed as responders. For the analysis of the gathered data, structural equation modeling (SEM) was used. According to the findings, students' entrepreneurial ideas considerably affect their entrepreneurial careers. In addition, the majority of aspiring entrepreneurs possess entrepreneurial ideas. Yousaf et al. (2015) also developed a career choice hypothesis in this study. According to their theory, selecting entrepreneurship as a career path necessitates that students possess essential skills and be highly motivated. Their view highlights that individuals' career choices are frequently aligned with their values, personality, interests,

and requirements. Based on this idea, it can be inferred that an individual's decision to become an entrepreneur is influenced by their view that their chosen employment matches their skills (Rocha & Van Praag, 2020).

According to Wang et al. (2018), individuals' perceptions of the benefits of an entrepreneurial profession do influence their intentions. It demonstrates that despite the importance of independence and purpose in becoming an entrepreneur, self-fulfillment and financial benefits are the most relevant elements. Savage et al. validated this conclusion (2020). Thus, entrepreneurship is regarded as part of a person's career, and the individual's opinion of his competencies affects whether he would pursue it or not.

H1: ECO is positively related to EI.

H2: ECO is positively related to EE.

H3: EE mediates the relationship between the ECO and EE.

Research methodology

Methodology for any research is selected based on the research problem or objectives of the research (Sabir et al., 2021) and proper methods are obligatory for the accuracy of research findings. The cross-sectional method with a quantitative research approach was selected to investigate the research problem of this research study. A self-administrative questionnaire was used to collect the data. The questionnaire technique for data collection is the best because it makes it convenient to collect the data at a reasonable cost and time (Sriyakul & Jermisittiparsert, 2019). Scales items for all variables of this study were adapted from previous studies.

Sample size

The study follows the instructions of Comrey and Lee (1992) regarding inferential statistics in selecting sample size to collect the data. Comrey and Lee (1992) argued that less than the 50 sample size is a weaker sample, a sample of 100 respondents is considered a weak sample, 200 samples is assumed an adequate, and 300 samples is assumed to be a good sample. Therefore, the current study chose a three hundred (300) sample size that is consider a good sample. Furthermore, the detail of distribution of questionnaire is give in Table 2.

Table 2

Response from respondents

Response	Frequency/Rate
Total questionnaires distributed	300
Total questionnaires returned	231
Total Useable questionnaires	213

Total questionnaires excluded	18
Total response rate after data entry	71%

Analysis and results

Data entry was performed using the Statistical Package for Social Sciences (SPSS) platform to run the preliminary and basic analyses to identify and replace missing values, determine normality, and identify and treat outliers. Additionally, it was utilized to run the descriptive statistics for the demographic data and the study variables, including the frequency, mean, and standard deviation.

The Partial Least Squares (PLS) path modeling was used to test the developed hypotheses and examine the mediating effect of entrepreneurial education (Lee et al., 2011). Introduced by Sellin and Versand (1995), PLS path modeling is used for estimating path models involving latent constructs measured indirectly by numerous indicators. The PLS approach is a structural equation model that estimates relationships between latent variables via regression and between latent variables and their indicators.

PLS route modeling was chosen for testing the proposed hypotheses in this work for numerous reasons. First, it is suitable for a model with numerous indicators or latent variables. In short, it is appropriate for investigations analyzing relationships modeled with moderators and mediators and hybrid formative second-order variables. Second, PLS is appropriate for research in which the link between latent variables and their corresponding measures must be modeled in diverse ways (formative and reflective). In this study, formative and reflective measures were used to model the variables and their corresponding measures. Therefore, PLS is preferable to covariance approaches, which may result in several complications when analyzing formative constructs (Cenfetelli & Bassellier, 2009).

Thirdly, PLS does not restrict hypotheses. For instance, it does not require a normal data distribution. However, PLS is more rigorous than correlations or regression analysis, which presume measurements to be error-free (Diamantopoulos, 2011). In addition, PLS is more adaptable in terms of sample size. The recommended minimum sample size is 10 times the amount of indicators on the scale with the most indicators. The performance of its statistical data analysis is comparable to that of the covariance-based SEM (Aimran et al., 2017). In management and entrepreneurial research, it is not surprising that PLS is gaining popularity as a valid SEM approach for the reasons stated. Consequently, this study utilized the Smart PLS Version 2.0 (3M) software for its analysis. The subsequent section covers the study's principal findings.

Assessment of Measurement Model

This section presents the assessments of the measurement and structural models using the Partial Least Squares Structural Equation Modeling (PLS-SEM). PLS-SEM was used in this study for several reasons, as laid out by Henry and Lewis (2018)). To begin with, PLS-SEM is suitable for small sample sizes without making assumptions regarding the

underlying data. It can run data that is measured by reflective and formative items easily and tackles single-item constructs without having any issues with identification. As opposed to CB-SEM, it also efficiently estimates parameters leading to outcomes with high statistical power. All these reasons made PLS-SEM highly favored by researchers.

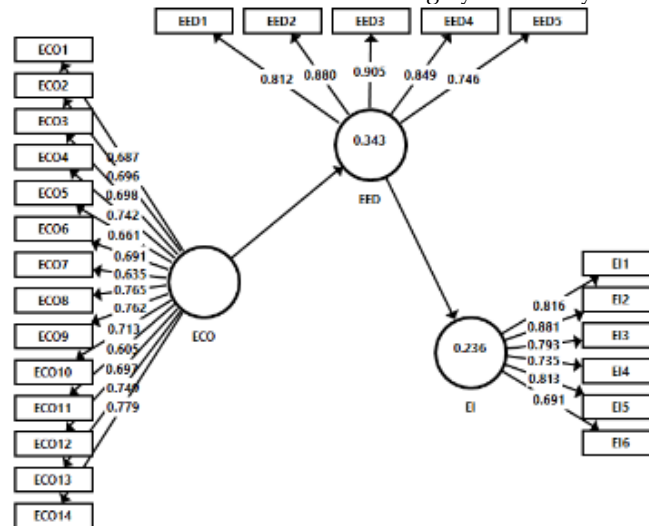


Table 3

Internal Consistency, Convergent Validity, composite reliability and AVE

Construct	Indicators	Loadings	Cronbach's alpha	Composite Reliability	AVE
Entrepreneurial Career Option	ECO1	0.687	0.923	0.933	0.501
	ECO2	0.696			
	ECO3	0.698			
	ECO4	0.742			
	ECO5	0.661			
	ECO6	0.691			
	ECO7	0.635			
	ECO8	0.765			
	ECO9	0.762			
	ECO10	0.713			
	ECO11	0.605			
	ECO12	0.697			
	ECO13	0.749			
	ECO14	0.779			
Entrepreneurship Education	EED1	0.812	0.895	0.923	0.706
	EED2	0.880			
	EED3	0.905			
	EED4	0.849			
	EED5	0.746			
Entrepreneurial	EI1	0.816	0.807	0.857	0.523

Intention	EI2	0.881
	EI3	0.793
	EI4	0.735
	EI5	0.813
	EI6	0.691

The indicators' reliability was also determined by examining the outer loadings, apart from the composite reliability. Based on the results, all the loading values are higher than the 0.70 cut-off value (Henseler et al., 2012), i.e., ranging between 0.705 and 0.913. Each of the model's constructs has captured highly similar indicators, which are statistically significant. The squared outer loadings again show values above 0.5 as proposed by Sarstedt et al. (2014). The squared outer loadings indicate the extent of variation in an item justified by its construct, which should be at a minimum value of 0.50. Thus, the reliability of the indicators in this study is confirmed (Wong, 2016). The item loadings of the model's items are shown in Table 1. Subsequently, convergent validity was assessed, entailing the examination of the Average Variance Extracted (AVE) values. All the AVE values are higher than the 0.50 cut-off value (Henseler et al., 2012). With the lowest value being 0.549, convergent validity is hence confirmed. Table 3 shows all the AVE values.

Discriminant validity is assessed by examining the indicators' cross-loadings. Discriminant validity is established when the indicator's outer loading on its construct is higher than its loadings on other constructs (Henseler et al., 2012). Another way for determining discriminant validity is via the more traditional Farrukh et al. (2018b); Fornell and Larcker (1981) criterion. Here, the AVE square root value is equated to the latent variable correlations. Each construct's AVE square root must be higher than its highest correlation with the other constructs Hulland (1999). This indicates that the construct has more variance with its indicators than the other constructs in the model (Hyder et al., 2011). The reliability and validity cut-off values used in this current study are presented in Table 3.

Table 4

Fornell-Larcker Criterion

	ECO	EED	EI
ECO	0.708		
EED	0.586	0.840	
EI	0.539	0.485	0.723

Table 5

Heterotrait-Monotrait Ratio (HTMT)

	ECO	EED	EI
ECO			
EED	0.633		
EI	0.606	0.530	

Next is the determination of the discriminant validity, which was done using the Fornell and Larcker (1981) criterion. The findings show that the AVE (Table 2) square root values for all the constructs are higher than the other constructs' values based on the latent variable correlation. Hence, discriminant validity is confirmed (Hulland, 1999). The values of the Heterotrait-Monotrait Ratio (HTMT) also confirm the validity of our model

Assessment of Structural Model

The part coefficients were then determined using the bootstrapping procedure in Smart PLS 2.0. Following the suggestion of Wang et al. (2018), a total of 5,000 bootstrapping subsamples were used with a dataset of 595 bootstrap cases, along with a no sign change. A path-weighting scheme was also used in estimating the parameters (Peng & Lai, 2012). The bootstrapping procedure was performed to identify the standard errors to determine the coefficient significance and test the hypotheses (Peng & Lai, 2012).

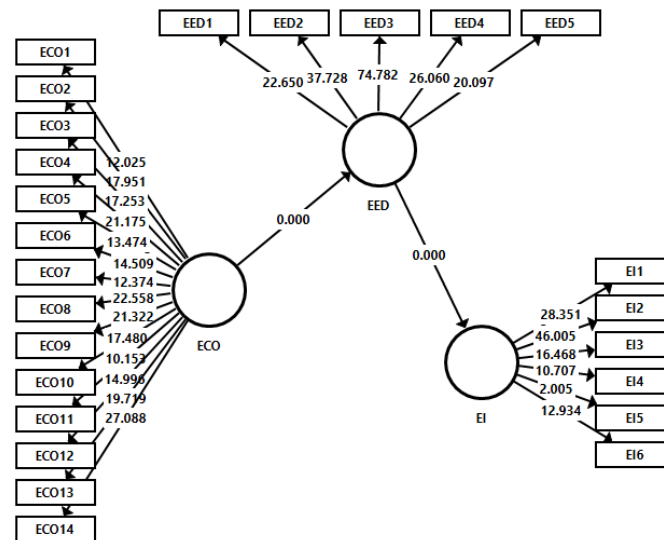


Fig. 2 Structural Model Assessment

The findings (Figure 2) revealed that all the path coefficients, i.e., the predictors to the criterion variables, are positive and significant at a $p < 0.01$ significance level.

Table 6

Structural Model Assessment (Direct Effect Results)

Hypotheses	Relationship	Beta	STD	T Value	P Values
H ₁	ECO-> EED	0.586	0.057	10.243	0.000
H ₂	EED -> EI	0.485	0.061	7.951	0.000

Table 7

Structural Model Assessment (Indirect (Mediation) Effect Results)

Hypothesis	Relationship	Beta	STD	T Value	P Values
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H₃	ECO-> EED	0.284	0.057	4.997	0.000
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Next, the endogenous latent variables' coefficient of determination (R²) was determined (Henry & Lewis, 2018; Henseler et al., 2012). Rideout and Gray (2013) stated that an R² value of 0.19 is weak, 0.33 is moderate, and 0.67 is good. Based on the results, the endogenous latent variables' R² values are as follows: EED 0.343 and EI 0.236. Thus, based on Rauch and Hulsink (2015), the R² values in this study are primarily moderate except for EI, which is weak. The R² values indicate that the exogenous latent variables have good predictive power over the endogenous latent variables. In short, there is acceptable variance in the endogenous constructs as described by the exogenous constructs. Table 8 presents all the R² values obtained.

Table 8

R Square

	R Square
EED	0.343
EI	0.236

In addition, the effect size (f²) was calculated. The impact size of an exogenous construct is computed following the exclusion of the construct from the model to assess its effect on the endogenous construct via the change in R² value. An f² value of 0.02 is regarded as having a little effect, 0.15 has a medium effect, and 0.35 has a substantial effect (Cheah & Ho, 2019). Therefore, the exogenous constructs ECO and EED explained the endogenous latent variable EI in this analysis.

Table 9

f-Square

	EED	EI
ECO	0.522	
EED		0.308

Results

According to the study's findings, the career decision made by students is related to their professional occupation. This profession may be organizational or entrepreneurial. According to Barba-Sánchez and Atienza-Sahuquillo (2017), the adoption of self-employment might be motivated by various factors. Entrepreneurship includes the establishment of ventures, the start and utilization of possibilities, and focusing on profit, change, and economic progress. To pursue entrepreneurship as a career, an entrepreneur must play a central role in economic operations. Thus, an individual initiates acts to affect socio-economic conditions through the process of development. An entrepreneur is a person who introduces new products or services or uses innovative methods to launch a new business (Ardichvili et al., 2003). Entrepreneurship possesses numerous characteristics, such as originality, self-employment, innovation, opportunity exploitation, financial rewards, initiative, success and recognition, responsibility, innovation, risk-taking, economic growth, independence, social networking, and confidence.

Additionally, Rideout and Gray (2013) identified and described issues affecting

graduates in developing nations. They concluded that entrepreneurship education is a crucial instrument for boosting entrepreneurial activity. Zhao et al. (2005) discovered that writing a business plan had a substantial impact on students' intentions and subsequent behavior. In conclusion, Marques et al. (2012) proved the significance of a quality entrepreneurship education in enhancing students' EI.

Moreover, Karimi et al. (2016) found that students who received entrepreneurship education had a higher EI than students who had not taken an entrepreneurship course. In the same study by Pandit et al. (2018), it was found that entrepreneurship students were more susceptible to EIs than non-entrepreneurship students and that entrepreneurship education and EIs had a direct relationship.

Conclusion

Its theoretical, methodological, and practical contributions are discussed in this work. This study expands the theoretical applicability of both the TPB and SEE frameworks to provide useful information on entrepreneurial education and EI. According to Zhao et al. (2005), the TPB is a vital tool for educators to analyze their training programs. In addition, the originality of the theories rests in their application to a novel research context (a developing country), where research on entrepreneurship education and EIs is severely deficient.

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