

## **Antecedents of Entrepreneurial Intentions: A Study of Business Students from Universities of Pakistan**

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### **Abstract**

The purpose of this study was to investigate the mediating role of attitude in the development of students' intentions to become entrepreneurs. The authors used Smart PLS 3 with a sample of 350 business students across nine universities to test their hypotheses. We proposed the relationship between entrepreneurship intention and five other variables, attitude towards entrepreneurship as a mediator. Entrepreneurship education Perceived Creativity Disposition, Entrepreneurial passion for Inventing, Entrepreneurial passion for Founding really influence attitudes and intention toward entrepreneurship. The results showed that all the variables have a positive impact except entrepreneurship education. The authors discuss practical implications and directions for future research.

**Keywords:** Entrepreneurial Intentions, Entrepreneurship education, Attitude, Passion for creativity, Theory of Planned Behaviour

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### **INTRODUCTION**

Entrepreneurship has become a worldwide program because of its maximum contributions to the economy growth of countries through job creation and generating high employment, innovativeness and creativity and social development (Muhammad Farrukh, Lee, Sajid, & Waheed, 2019a; Shane & Venkataraman, 2000a). They have made a great positive contribution to the economic growth and social development of a country. As mentioned by Morrison, Brian and Ali (2003), entrepreneurs play a fundamental role in job creation, innovation, wealth creation, health improvement and even economic development. Since entrepreneurship is synonymous with self-

employment, it is considered an effective strategy to solve employability problems, especially among young people (Koe, Sa'ari, Majid, & Ismail, 2012). Entrepreneurs can reduce unemployment or the so-called Schumpeter effect (Muithi, 2018).

Developed countries, such as USA, Japan, and Germany have enjoyed economic development and growth due to the presence of entrepreneurs (Prakash, Jain, & Chauhan, 2015). Entrepreneurship has a simple meaning of starting a business to a more complex definition involving independence, creativity, innovativeness, initiative, and risk-taking (Bruyat & Julien, 2001). Opportunity identification is, thus, the beginning of entrepreneurship and the procedure is obviously intentional (Yu, Hurren, Millington, Sun, & Wang, 2016).

In developing countries, entrepreneurship is considered essential to increase employment opportunities. This effect of entrepreneurship is also evident in some regions, where unemployment rates are reported to have decreased as their entrepreneurship index has increased further (Audretsch, 2002). Despite this global recognition, entrepreneurship remains limited in developing countries such as Pakistan (Zreen, Farrukh, Nazar, & Khalid, 2019).

The reason for this is that, in the past, policymakers and governments have limited attention to entrepreneurship, as well as the low level of growth of key indicators for new business in Pakistan and limited economic absorption shocks (Anjum, Ramzani, et al., 2018).

Pakistan an underdeveloped country is striving to accelerate its economic growth and catch up with the pace of the fast-growing economies of the region. The economic growth is accompanied by unsustainable production and consumption pattern, which not only poses significant threats to resources consumption but also increases stress on the environment. Pakistan is facing serious environmental issues especially in form of unemployment, water scarcity, energy crisis, air and water pollution and depletion of natural resources. According to estimates, our environmental debt burden in country is 6 per cent to GDP . GDP. In 2018, global entrepreneurship index in Pakistan was 15.64 index. In the ranking by global entrepreneurship index including 135 countries, Pakistan has the 118th rank that is close to the positions of such countries as Liberia and Cameroon. Compared to the United States of America which at the top of the ranking with global entrepreneurship index of 83.61 indexes in 2018, Pakistan has 81.29 % per cent lower global entrepreneurship index (Global Entrepreneurship Index 2018).

All these scenarios are, however, linked to poor government attitude towards entrepreneurship development, lack of enabling an environment for entrepreneurship activities, and lack of infrastructure and quality education from the tertiary institutions, among others (Roberts, 2013). Nonetheless, the need to be self-employed coupled with the required skills and competencies depends on the potential entrepreneurs' intention, which could be determined by so many factors, such as quality and effective entrepreneurship education, innovation and creativity, as well as entrepreneurial passion. Entrepreneurship, therefore, has become a focal point and has been employed to solve this social problem of the high unemployment rate (Riaz, Farrukh, Rehman, & Ishaque, 2016).

### **Research Issue**

The shortage of entrepreneurs in Pakistan remains acute and still far left behind compared to other neighboring countries. Whatever regulations the universities following now, they are still not able to increase the number of entrepreneurs. In terms of population, Pakistan is a developing country and the sixth-largest country, representing 2.55% of the world's total population (DHS, 2019). It is worth noting that the importance of the Pakistani population is that its core is still very young. Young people under 30 represent 60% of Pakistan's population (Asma, 2018). Pakistan is currently the most popular young man in the history of Pakistan (NHDR, 2017).

According to the general population report, 64% of the country is currently under 30, and 29% of Pakistanis are between 15 and 29 years old (we define this age group as a young person). Pakistan now has younger people than ever and is expected to continue increasing until at least 2050 (NHDR, 2017). However, the majority of the country's population is poor and unemployed, since the country's daily income is less than \$ 1.25, indicating that poverty is growing in Pakistan. According to an economic survey, 24.3% of Pakistanis live below the poverty line. Some types of unemployment facing Pakistan include technical, cyclical, seasonal and basic unemployment. The number of labour forces increases gradually, and the unemployment rate continues to increase; therefore, new employment opportunities for the workforce must also be created (ShuHong & Zia-ud-Din, 2017).

The rise in unemployment occurs the same among the professional degree holders and the labour force. According to official statistics from Pakistan, Pakistan's labour input rate is 54.4%. According to these statistics, 3.7 million people were unemployed in 2017-2018 (Pakistan Statistics Office, 2018). Unemployment is one of the most important economic problems in Pakistan for many years (Waqas and Hyder, 2012). The unemployment rate in Pakistan fell from 5.80% in 2016 to 5.70% in 2017. From 1985 to 2017, Pakistan's unemployment rate averaged 5.47%, reaching a record high of 7.80% in 2002 and a record low of 3.10% in 1987 (transaction economy 2018).

To have a stable economy, the state administration must promote entrepreneurship (Kongolo, 2010). The contribution of entrepreneurship to the economy has attracted the attention of policymakers in developing and developed economies (Krasniqi, 2007). The literature suggests that a large amount of economic growth should be linked to entrepreneurs who use the national investment for knowledge creation (Valliere and Peterson, 2009; Gallouj and Savona, 2009; Kennedy and Fiss, 2013). Pakistan Global Entrepreneurship Index It is index 15.64. In the Global Entrepreneurship Index, which includes 135 countries, Pakistan is ranked 118, near countries such as Liberia and Cameroon. Compared to the United States, Pakistan ranked first in the 2018 Global Entrepreneurship Index for the 83.61 indexes, while Pakistan's Global Entrepreneurship Index fell 81.29% (Global Entrepreneurship Index 2018).

## **LITERATURE REVIEW**

The Theory of Planned Behavior (TPB) developed by Ajzen (1991) and supported with the Shapero's Entrepreneurial Event (SEE) model developed by Shapero and Sokol (1982) which explains the relationships between the independent variables of perceived effective entrepreneurship education, Perceived Creativity Disposition, Entrepreneurial passion for Inventing and Entrepreneurial passion for Founding on the dependent variable of entrepreneurial intention and the mediate role of attitude towards entrepreneurship . These two cognitive-based theories are mostly regarded as the main theories generally adopted in entrepreneurial intention researches to explain new venture formation. Theory of Planned Behavior is an intention-based model that explains an individual's intention to perform a particular behaviour. As a good predictor of planned behaviour (Ajzen, 1991; Krueger & Carsrud, 1993; Krueger, Reilly, & Carsrud, 2000), intention itself shows how hard people are willing to try or the effort exerted in order to perform a given behaviour (Ajzen, 1991), for example, entrepreneurial behaviour (Liñán, 2004). Hence, the extent of the intention can determine the likelihood of the actual performance. The Theory of Planned Behavior (TPB) has been an influential model (Anjum, Nazar, Sharifi, & Farrukh, 2018; Autio, Keeley, Klofsten, Parker, & Hay, 2001; Muhammad Farrukh, Alzubi, Shahzad, Waheed, & Kanwal, 2018; Krueger Jr, 2007) in offering a sound and mostly applicable theoretical framework in improving the understanding and prediction of entrepreneurial intention, while also considering personal and social factors, including

support (Krueger Jr, 2007). The meta-analyses of Kim and Hunter (1993) showed that while attitudes predicted intentions with 50% variance, intentions had been a predictor of behaviors with 30% of variance explained.

This study uses the theory of planned behavior because it has been shown that the theory of planned behavior is sufficient to explain how intentions lead to the execution of a particular behavior in different areas and research situations (Krueger & Carsrud, 1993; Segal, 2001). Gurbuz and Aykol (2008) mentioned that the purpose of Theory of Planned Behavior (TPB) is to explain how a person's interests reflect the behavior or behavior of a person doing something. In other words, the Theory of Planned Behavior (TPB) explains why people act in a particular way. It is often difficult to find a comprehensive definition of attitude, but most researchers believe that attitude is considered personal property. Faith or perception increases attitudes that lead to specific types of behavior that form behavior (Behjati, Pandya, & Kumar, 2012). Attitude can also be seen as a positive or negative evaluation of behavior.

**Entrepreneurship Education :** The main consideration in the various definitions of entrepreneurship education is how effective does the program provides the required knowledge for practical business situation builds self-confidence and develop skills for successful business venture (Anjum, Ramzani, et al., 2018). Other than that, Liñán et al (2011), the motivation of starting a business, provides the general knowledge of entrepreneurship, show how entrepreneurs should function and how to develop a business venture after the initial start-up. Their study suggested that these can be achieved through raising awareness in seminars, discussions on growing and developing firms, encouraging creative thought and opportunity recognition, as well as acquiring knowledge of the business environment.

**Entrepreneurial passion :** It is the key framework that emerges the organizational behavior. It enumerates the impact of personality traits on entrepreneurial passion in the organization and compares human-centred and variable-oriented traits, and test the effect with alternative explanatory models (rational choice methods, social learning methods and social identity methods) (Martin, 2019). The passion of entrepreneurship is described about the positive attitudes and feeling with perception and expectations of the individuals through past entrepreneurial activities (Cardon et al. 2009). The passion with the entrepreneurial activities explores the innovation according to the market values. It the best source to develop and make the new business profitable (Cardon et al. 2009; Cardon et al. 2013). Cardon and colleagues (2013) conducted a study to investigate the effect of passion on entrepreneurship. The findings revealed that the passion of the individuals play a significance role for the growth of new business and provide the opportunities for creativity, Cardon and colleagues endorse this concept (Drnovšek, Wincent, & Cardon, 2010).

**Perceived Creativity Disposition :** A concept in entrepreneurship is creativity, which has been considered in various works because of its role in driving economy of nations (Sorgner & Fritsch, 2013). Shackle in 1970 launched the creativity with work, all employers apply best course of action in your imagination make a decision. This highlights the skills necessary creativity and imagination in the process of business (Muhammad Farrukh & Butt, 2015).

It defined as creating something new and useful (Amabile, 1996, 1988) ideas, but also as men of knowledge, allowing combinations to create novel idea not thought to reorder of mind and flexible expected, but useful. On the other hand, Godfrey (1996) considers that Innovation must continue to reshape the company and recommended by the launch of the imagination of interesting and fun people. Also, he believes that innovation is real and necessary ideas are useful, very useful service in the market.

**Attitude towards Entrepreneurship :** Attitude is not a permanent feature (common objects) average grades attitude is not the same attitude toward achieving the business environment (specific objective). Attitude is defined as a psychological and neurological status ready to play for organizing experience, with respect to the objectives and personal circumstances played a directive or dynamic influence associated with it, Allport (1935). Attitude is not a permanent feature. For example, a (common objects) average grades attitude is not the same attitude toward achieving the business environment (specific objective). Attitude is defined as a psychological and neurological status ready to play for organizing experience, with respect to the objectives and personal circumstances played a directive or dynamic influence associated with it within the context of entrepreneurship, entrepreneurs transfer ideas into products and services, and eventually create wealth while also reducing unemployment (Baron & Shane, 2008). Their contribution to nation's economic development has also been recognized.

**Entrepreneurial Intentions:** It intends to undertake the successful entrepreneurs, as this affect individual behavior (Ajzen, 1991) One of the main characteristics of dominant motivation factor. In fact, it has been generally accepted that the intention of the actual behavior is strongly related (Kruger et al., 2000). Hence, EI is a thoughtful situation of mind that prompt to do something before act and engross with business creation (Bird & Jelinek, 1988; Shane & Venkataraman, 2000b) which then becomes an essential antecedent in performing entrepreneurial behaviors (Fayolle, Gailly, & Lassas-Clerc, 2006). Thus, intention is known as the best and immediate predictor of behavior (Ajzen, 1991, 2001), such as entrepreneurship (Bagozzi, Baumgartner, & Yi, 1989).

According to the theory of planned behavior, an individual's tendency to exhibit a certain behavior is significantly affected by the individual's interest in showing the behavior and the ability to make decisions (i.e., disposition). The theory describes that the behavioral intentions of an individual depend mainly on three factors. A person's attitude toward behavior that is their willingness to perform this is called intention. Second, subjective norms, that is, to believe that others want him/her to perform such behavior. The third factor is the feeling of behavior control, the individual's belief in their ability to perform their behavior. The third factor is derived from the Reasonable Action Theory (TRA). The first two factors above are considered motivational factors that affect behavior. The third factor, perceived behavioral control, is a non-motivating factor that affects behavior. All these factors together reflect the premise of a person's intention to perform a certain behavior (Ajzen, 1991). From the model, it is clear that individual attitudes, subjective norms and perceived behavioral controls can influence their behavioral intentions, and intentions affect their behavioral intentions. Personal behavior The model is also compared with subjective attitudes and norms. Perceived behavioral control can directly influence the decision-making behavior of an individual.

Suharti & Siren (2011) revealed that attitudinal factors, which are postulated by the TPB, also influence a person's desire or intention to become entrepreneurs. Further, Krueger (1993) tested the TPB in relation to an individual's interest and intention to initiate a new venture. Their findings suggest that an individual's interest and intentions in entrepreneurship can be significantly influenced by their attitude and behavior control.

In entrepreneurial research, Theory of planned behavior has been employed and used as a framework to explain and understand entrepreneurial behavior (Anjum, Nazar, et al., 2018; Muhammad Farrukh, Alzubi, et al., 2018; Muhammad Farrukh, Lee, Sajid, et al., 2019a; Kautonen, Van Gelderen, & Tornikoski, 2013; Miller, Bell, Palmer, & Gonzalez, 2009).

The model has also been employed to study the intention to create a venture (Fayolle et al., 2006; Kolvereid, 1996a; Krueger & Carsrud, 1993). Moreover, the theory of planned behavior has been widely applied to study student population in entrepreneurship researches (Krueger & Carsrud, 1993; Krueger Jr et al., 2000). Empirically, various studies have found TPB useful in explaining students' EI (Kautonen et al., 2013; Krueger Jr, 2007). The Shapero's entrepreneurial event theory also sees firm creation as an outcome of the interaction among contextual factors that influence an individual's perceptions. According to Peterman, and Kennedy (2003), taking an entrepreneurial option would be a result of some external occurrences, termed as a sudden occurrence and that individual response to the external event will be guided by their perceptions on the available options. This means that the external environment will determine the individual perception of the convenience and viability of the venture. Therefore, Shapero and Sokol (1982) developed three phases in the risk creation process. First explained by the displacement, this displacement can positively or negatively motivate a person to start a business. The second phase is the promotion of entrepreneurship due to certain situations (ie, training, environment and family). In the final phase, potential entrepreneurs will decide to establish a business when certain conditions are met (for example, access to financing, support activities, human resources).

Given the above theoretical supports, this study applied TPB and SEE to examine how the relationships between individuals' perceptions of effective entrepreneurship education, Perceive creativity Disposition, Entrepreneurial Passion for Inventing, Entrepreneurial Passion for Founding, attitude towards entrepreneurship and Entrepreneurial intentions. Consequently, the proposed model is presented in below Figure .

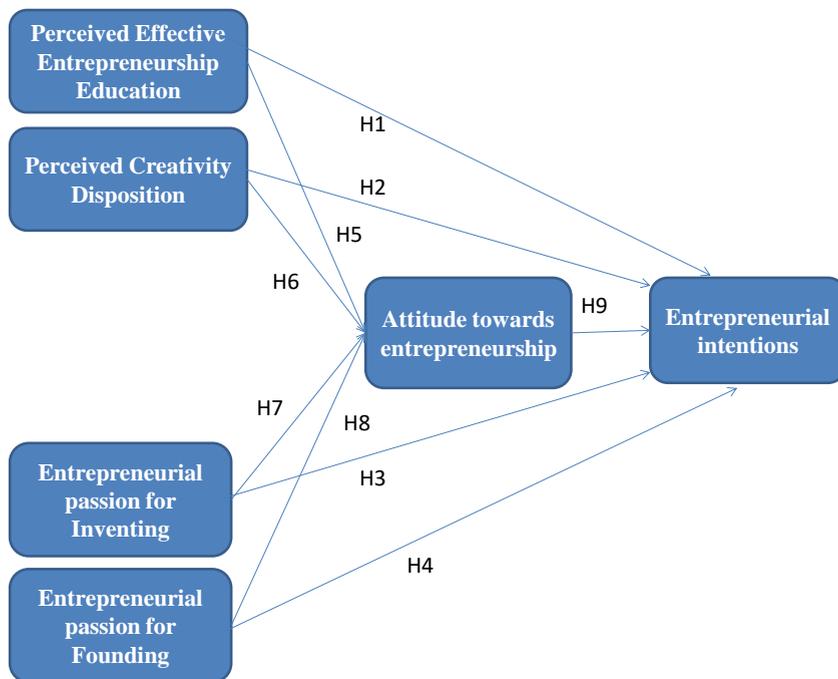


Figure 1. Model of the study

Given the literature review on the variables of concern and the theoretical justifications highlighted above, in addition to the following syntheses of the literature, the hypotheses of this study were formulated to be tested empirically, and hence, validated. In relation to the Six constructs in the model, including four independent variable, one mediating variables, and one dependent variable, nine hypotheses had been formulated; five direct relationships and four mediating relationships.

Table 1. Summary of Hypotheses

<b>Summary of Hypotheses</b>	
<b>Hypotheses</b>	<b>Statement</b>
H1	Perceived effective entrepreneurship education is positively related to entrepreneurial intention.
H2	Perceived Creativity Disposition is positively related to entrepreneurial intention.
H3	Entrepreneurial passion for Inventing is positively related to entrepreneurial intention.
H4	Entrepreneurial passion for Founding is positively related to passion for entrepreneurial intention.
H5	Attitude towards entrepreneurship mediates the relationship between perceived effective entrepreneurship education and entrepreneurial intention.
H6	Attitude towards entrepreneurship mediates the relationship between Perceived Creativity Disposition and entrepreneurial intention.
H7	Attitude towards entrepreneurship mediates the relationship between Entrepreneurial passion for Inventing and entrepreneurial intention.
H8	Attitude towards entrepreneurship mediates the relationship between Entrepreneurial passion for Founding and entrepreneurial intention.
H9	Attitude towards entrepreneurship is positively related to entrepreneurial intentions.

## **METHOD AND MEASURES**

The current research attempts to investigate the academy's efforts to start a university's business education program. Therefore, this study aims to provide a multidisciplinary framework to study the role of university education in the development of business intentions and actions. Therefore, the initial reviews of the literature come from different areas, such as the prerequisites for business behavior, the convergence of different perspectives and the study of the role of formal entrepreneurship programs that may or may not play a role in development of intentions and business actions.

In order to achieve the above objectives, different but related areas have been reviewed to explore research gaps that effectively answer research questions and depends on an understanding of the research field. After an extensive reading of the literature, which includes debates about whether entrepreneurship can be taught (Henry, Hill, & Leitch, 2005) it has been discovered that most academics believe that entrepreneurship can be a program educational part of the university curriculum . The policies of global government agencies emphasize the importance of such programs. In addition, a series of influential reports published by the OECD (Ball, 1989) and the European Commission (2005) indicate that entrepreneurship education should be at the center of

any national educational policy.

From this point of view, some researchers have empirically studied the effects of business education and played a positive and encouraging role in the attractiveness and viability of new businesses (Henry et al., 2005; Peterman & Kennedy, 2003; Tkachev & Kolvereid, 1999). However, it is not clear whether participating in the aforementioned plans, and as formed the intentions of these entrepreneurs' people build their own plans. If the company has taken action and interacted with a variety of factors: Environment, therefore, in the current study, environmental and contextual factors are proposed as regulatory variables, which can help distinguish between different individuals, education and relative role of contextual factors in subsequent business policies and the success of the program.

This research had been based on the quantitative approach. Hence, the study had been set hypothesis of the relationship between six variables; perceived effective entrepreneurship education, Perceived Creativity Disposition, Entrepreneurial passion for Inventing, Entrepreneurial passion for Founding, Entrepreneurial Attitude, and entrepreneurial intentions. The study was also cross-sectional research. Data collection of university business students did to determining their entrepreneurial intentions. Specifically, it was conducted from business departments at undergraduate and postgraduate levels of their studies across nine universities in Punjab Pakistan. Survey research was also employed, whereby questionnaires were administered to elicit relevant information concerning the variables of the study. This had been necessary in order to answer the research questions, as well as to achieve the purpose of this study. The survey was conducted in order to measure the variables, to test the hypotheses, and to infer questions about individual experiences and characteristics (Neuman, 2007).

### Instrument

The following table indicates the sources of survey instruments

Table 2. Sources of Scales for alpha values

Variables	Items	Sources	Cronbach's Alpha ( $\alpha$ )
Entrepreneurial Intentions	6	(Liñán & Chen, 2009)	.78 to .95
Perceived Effective Entrepreneurship Education	5	(Souitaris, Zerbinati, & Al-Laham, 2007)	0.71
Passion for venture creation	5	(Cardon, Glauser, & Murnieks, 2017)	0.85
Passion for Venture Founding	4	(Cardon et al., 2017)	0.72
Perceived Innovativeness	8	(George & Zhou, 2001)	0.9
Entrepreneurial Attitude	6	(Kolvereid, 1996b)	0.82

### DATA ANALYSIS

Data were collected from Business the business students from the nine public and private universities from Punjab Pakistan.

The study used a PLS SEM two-stage approach in the analysis, the first stage we assessed the measurement model, and in the second stage, we considered the structural relationships using

factor scores for all the variables in our model (Ringle et al., 2012; Wilson, 2010). This approach has been utilized by many current studies in business and management field (Alkipsy & Raju, 2019; Anjum, Nazar, et al., 2018; Ansari, Siddiqui, & Farrukh, 2018; ChenXi & Sara, 2019; Malik Farrukh, Kalimuthuan, & Farrukh, 2019; Muhammad Farrukh, Alzubi, et al., 2018; Muhammad Farrukh, Chong, Mansori, & Ravan Ramzani, 2017; Muhammad Farrukh, Khan, Shahid Khan, Ravan Ramzani, & Soladoye, 2017; Muhammad Farrukh, Lee, Sajid, et al., 2019a; Muhammad Farrukh, Lee, Sajid, & Waheed, 2019b; Muhammad Farrukh, Lee, & Shahzad, 2019; Muhammad Farrukh, Sajid, Lee, & Shahzad, 2019; Muhammad Farrukh, Sajid, Zreen, & Khalid, 2019; Muhammad Farrukh, Ting, Shahzad, & Hua, 2018; Muhammad Farrukh, Ying, & Mansori, 2017; Shahzad, Farrukh, Ahmed, Lin, & Kanwal, 2018; Zreen et al., 2019).

### **Descriptive Statistics**

The mean and the standard deviation of the variables in this study were computed and the results are presented in the Table below. The scale of measurement for the variables had been a 7-point Likert scale anchored on different degrees of agreements. The mean for all other variables had been slightly above 5.0, with the highest (entrepreneurial passion for founding) mean of 5.611. This suggested that on average, the scores to the questions on the variables of the study were considerably higher on the scale, agreeing mostly with the questions.

Table 3. Descriptive Statistics

<b>Construct</b>	<b>Mean</b>	<b>Std. Deviation</b>
Entrepreneurial Intention	5.498	1.398
Entrepreneurial Passion for Founding	5.611	1.135
Passion for venture creation	5.366	1.163
Perceived Innovativeness	5.195	1.107
Perceived Effective Entrepreneurship Education	5.373	1.116
Attitude towards entrepreneurship	4.195	1.01

### **Measurement Model**

The composite reliability values for all the latent variables examined showed that they are all above the suggested threshold of 0.70 (Hair, Hult, Ringle, & Sarsted, 2014; Henseler, Ringle, & Sinkovics, 2009). Specifically, as shown in the table below,

Table 4. Measurement Model Evaluation

<b>Construct Indicators</b>	<b>Indicators</b>	<b>Loadings</b>	<b>Composite Reliability</b>	<b>AVE</b>
<b>Perceived Effective Entrepreneurship Education</b>			.939	.762
	PEE1	.777		
	PEE2	.898		




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	PEE3	.913		
	PEE4	.895		
	PEE5	.872		
	PEE6	.462		
<b>Perceived creative disposition</b>			.866	.682
	PCD1	.825		
	PCD2	.852		
	PCD3	.801		
	PCD4	.815		
	PCD5	.835		
	PCD6	.351		
	PCD7	.816		
	PCD8	.746		
<b>Entrepreneurial passion for Inventing</b>			0.887	0.687
	EPI	.749		
	EP2	.754		
	EP3	.752		
	EP4	.795		
	EP5	.788		
<b>Entrepreneurial passion for Founding</b>			.799	.611
	EPF1	.720		
	EPF2	.785		
	EPF3	.806		
	EPF4	.804		
<b>Entrepreneurial Intention</b>			0.881	0.671
	EI	.888		
	EI2	.870		
	EI3	.783		
	EI4	.785		
	EI5	.791		

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	EI6	.777		
Attitude towards entrepreneurship			0.798	0.588
	ATE1	.788		
	ATE2	.770		
	ATE3	.883		
	ATE4	.885		
	ATE5	.491		
	ATE6	.877		

### Discriminant validity

The discriminant validity was assessed based on Fornell and Larcker's (1981) criterion. The results of this study showed that the square root of AVE values for all constructs exceeded other construct values as they correlated with a latent variable correlation. Therefore, the discriminant validity construct wise had been established (Henseler et al., 2009; Hair et al., 2014). The results of the Fornell and Larcker's (1981) criterion for assessing discriminant validity.

Table 5: The Discriminant Validity Analysis by Fornell & Larcker Method

Construct	1	2	3	4	5	6
1) Entrepreneurial Intention	<b>.819</b>					
2-Perceived creative disposition	.328	<b>.825</b>				
3 Entrepreneurial passion for Inventing	.432	.320	<b>.828</b>			
4 Entrepreneurial passion for Founding	.443	.479	.397	<b>.781</b>		
5) Attitude towards entrepreneurship	.403	.336	.456	.430	<b>.766</b>	
6) Perceived effective entrepreneurial education	.244	.388	.417	.413	.244	<b>.873</b>

### Results from assessment of structure model

Subsequently, after estimating the quality of the measurement model, the succeeding step in a PLS-SEM analysis was to analyse the inner model of the structural model. Given an adequate measurement model and second-order constructs model, the hypotheses were tested by probing the structural model. Mediation studies using PLS-SEM consist of several alternative approaches, and for the persistence of this research, the present research chose the bootstrapping approach. The research framework for this structural model consisted of three main constructs. After running the

PLS-SEM with path weighting scheme algorithm, estimates were obtained for the structural model relationship through path coefficients, which represented the hypothesized relationship among the constructs.

### Analysis of R square (R<sup>2</sup>)

According to Hair *et al.* (2014), the key assessment criterion of the structural model, by PLS-SEM is, R<sup>2</sup> measures, and to conclude the impact level of the path measurements. The reason is as the objective of the prediction-oriented PLS-SEM methodology is to elucidate the variance of endogenous latent variable and reasonably high R<sup>2</sup> value should be obtained. A rule of thumb in marketing research studies, R<sup>2</sup> values of 0.75, 0.50, or 0.25 for endogenous latent variables in the structural model can be represented as substantial, moderate, or weak, respectively. Accordingly, the obtained R<sup>2</sup> value could use to interpret the strength of the structural model, which indicates the explanatory variance by the exogenous variables contained in the endogenous variable.

Table 6. Coefficients of Determination (R<sup>2</sup>)

Variables	R <sup>2</sup>	Range
Entrepreneurial Intention	.59	Strong
Attitude towards entrepreneurship	.46	Moderate

Table 7. Results of the hypothesis tests

		Path Coefficient	T value	Decision
H1	Perceived effective entrepreneurship education is positively related to entrepreneurial intention.	0.110	1.234	Not supported
H2	Perceived Creativity Disposition is positively related to entrepreneurial intention.	0.234	2.56	Supported
H3	Entrepreneurial passion for Inventing is positively related to entrepreneurial intention.	0.321	2.971	Supported
H4	Entrepreneurial passion for Founding is positively related to passion for entrepreneurial intention.	0.243	2.81	Supported
H5	Attitude towards entrepreneurship mediates the relationship between perceived effective entrepreneurship education and entrepreneurial intention.	.312	3.312	Supported
H6	Attitude towards entrepreneurship mediates the relationship between Perceived Creativity Disposition and entrepreneurial intention.	0.213	2.11	Supported
H7	Attitude towards entrepreneurship mediates the relationship between Entrepreneurial passion for Inventing and entrepreneurial intention.	0.265	3.113	Supported

H8	Attitude towards entrepreneurship mediates the relationship between Entrepreneurial passion for Founding and entrepreneurial intention.	0.265	3.65	Supported
H9	Attitude towards entrepreneurship is positively related to entrepreneurial intentions.	0.331	3.31	Supported

## DISCUSSION

This study has portrayed that effective entrepreneurship education is a critical factor in creativity enhancement and entrepreneurial passion building, as well as in playing a significant role in entrepreneurial intention formation, which has a direct effect on entrepreneurial behavior. This study presents a detailed investigation of the direct and indirect effects of entrepreneurship education, perceived creativity disposition, entrepreneurial passion for founding and entrepreneurial for inventing on the entrepreneurial intentions in students of Pakistan. Although several authors have investigated the effects of entrepreneurship education, however, the benefits and desired objectives derived from entrepreneurship education are still poorly understood and effect on intentions. Several previous studies have found a negative impact of entrepreneurship education on intentions.

Entrepreneurial intention and the subsequent entrepreneurial behavior will be the ultimate societal application in developing countries, especially in Pakistan, to address the pressing unemployment situation. Entrepreneurship education is found to have a positive influence on the entrepreneurial attitude and these students attain strong entrepreneurial intentions. These students were found determinant to start their own business and during their studies, some of them were found partially involved in business activities. There may be methodological reasons why the literature has not generated consistent assessments as yet. While the studies provide intriguing results, many of them tend to have methodological limitations.

Further entrepreneurship learning was found to be the most influenced module in founding the entrepreneurial attitude of the students leading to establishing entrepreneurial intentions. In addition, inspiration and utilization of resources were also found to affect attitude, subjective norms and perceived behaviour control positively, thus exhibiting their influence in establishing the entrepreneurial intention of the students. Entrepreneurship education is yet to be developed in developing countries to successfully provide students with entrepreneurial skills and competencies that would assist them in choosing entrepreneurship as a study and then career (Lekoko, Rankhumise, & Ras, 2012).

Moreover, the mediating effect of attitude towards entrepreneurship was investigated on the relationship between perceived effective entrepreneurship education, Perceived Creativity Disposition, Entrepreneurial passion for Inventing, Entrepreneurial passion for Founding and entrepreneurial intentions. The mediation analysis provides a positive impact on the importance of this factor in the process of entrepreneurial intentions development and subsequent entry to self-employment. To conclude, the current study indicates the positive impact of entrepreneurship education in promoting the entrepreneurial attitude of the university students and thus could be considered a vital source of entrepreneurship development in particular and economic development in general. Further programmes would be of greater influence when designed in the context of a particular entrepreneurial environment and context

This study offers several important practical contributions; in understanding the antecedents of entrepreneurial intentions among Pakistani university students, which would alert all

stakeholders' responsible for entrepreneurship development to have a better picture of how EI is formed and how potential venture initiators' beliefs and perceptions have an impact on their intention to commence business. The study reveals the role of entrepreneurship education in driving individual personality trait to increase entrepreneurial intention if the program is made effective. This will enable the government and the policymakers to direct thoughts and resources on young adults, who in all possibility, will form entrepreneurial intentions and subsequently be involved in entrepreneurial behaviour. Therefore, knowledge of the determinants of entrepreneurial intention can help in entrepreneurial training and in discovering the best ways to mould the intention, as well as enhance the likelihood of the consequential behavior of new business start-up.

Future studies should conduct longitudinal studies to investigate students while still in school and to extend the studies after years of graduation. This will reveal the realization of the said intention while in school. In other words, studies can confirm the translation of entrepreneurial intention into actual entrepreneurial behavior after graduation. Qualitative study could uncover the true reaction of the participants as the researchers can observe and interact directly while information is collected from the participants. This is difficult in a quantitative sense.

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