



# Effects of Entrepreneurship Education on Entrepreneurial Passion and Intention: Moderating Role of Government Support

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**Abstract.** Academicians and policymakers are increasingly interested in studying entrepreneurship as entrepreneurship plays a pivotal role in the economic growth of the country. Particularly the focus remains on how to increase the entrepreneurship rate for becoming economically stable in the world. In this perspective, entrepreneurship education (EE) has an immense role to play for entrepreneurship. Considering the importance of EE, literature still remains inconsistent on the effectiveness of EE towards entrepreneurial intention (EI). Therefore, based on the Stimulus Organism Response theory (SOR), this study by considering entrepreneurial passion (EP) as mediator and government support programs and policies (GSPs) as moderator has demonstrated the influence of EE on EI. For this purpose data was gathered from a sample of 307 Pakistani university students through a survey questionnaire and analysis was done through Smart PLS 4.0. The findings confirmed that EE not only directly but indirectly through EP triggered the students' EI. Moreover, government support programs and policies further enhanced the effects of EE on EP which would lead to the development of EI among students. This study has important implications for educators and policymakers to increase the entrepreneurship rate by considering how the EP of students can be enhanced through educational programs and regulatory policies.

**Keywords:** Entrepreneurship Education, Entrepreneurial Intention, Entrepreneurial passion, Government support programs and policies, SOR theory.

## 1 Introduction

In recent times, entrepreneurship has been the most intriguing talking point among educators, scholars, and policymakers as it is considerably important in economic growth, innovation, and social progress [1]. Hence, almost all the United Nations member states have formulated and implemented policies for the growth of entrepreneurship to reduce poverty and enhance economic growth through innovation and employment generation. Above discussed details demonstrate the prominence of entrepreneurship and thus, em-

phasize the importance of studying the phenomenon through which the entrepreneurship rate can be enhanced [2]. For this purpose, the key research topic that emerges in the entrepreneurial field is what encourages individuals to choose entrepreneurship as a career choice. Entrepreneurial intention (EI) is considered to be a valid proxy for determining entrepreneurial behavior. EI can be explained as a conscious state of mind that directs an individual toward performing a particular behavior [2]. It is evident from previous studies that entrepreneurship education (EE) is positively associated with EI [2]. However, few studies have found otherwise [3]. Following these inconsistent results, scholars suggest including an appropriate mediating variable can help to understand how EE can influence EI. In this perspective, emotional aspects such as entrepreneurial passion (EP) can be an appropriate mediating variable [4, 5]. EP is an intense positive feeling/emotion that can affect the identification and exploitation of new business opportunities through innovative information patterns [6]. Therefore, this study considers the emotional aspect i.e., EP as an appropriate mediator for studying the EE to EI link among Pakistani university students. Moreover, government support programs and policies (GSPs) is also an important factor relevant to entrepreneurship [7]. GSPs can encourage individuals to start new ventures by giving support such as through subsidies and ease in bureaucratic procedures [7]. Considering the importance of GSPs, the present research incorporates GSPs as a strong catalyst (moderator) that can influence the link between EE and EP. Moreover, recent researchers explained that educational support alone is not enough and needs to be accompanied by government support to enhance entrepreneurship by increasing the entrepreneurial spirits of individuals [4].

According to the Global Entrepreneurship Monitor (GEM) report, Pakistan's total early-stage entrepreneurial activity average rate (3.65%) is far below as compared to regional (9.68%) and global averages (12.81%). The lack of confidence or impotent attitude of individuals in Pakistan can be the potential cause of these below-par statistics. Therefore, this study aims to examine the factors that can influence the intention development of students in Pakistan. Through this study, policymakers and educators can effectively develop new policies for enhancing entrepreneurial behavior among university students that will ultimately boost entrepreneurial activity and economic growth.

## 2 Theory and Hypotheses

Prior researchers in entrepreneurial literature find difficulties in examining EI because of its complexity. EI can be influenced by numerous factors including environmental factors for instance entrepreneurship education (EE), and cognitive/affective factors such as EP [8]. This study explores the influence of EE as environmental stimuli on the responsive variables including EI through cognitive organism EP, hence making the Stimulus Organism Response theory suitable for this study. The SOR theory helped to understand the sequential mechanism involving complex human behavior. Following the SOR theory EE acts as an external environmental stimulus (S) and activates the EP that is organism (O), which in turn generates EI as a human response (R) [9]. The usefulness of the SOR theory lies in the fact that it captures the complexities involved in

cognitive processes. Based on SOR theory, this study also tests the moderating role of GSPs as an external catalyst on the link between EE to EP. (see Fig.1)

Entrepreneurship is a challenging process and requires appropriate skills and knowledge to achieve success. EE provides the knowledge and skills required to become successful in the entrepreneurial process [2]. Knowledge acquisition and learning methods stimulate the abilities of individuals to identify and exploit new opportunities. These skills and knowledge can help develop EI among individuals. EE develops self-efficacy (i.e., faith in one's ability to complete a task) in students that helps shape many of their emotions, i.e., passion. Long before, EP was considered a self-driven motivation, however, recent researchers argued that EP is an interpersonal construct and can be developed through the external environment [8]. Individuals when engaged in real-world tasks that are related to establishing new businesses while gaining skills and knowledge through EE programs, can develop strong entrepreneurial passion. Therefore, through EE programs, entrepreneurial proclivity can be enhanced.

EP is the “heart of entrepreneurship” and acts as “fuel to fire” [8]. Scholars highlighted the importance of emotions for entrepreneurship, as emotions may help individuals to strive for new start-ups [8]. EP as positive emotion gives impetus to the entrepreneurial process and helps to enhance EI [8]. Therefore, EP is considered to be one of the important predictors of EI.

Individuals hesitate if government policies are not favorable for entrepreneurship. Support from the government in the form of subsidies, separate funding for new startups, and ease in bureaucratic procedures are the important measures that can motivate individuals toward business [7]. Therefore, apart from EE, GSPs is also an important stimulus that can trigger individuals' EP. Moreover, [4] explained that only EE will not be enough to encourage individuals towards entrepreneurship, government support needs to be accompanied by EE to reap maximum benefits. Therefore, this study incorporates GSPs as moderators. Thus, the following hypotheses have been proposed:

Hypothesis 1: Entrepreneurship education is positively associated with entrepreneurial intention.

Hypothesis 2: Entrepreneurship education is positively associated with entrepreneurial passion.

Hypothesis 3: Entrepreneurial passion is positively associated with entrepreneurial intention.

Hypothesis 4: Entrepreneurial passion mediates the link between entrepreneurship education and entrepreneurial intention.

Hypothesis 5: Government support programs and policies moderate the link between entrepreneurship education and entrepreneurial passion.

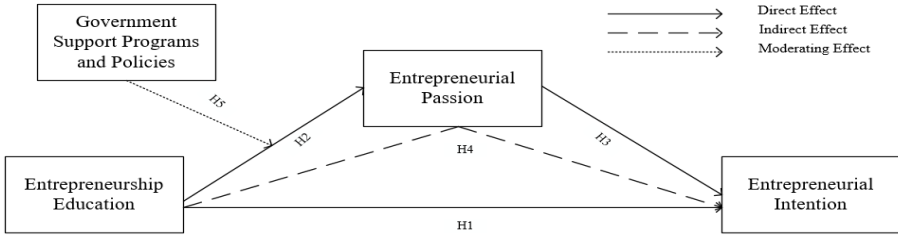


Fig. 1. Research Model

### 3 Methods and Materials

This study comprised undergraduate and postgraduate students from Pakistani public sector universities, who were in their last year of education in management and business studies. These universities were selected based on their growing proclivity to enhance entrepreneurship. During the data collection procedure, the authors implemented all the necessary measures to protect the privacy of respondents. Moreover, the anonymity of the respondents was kept by ensuring them that their information would not be made public by any means to any external body.

The research devised a survey instrument consisting of two different parts. The first part gathered demographic information from participants, encompassing age, education, gender, and previous entrepreneurial experience. The subsequent section gauged the constructs of variables using a seven-point Likert-type scale ranged from (1 = highly disagree to 7 = highly agree). To meet the study's requirements, measures from earlier research were utilized and modified. This included a six-item measurement scale for EI, derived from the intention questionnaire by [10]. The scale to measure EE, adapted from [11], was comprised of five items. For assessing EP, a four-item scale developed by [6] was employed. Finally, to measure the GSPs, a seven-item scale was adopted from [7].

First, the survey instrument was developed in the English language and underwent a validation process through the pilot survey involving 27 students with prior entrepreneurial experience who were in their final year of education. Following the pilot survey and a thorough explanation of the study's objectives, the final version of the questionnaire was disseminated via email containing guidelines, informed consent, and anonymity. Out of the 450 survey questionnaires dispatched to students, 331 responses were received through email. After the cleaning and screening procedure of collected data, 24 responses were found incomplete and thus eliminated, resulting in a total of 307 usable responses for this study. (See Table 1 for demographics).

**Table 1.** Demographics of Respondents (N = 307)

Demographics	Classification	Frequency	%
<b>Age</b>	18-24	140	45.60
	25-31	134	43.65
	32 and above	33	10.74
<b>Gender</b>	Male	172	56.00
	Female	135	44.00
<b>Education (degree)</b>	Undergraduate	188	61.24
	Postgraduate	119	38.76
<b>Prior entrepreneurial Experience</b>	Yes	163	53.10
	No	144	46.90

The common method bias is relevant when variables (measures) including dependent and independent involve the same individual. Thus, this study through SPSS software assesses the method bias by using Harman's single-factor test with 22 items loading. The resultant factor accounted for only 36.549% of the total variance which is way less than 50%. Then, this study employed the full collinearity technique for assessing method bias suggested by [12]. All the latent variables were declared as outcome variables sequentially and calculate the variance inflation factor (VIF) values. The results confirmed that all the values were below the threshold limit of 3.3 [12] suggesting the absence of method bias.

## 4 Results

The analysis in this research is divided into two phases. In the first phase, the measurement model including reflective constructs was checked based on their validity and reliability. Then in the second phase, the main hypothesized model was tested using a structural model.

### 4.1 Measurement Model

The consistency and authenticity of the constructs were examined through composite reliability, and Cronbach's alpha [13] and found well within the limits. The results in Table 2. show values regarding the measurement model and confirm that Cronbach's alpha and CR values were all above  $> 0.70$ , suggesting the reliability and internal consistency of constructs [13]. Furthermore, the average variance extracted (AVE) showed convergent validity of constructs, as all the values were  $> 0.50$  [13]. (see Table 2).

**Table 2.** Outer loadings, reliability, and validity

Variables	items	Avg. loading	Cronbach's ( $\alpha$ )	CR	AVE
Entrepreneurial intention	6	0.844	0.920	0.921	0.713
Entrepreneurship Education	5	0.801	0.861	0.862	0.643
Entrepreneurial passion	4	0.804	0.818	0.823	0.647
Government support programs and policies	7	0.758	0.885	0.918	0.577

**Note:** Each latent construct's convergent validity was established by calculating the average variance explained, or AVE.

Then to examine the discriminant validity of the constructs, heterotrait-monotrait (HTMT) ratio and fornell larcker approach were used. The results regarding HTMT ratio for discriminant validity were found to be lower than the threshold limit of 0.85 (below diagonal values, see Table 3) ensuring the discriminant validity of constructs [14]. Moreover, the Fornell and Larcker (1985) approach was also applied to assess the discriminant validity. This approach suggests that a latent variable is said to be enough divergent from other latent variables if its squared root value of AVE is greater than its bivariate correlations with other latent variables. Table 3 affirms that squared root values of AVE (bold diagonal values) for each latent variable are greater than the above diagonal bivariate correlation coefficients; thus, ensuring the discriminant validity of the measurement model. In the assessment of the model fit of this study, SRMR was used to circumvent model misspecification. The SRMR allows the assessment of the average magnitude of the discrepancies between observed and expected correlation and its value less than 0.08 is considered to be good. The results show the model fitness as the value of SRMR was 0.058.

**Table 3.** Zero-order correlations and discriminant validity (Fornell-Larcker method and HTMT Ratios)

Variable Name	EI	EE	EP	GSPs
Entrepreneurial intention	<b>0.845</b>	0.674**	0.604**	0.211**
Entrepreneurship education	0.753	<b>0.802</b>	0.560**	0.312**
Entrepreneurial passion	0.695	0.662	<b>0.805</b>	0.135**
Government support programs and policies	0.210	0.328	0.133	<b>0.760</b>

Note: Correlations are significant at 1%, i.e., \*\*P < 0.01 level. Bold values are the squared root of AVE. Zero-order correlations (above the bold) and HTMT (below the bold). EI = Entrepreneurial intention; GSPs = Government support programs and policies; EE = Entrepreneurship education; EP = Entrepreneurial passion

### 4.2 Hypotheses Testing

The SEM model in Smart PLS 4, employing the bias-corrected percentile method with 5000 bootstraps was used to test hypotheses. The results reveal that EE significantly influenced EI ( $\beta = 0.489$ ; BootSE = 0.069; CIs at 95% 0.350 and 0.621). Similarly, EE has a direct and significant influence on EP ( $\beta = 0.559$ ; BootSE = 0.061; CIs at 95%

0.431 and 0.672) and EP significantly affects EI ( $\beta = 0.330$ ; BootSE = 0.068; CIs at 95% 0.199 and 0.462). The mediating effect of EP is also significant ( $\beta = 0.185$ ; BootSE = 0.044; CIs at 95% 0.108 and 0.284). Hence all the direct and indirect hypotheses are accepted. Moreover, the moderating effect of GSPs on EE to EP link is also significant ( $\beta = 0.208$ ; BootSE = 0.094; CIs at 95% 0.064 and 0.429). Thus, all the proposed hypotheses are accepted (Refer to Table 4.)

**Table 4.** Direct, indirect, and moderation (Standardized effects)

	Est ( $\beta$ )	SD	T-value	P-value	ULCI	LLCI	Status
<b>Direct Effect on EI</b>							
EE $\rightarrow$ EI	0.489	0.069	7.104	0.000	0.350	0.621	Accepted
EE $\rightarrow$ EP	0.559	0.061	9.164	0.000	0.431	0.672	Accepted
EP $\rightarrow$ EI	0.330	0.068	4.887	0.000	0.199	0.462	Accepted
<b>Mediating Effect on EI</b>							
EE $\rightarrow$ EP $\rightarrow$ EI	0.185	0.044	4.147	0.000	0.108	0.284	Accepted
<b>Moderating Effect on EP</b>							
EE*GSPs $\rightarrow$ EP	0.208	0.094	2.223	0.026	0.064	0.429	Accepted
<i>Adjusted R<sup>2</sup></i>	For EP = 0.357		For EI = 0.526				

## 5 Conclusion

This study investigates the role of entrepreneurial passion as a mediator between entrepreneurship education and the EI of Pakistani university students. Moreover, how GSPs moderate the influence of EE and EP is also explored. The results of this study demonstrate the importance of the emotional aspect of students by explaining that entrepreneurship education significantly enhances the passion of students towards entrepreneurship. Furthermore, this relationship gets strengthened when the GSPs are perceived to be favorable for entrepreneurship in the country. The findings of this study have important implications for both policymakers and educators. The EE encourages the students and develops their passion for entrepreneurship, which will act as fuel and trigger the students' EI. Moreover, the influence of EE becomes pronounced if the government formulates and implements policies favorable for the entrepreneurial environment. This study adds to the existing entrepreneurial literature by highlighting the combined effect of external stimuli i.e., EE and GSPs in developing positive emotions among students that will further grow their interest in entrepreneurship. The results of this scholarship suggest that educational institutions need to focus on developing passion among students by designing such courses that not only include traditional courses but also arrange workshops and seminars through which students can get a chance to meet with successful entrepreneurs. Listening to real-world experiences and success stories relevant to entrepreneurship can help students develop a passion. Moreover, the government needs to form and implement such policies that can promote entrepreneurship in the country, which will ultimately lower the levels of poverty and boost economic growth.

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