

## **Role of Entrepreneurial Passion between Entrepreneurial Attitude, Subjective Norms, Perceived Behavioral Control, and Entrepreneurial Intention: Measuring the Entrepreneurial Behavior of Pakistani Students**

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### **Abstract**

This study aims to investigate the role of entrepreneurial passion between entrepreneurial attitude, subjective norms, perceived behavioral control, and entrepreneurial intention while measuring the entrepreneurial behavior of Pakistani students. The study has applied the quantitative methods to empirically test the study model and proposed hypotheses using the PLS-SEM technique in the computer version 3.0 of the Smart PLS software. The data were collected from the 240 university students using the structured questionnaire and the sample was drawn randomly. The results have shown significant positive relationship between subjective norms, perceived behavioral control, and entrepreneurial intentions. Similarly, students' entrepreneurial behavior is positively influenced by perceived behavioral control and entrepreneurship intention. In the case of mediation, the entrepreneurial intention significantly and positively intermediates the relationship between subjective norms, perceived behavioral control, and entrepreneurial behavior. Next is the case of moderation, the entrepreneurial passion does not moderate the associations of entrepreneurial attitude, subjective norms, perceived behavioral control, and entrepreneurial intention. These findings contribute to broadening the paradigm of the theory of planned behavior by incorporating entrepreneurial passion and bridging a literature gap between the associations of attitudinal factors, entrepreneurial passion,

entrepreneurial intention, and entrepreneurial behavior. These findings can be helpful for policy-makers, practitioners, small-medium enterprises to promote entrepreneurship culture in emerging countries, and also helpful for university graduates for creating new business ventures or to become self-employed in order to reduce employment pressure after completing university education.

**Keywords:** Entrepreneurial attitude, subjective norms, perceived behavioral control, entrepreneurial intention, entrepreneurial behavior, entrepreneurial passion.

## 1. Introduction

Entrepreneurship has been recognized as a backbone of the country's economic growth, innovation, and job creation (Cardella et al., 2020; Li et al., 2020). For employment creation, private sectors and public sectors have relied upon entrepreneurial start-ups (Neneh, 2019; Sánchez-García et al., 2018). For Graduate students, searching for an appropriate job has become a serious issue, with the growing number of students pursuing and completing higher education in Pakistan. Thus, for releasing employment pressure, universities and governments have been motivating students towards creating a new business venture since the 2008 economic recession (Li et al., 2020). The statistics relating to Pakistan showed that people's self-employment perception (entrepreneurial intention) and entrepreneurial behavior towards establishing new business ventures have been grown up from 24.51% to 27.90% from 2012 to 2020. Alongside the fear of failure has also grown up from 31.24 to 54.16, it may be due to the COVID-19 pandemic as well as the political interference in higher education institutions of Pakistan (Global Entrepreneurship Monitor Report 2020-2021; Murad et al., 2021). Many researchers have looked into entrepreneurship drivers, trying to figure out why people have the desire (entrepreneurial intention) to start their own business (Bueckmann-Diegoli et al., 2020; Fuller et al., 2018; Kautonen et al., 2015). These researchers mostly relied on entrepreneurship models that describe the creation of entrepreneurial intention, with little emphasis on the importance of entrepreneurial behavior activities. Therefore, Shinnar et al. (2018) and Shirokova et al. (2016) argued that it is critical to move beyond models that end with illuminating intentions, instead of focusing on how these entrepreneurial intentions translate into entrepreneurial behavioral activities, a person's entrepreneurial behavior is enabled by the decision mechanisms, it is still an open issue in the field of behavioral sciences.

With respect to the theory of planned behavior (TPB), attitudinal factors (entrepreneurial attitude, subjective norms, and perceived behavioral control) influenced entrepreneurial intention that consists of beliefs about outcomes (Ajzen 1991). Although, entrepreneurial intention denotes a desire to create a new business venture as well as pursue a different professional path than what is already available (Yi, 2020; Ward et al., 2019). Prior studies highlighted that intention is the best predictor for investigating entrepreneurial behavior (Ajzen and Sheikh, 2013; Fitzsimmons and Douglas, 2011). Many scholars have pointed out entrepreneurial behavior is positively and significantly influenced by those individuals who have a high level of entrepreneurial intention (Neneh, 2019; Kautonen et al., 2015). For the last three decades, several researchers have revealed the impact of entrepreneurial passion on investigating entrepreneurial orientation and entrepreneurial intention (Campos,

2017; Cardon and Kirk, 2015). However, entrepreneurial passion has gained less attention when it comes to measuring entrepreneurial behavior. Limited attention has been paid to the effect of entrepreneurial passion with the influence of entrepreneurial attitude, subjective norms, and perceived behavioral control on entrepreneurial intention leading to entrepreneurial behavior. Therefore, the current study is called to fill this research gap, the authors tried to investigate the association between intention (non-final outcomes) and behavior (final outcomes) for explaining their relationships and contributing to the entrepreneurship existing literature (Karimi, 2020; Hu et al., 2018; Fuller et al., 2018). After critically analyzing the existing literature, the authors have found a gap in the entrepreneurship field, because intention does not necessarily lead to the formation of entrepreneurial behavior in the conceptual models of intention-behavior. Some scholars have shown in the intention-behavior models, entrepreneurial intention explained variance no more than 30% in the entrepreneurial behavior (Neneh, 2019; Shirokova et al., 2016).

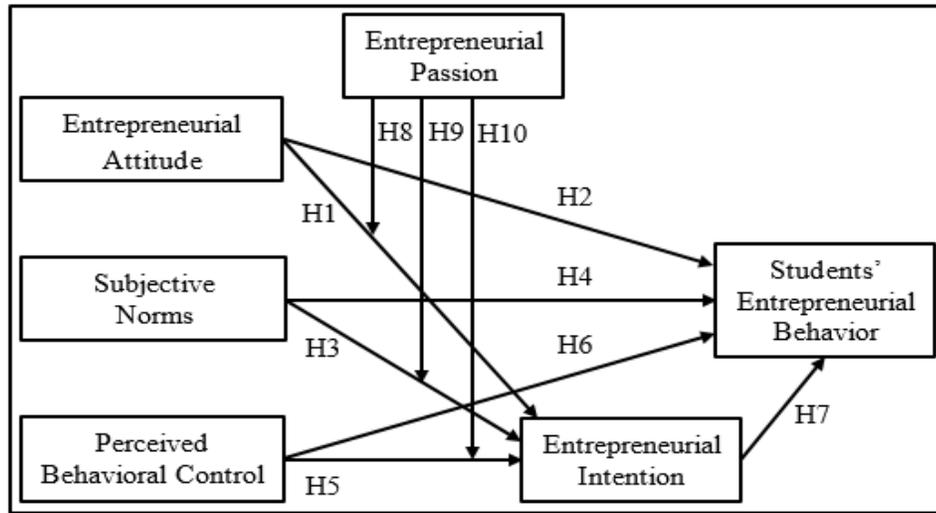
Thus, we still don't know what kinds of factors influence how intentions become behavior in the entrepreneurial context, especially in the relationships between attitudinal factors (entrepreneurial attitude, subjective norms, perceived behavioral control), entrepreneurial passion, entrepreneurial intention, and entrepreneurial behavior. (Karimi, 2020; Murad et al., 2021). As a result, it is critical to link all of these constructs in order to get new practical and theoretical insights. To see how closely variables are linked to entrepreneurial intentions that lead to entrepreneurial behavior, the authors have employed a university student sample from Lahore, Pakistan. The current research contributes to the existing body of knowledge in three ways. It first looks at how attitudinal factors (entrepreneurial attitude, subjective norms, and perceived behavioral control) affect entrepreneurial intention and behavior. Second, this research looks into the role of entrepreneurial intention in mediating the relationship between antecedents of intention and entrepreneurial behavior. Finally, in the context of this study, the effect of entrepreneurial passion in moderating the links between antecedents of intention and entrepreneurial intention is investigated. The findings of the study can use entrepreneurs, small and medium enterprises, universities, and policymakers for creating entrepreneurial attitudes and passion among university students to become self-employed in order to reduce employment pressure. It may prove to be a vehicle for sustainable economic growth and wealth creation through boosting entrepreneurship culture in Pakistan and around the world.

The remaining paper is structured as follows. After the introduction, section two gives a quick overview of the backgrounds of literature and hypotheses formation. This is followed by section three explains the methods and measures used in the article. Next comes section four that describes the data analysis. Lastly, section five includes discussion, theoretical contribution, managerial implication, limitation, and future recommendation. Next is the second section that gives a quick overview of the existing literature on the subject, followed by a description of the theoretical model. The third section explains the methods used in the article, while section four describes the results. Section five concludes with a discussion, study implications, and the future scope of the study.

**2. Literature Review**

*2.1 Theory and Hypotheses Development*

Ajzen (1991) presented the theory of planned behavior, which explained the entrepreneurial intention and behavior of individuals for starting a new business venture utilizing the components of attitude toward entrepreneurship, subjective norms, and perceived behavioral control. TPB is a model that tries to predict both entrepreneurial intention and actual entrepreneurial behavior activities (Murad et al., 2021). Furthermore, entrepreneurial passion and attitudinal factors are the main driving forces in the formation of new business ventures as well as the fire of desire that motivates entrepreneurs' daily efforts. Several scholars argued that attitudinal factors (entrepreneurial attitudes, subjective norms, and perceived behavioral control), and entrepreneurial passion have an impact on entrepreneurial intention and entrepreneurial behavior (Gird & Bagraim, 2008; Shirokova et al., 2016; Miralles et al., 2017; Shinnar et al., 2018; Wang et al., 2018; Khan et al., 2019; Zulfiqar et al., 2019; Feola et al., 2019; Ferri et al., 2019; Farrukh et al., 2019; Van Trang & Doanh, 2019; Mahmood et al., 2019; Karimi, 2020; Al-Jubari, 2019; Al-Jubari et al., 2019; Doanh & Bernat, 2019; Ahmed et al., 2020; Shah et al., 2020; Shi et al., 2020; Li et al., 2020; Yarimoglu & Gunay 2020). Therefore, it is believed that individual with a higher level of entrepreneurial passion and entrepreneurial intention is more expected to be an entrepreneur and self-employed. As a result, TPB provides a useful model for investigating the association between attitudinal factors, entrepreneurial passion, entrepreneurial intention, and entrepreneurial behavior.



**Figure 1: Research Model**

*2.2 Entrepreneurial Attitude (EAT)*

Ajzen and Fishbein (1980) defined attitude as an individual's belief and assessment towards a behavior. When a person responds to a specific judgment, his/her attitude toward

a behavior is developed (Karimi, 2020). For studying human behavior, numerous prior scholars have considered the attitude. For instance, Shi et al. (2020) found a significant positive relationship between EAT and EI of university students in China's Zhejiang province. Similarly, Yarimoglu and Gunay (2020) highlighted a significant positive influence of attitude on Turkish customers' intention to visit green hotels. Besides it, many scholars have examined significant positive effect of EAT on EI such as Shah et al. (2020) in Oman; Van Trang and Doanh, (2019) in Vietnam; Karimi (2020) in Iran public university students; Al-Jubari (2019); Al-Jubari et al. (2019) in Malaysian public university students; (Doanh & Bernat, 2019) in Vietnam university students; Farrukh et al. (2019); Ahmed et al. (2020) in Pakistan university students; Ferri et al. (2019) in Italian university students; and Gird and Bagraim (2008) in South Africa amongst final-year commerce students. Another recent study by Li et al. (2020) revealed a significant positive correlation between EAT and intention toward using shared electric bicycle. In line with many previous studies have shown a significant positive relationship between EAT and EI (Mahmood et al., 2019; Zulfiqar et al., 2019; Feola et al., 2019; Miralles et al., 2017) in the context of education. A Karachi based study of (Khan et al., 2019) showed that EAT is found insignificant with recycling intention of households in Pakistan. Thus, this study proposed the next hypotheses.

- H1: There is a significant positive association between EAT and EI.
- H2: There is a significant positive association between EAT and EB.

### 2.3 Subjective Norms (SN)

SN refers to the social pressure that a person feels when deciding whether or not to perform a behavior (Ajzen, 1991). Social pressure is created by people close to a person, for example relatives, peers, and friends, etc. A person is supposed to behave in a way that is liked by those close to him/her. The latest study by Mahmood et al. (2019) revealed a significant positive correlation between SN and pre-start-up behavior among the low-income Asnaf millennials (Asnaf millennials is referred to as the children of the poor and needy who were born between 1998 and 2000) in Malaysia. While Zulfiqar et al. (2019) examined subjective norms have a negative significant relationship with entrepreneurial intention. They investigated that how technological teaching methods affect students' attitudes and intentions towards entrepreneurial activities in China and Pakistan. Contrary to this, many previous scholars pointed out insignificant relationships between SN and EI, for instance, Karimi, (2020) in Iran; Doanh and Bernat (2019) in Vietnam; and Miralles et al. (2017) in Spain. Besides it, numerous previous scholars highlighted a positive and significant relation between SN and EI (Gird & Bagraim, 2008; Khan et al., 2019; Feola et al., 2019; Ferri et al., 2019; Farrukh et al., 2019; Van Trang & Doanh, 2019; Mahmood et al., 2019; Li et al., 2020; Al-Jubari, 2019; Al-Jubari et al., 2019; Ahmed et al., 2020; Yarimoglu & Gunay, 2020; Shah et al., 2020; Shi et al., 2020). Thus, grounded the aforementioned rationale, the authors proposed the next hypotheses.

- H3: There is a significant positive association between SN and EI.
- H4: There is a significant positive association between SN and EB.

#### 2.4 Perceived Behavioral Control (PBC)

PBC refers to a person's degree of control over his/her action or behavior. According to Ajzen, (1991) perceived controllability and self-efficacy are two factors that influenced by behavioral performance. An individual decision is affected by the difficulties and easiness connected with actions while performing a behavior (Al-Jubari et al., 2019). A Malaysian based study concerning Asnaf millennials, has explored a significant positive correlation between PBC and pre-start-up behavior (Mahmood et al., 2019). Likewise, another recent study revealed a significant positive influence of perceived behavioral control over entrepreneurial behavior among graduating students from universities in Pakistan (Ahmed et al., (2020). however, contrary to this, a Karachi-based study by Khan et al. (2019) investigated that PBC has insignificant relation with consumer' recycling intention in Pakistan; and with Turkish customers' intentions to visit green hotels (Yarimoglu & Gunay, 2020). Besides it, various scholars have pointed out a positive and significant connection between PBC and EI (Gird & Bagraim, 2008; Miralles et al., 2017; Zulfiqar et al., 2019; Feola et al., 2019; Ferri et al., 2019; Farrukh et al., 2019; Van Trang & Doanh, 2019; Karimi, 2020; Al-Jubari et al., 2019; Doanh & Bernat, 2019; Ahmed et al., 2020; Shi et al., 2020; Li et al., 2020). Thus, the current research has established the next hypotheses.

- H5: There is a significant positive association between PBC and EI.
- H6: There is a significant positive association between PBC and EB.

#### 2.5 Entrepreneurial Intention (EI)

The term intention is an individual's plan and motivation towards performing an action or behavior. It is referred to person's willingness towards the entrepreneurial behavior such as creating a new business venture to become an entrepreneur (Dohse & Walter 2012). Whereas, an individual's behavior is most significantly influenced by his intention (Gird & Bagraim, 2008; Ajzen, 1991). Likewise, in Malaysian, Mahmood et al. (2019) explored that EI has positive and significant effect over Asnaf millennials' pre-start-up behavior. In line with, Li et al., (2020) also pointed out the people intentions towards using shared electric bicycles has a significant positive impact on behavior for low-carbon commuting in China. Contrarily, Ahmed et al. (2020) exposed the insignificant association between EI and EB of university students in Pakistan. Next is explained, the theoretical arguments regarding the mediating role of EI. According to (Fishbein & Ajzen, 2010, p. 218), when an individual is involved in an activity, it would have unintended outcomes (positive or negative), arouse emotions (favorable or unfavorable), and disclose unforeseen variables (challenging or supporting). These inputs are likely to change future intentions and actions which are influenced by the person's behavioral, normative, and control beliefs. Numerous prior studies have investigated that the antecedents of intention (EAT, SN, and PBC) have significant associations with individual intention (Gird & Bagraim, 2008; Miralles et al., 2017; Wang et al., 2018; Khan et al., 2019; Zulfiqar et al., 2019; Feola et al., 2019; Ferri et al., 2019; Farrukh et al., 2019; Van Trang & Doanh, 2019; Karimi, 2020; Al-Jubari et al., 2019; Doanh & Bernat, 2019; Ahmed et al., 2020; Shah et al., 2020; Shi et al., 2020; Li et al., 2020; Yarimoglu & Gunay 2020). Whereas, Shirokova et al. (2016) and Shinnar et al. (2018) have shown the individual intention has been considered a significant predictor

of behavior. Thus, after critically analyzing the previous studies, this study proposed the subsequent hypotheses.

- H7: There is a significant positive association between EI and EB.
- H11: EI is a significantly and positively mediating the association between EAT and EB.
- H12: EI is a significantly and positively mediating the association between SN and EB.
- H13: EI is a significantly and positively mediating the association between PBC and EB.

#### *2.6 Entrepreneurial Passion (EP) as a Moderator*

The term passion refers to an individual strong desire regarding a particularly activity, which he/she likes and think important for investing his/her money, energy, and time (Vallerand et al., 2003, 756). however, EP refers to individual's deliberate and attainable intense positive feelings which are generated by engaging in entrepreneurial activities and linked with roles and responsibility relevant to entrepreneur's self-identity (Cardon et al., 2009, p. 515). The recent studies by Li et al. (2020) and Anjum et al. (2021) explored a significant positive relationship between EP, EI and EB of university students. Contrary to this, another latest Iran-based study of Karimi (2020) investigated that EP does not have a direct effect on EI, however, it has an indirect significant effect on EI via (EAT and PBC). Likewise, Murad et al. (2021) observed a partial mediation of EP between the association of creativity and EI of Pakistani university students. Besides it, many scholars, for instance, Feng and Chen (2020), Murnieks et al. (2014), and Cardon et al. (2009) have found that EP is strengthen and uplift the students' entrepreneurial intention and it is an important motivator predictor of new business venture creation and outcomes (Syed et al. 2020; Cardon and Kirk 2015; Murnieks et al., 2014; Baum and Locke 2004; Smilor 1997). After building sufficient arguments on the association between EP and EI, the authors' concern is that passion is a motivational factor that is not found similar among students, thus this research is called to examine the moderating effects of EP on the studied relationships. Therefore, this study proposed the resulting hypotheses.

- H8: EP is a significantly and positively moderating the association between EAT and EI.
- H9: EP is a significantly and positively moderating the association between SN and EI.
- H10: EP is a significantly and positively moderating the association between PBC and EI.

### **3. Methodology**

#### *3.1 Participants and Procedure*

To investigate the stated hypotheses, this study employed a quantitative method. Data was gathered from business students of the universities using a self-administered survey, over six weeks from January to February 2021 in the metropolitan city Lahore, Pakistan. The respondents were approached online due to the COVID-19 pandemic before collecting data, the author received permission from participants. The reason for choosing Lahore as an example city is that it is Pakistan's second-largest metropolitan city and the capital of Punjab Province, with a population of above 11.126 million people, according to the Pakistan Bureau of Statistics (PBS), Population Census 2017, (<https://www.pbs.gov.pk>). The respondents were sampled randomly and 330 business graduates took part in the study based on the item response theory (Lord, 2012). Overall, 280 questionnaires were completed and received, 40 of them deemed useless and deleted. The net response rate was

72% yield a final sample of 240 participants. The sample size is considered adequate between 30 to 500 also supported by Hair et al., (2010) and Roscoe (1975).

### *3.2 Measures and Statistical Method*

The present study has relied on the measurement of the following six latent variables quantified through 33 questions. The entrepreneurial attitude was quantified by five questions, perceived behavioral control was assessed by six questions, entrepreneurial intentions were measured by six questions, and entrepreneurial passion was measure by five questions, all were adopted from (Karimi, 2020; Liñán, et al., 2013). Next, the subjective norm was assessed by six questions drawn from (Mahmood et al., 2019). Finally, entrepreneurial behavior was evaluated by five questions adopted from (Ahmed et al., 2020). The authors used a standardized 5-point Likert scale arraigned from 1 (strongly disagree) to 5 (strongly agree).

A partial least square based on structural equation modeling is used to analyze the hypotheses and to validate the measurements, and the computer version 3.0 of Smart PLS software was selected for this purpose (Ringle et al., 2005). The PLS method utilizes a component-based technique for a model estimation which is also suitable for measuring complex structural models. The PLS approach has been chosen because no conditions are placed on data normality. The PLS model is deciphered in two steps, the first is the model's measurement (outer model), and the second is the structural model (inner model). Before drawing any conclusions about the relationships between constructs, this design ensures that the measurement of the constructs is reliable and valid (Roldán & Sánchez-Franco, 2012). PLS approaches are used to examine the theory and measures simultaneously (Hulland, 1999).

To evaluate the model, Rodán and Sánchez-Franco (2012) used a structural equation modeling approach and PLS path-modeling based on variances. According to Barroso et al. (2010), PLS enables both the assessment of reliability and validity of theoretical construct measurement (outer model) and evaluation of the relationship between studied constructs (inner model) simultaneously. The following are three main reasons why PLS should be used: a) The goal of this study is to forecast the dependent variables; b) the sample size (n=240) is modest, and according to Reinartz et al. (2009), PLS can be used if the number of responses is less than 250; c) the model is complex in terms of both variable type and their relationship (Hair et al., 2011).

## **4. Analysis and Results**

### *4.1 Sample's Demographic Information*

The demographics information of the sample consists of 52.90% male and 47.10% female. The participants whose ages were 20-30 years accounted for the largest share of 50%, followed by 43.80% of respondents who were 31-40 years old, and the remaining 6% were 41–51 years old or above. Regarding marital status, 66.66% of respondents were unmarried, and the rest 33.33% were married. In terms of education, 35% of respondents were enrolled in the graduation program, followed by 50% of participants who were enrolled in the master program, and the remaining 15% were Ph.D. scholars. Next is

income, 88.80% of the respondents were earning an average monthly income PKRs. 30,000-50,000 and remaining 11.2% were earning PKRs. 51,000-71,000, or above (see Table 1). Notably, all the participants took part in the survey entirely voluntarily.

**Table 1: Demographic Profile of Respondents**

Demographic Variables	Categories	Frequencies	Percentages
Gender	Male	127	52.90%
	Female	113	47.10%
Age (Years)	20-30	120	50%
	31-40	105	43.80%
	41-50	9	3.70%
	51-above	6	2.50%
Marital Status	Unmarried	160	66.66%
	Married	80	33.33%
Education	Graduation	84	35.00%
	Master	120	50.00%
	PhD scholars	36	15.00%
Average Monthly Income	30,000 PKRs. - 50,000 PKRs.	213	88.80%
	51,000 PKRs. - 70000 PKRs.	20	8.30%
	71,000 PKRs. – above	7	2.90%

*4.2 Measurement of Model*

The Cronbach's alpha and composite reliability were used to examine the reliability of study's measures. Variables are considered sufficient when Cronbach alpha passes the minimum threshold value of 0.6. (Hair et al., 2010). A reliability score of 0.80 or higher is considered excellent, 0.70 or higher is good, and 0.60 or lower is considered bad (Hair et al., 2010). Cronbach alpha values of studied constructs are greater than 0.799 and considered acceptable (see Table 2). Next, according to Gefen et al. (2000) and Nunnally (1978), the composite reliability value should be greater than the specified cut-off value of 0.7. As stated by Chin and Gopal (1995) composite reliability is a more precise measurement of reliability. Composite reliability values in Table 2 are more than 0.8. Henceforth, it is considered that model is a reliable and adequate fit.

*4.2.1 Convergent Validity*

According to Chin et al. (2003), the outer loading of the measurement of items should be above 0.70, hence, the values of outer loading of all the measurement of items are greater than the threshold. Next, the threshold value of average variance extracted (AVE) should be greater than 0.50 as recommended by Fornell and Larcker (1981), thus the AVE values of all the studied constructs have met the threshold (see Table 2). It is indicating that the convergent validity of the measurement model is acceptable. This study also assessed the multicollinearity statistics, as recommended by (Aiken et al., 1991; Hair et al. 2017), the value of variance inflation factors (VIF) should be less than the threshold point of 5 deemed excellent. Hence, the examination of VIF demonstrates that the model estimation does not have a multicollinearity issue, the VIF values of all the measurement constructs are under the threshold and satisfactory (see Table 2).

**Table 2: Constructs, Measurement of Items, Validity & Reliability Assessment, and Outer Loading**

Coding	Study Measures and Items (Sources)	Outer Loading		
Entrepreneurial Attitude (EAT) (Karimi, 2020; Liñán, et al., 2013) $\alpha = 0.820$ , CR = 0.880, AVE = 0.648		MM	SM	VIF
	EAT1	Deleted	-	-
	EAT2	.860	.860	1.618
	EAT3	.706	.706	1.444
	EAT4	.841	.841	1.680
	EAT5	.806	.806	1.662
Subjective Norms (SN) (Mahmood et al., 2019) $\alpha = 0.868$ , CR = 0.903, AVE = 0.650				
	SN1	Deleted	-	-
	SN2	.768	.768	1.236
	SN3	.861	.861	1.155
	SN4	.836	.836	1.064
	SN5	.762	.762	1.168
	SN6	.801	.801	1.053
Perceived Behavioral Control (PBC) (Karimi, 2020; Liñán, et al., 2013) $\alpha = 0.848$ , CR = 0.868, AVE = 0.625				
	PBC1	.786	.786	1.368
	PBC2	Deleted	-	-
	PBC3	Deleted	-	-
	PBC4	.650	.650	1.215
	PBC5	.846	.846	1.656
	PBC6	.864	.864	1.494
Entrepreneurial Intention (EI) (Karimi, 2020; Liñán, et al., 2013) $\alpha = 0.868$ , CR = 0.897, AVE = 0.686				
	EI1	.766	.766	1.001
	EI2	.842	.842	1.006
	EI3	Deleted	-	-
	EI4	.854	.854	1.084
	EI5	.849	.849	1.080
	EI6	Deleted	-	-
Entrepreneurial Passion (EP) (Karimi, 2020; Cardon et al., 2013) $\alpha = 0.799$ , CR = 0.904, AVE = 0.653				

## Role of Entrepreneurial Passion

	EP1	.715	.715	1.172
	EP2	.848	.848	1.344
	EP3	.839	.839	1.405
	EP4	.856	.856	1.342
	EP5	.775	.775	1.392
Entrepreneurial Behavior (EB) (Ahmed et al., 2020) $\alpha = 0.873$ , CR = 0.904, AVE = 0.652				
	EB1	.776	.776	1.647
	EB2	.852	.852	2.123
	EB3	.778	.778	1.901
	EB4	.824	.824	2.748
	EB5	.806	.806	2.839
Notably: All items are being given in an appendix 1   MM = measurement model, SM = structural model, VIF = variance inflation factor, AVE = average variance extracted, CR = composite reliability, $\alpha$ = Cronbach's alpha				

### 4.2.2 Discriminant Validity

Discriminant validity relates to how variables are distinct from one another in the same model. The discriminant validity is measured using two methods Fornell Larcker and the Heterotrait and Monotrait (HTMT). Both of these strategies have been employed and approved by numerous scholars all across the world (Neneh, 2019; Henseler et al., 2016). As shown in Table 3, the square root of the AVE values is larger than the cross-correlations amongst studied constructs. The off-diagonal components in the relevant rows and columns are lesser than the diagonal values in bold, indicating that discriminant validity is adequate (Fornell & Larcker, 1981). The Heterotrait–monotrait (HTMT) method is also used to examine discriminant validity proposed by (Henseler et al., 2015). Therefore, this method was used to assess discriminant validity, according to Gold et al. (2001) all HTMT values are below 0.90. Thus, studied constructs have met the discriminant validity criteria (see Table 4).

**Table 3: Fornell-Larcker Criterion**

Variables	EAT	EB	EI	EP	PBC	SN
EAT) Entrepreneurial Attitude	<b>.805</b>					
EB) Entrepreneurial Behavior	.207	<b>.808</b>				
EI) Entrepreneurial Intention	.585	.408	<b>.828</b>			
EP) Entrepreneurial Passion	.446	.241	.412	<b>.808</b>		
PBC) Perceived Behavioral Control	.626	.350	.490	.554	<b>.791</b>	
SN) Subjective Norms	.332	.421	.376	.326	.397	<b>.806</b>
* The square root of the values of AVE are shown in bold diagonal elements						

**Table 4: Heterotrait-Monotrait Ratio (HTMT)**

Variables	1	2	3	4	5	6
1. Entrepreneurial Attitude						
2. Entrepreneurial Behavior	0.239					
3. Entrepreneurial Intention	0.669	0.445				
4. Entrepreneurial Passion	0.497	0.283	0.466			
5. Perceived Behavioral Control	0.765	0.396	0.587	0.638		
6. Subjective Norms	0.381	0.423	0.399	0.341	0.444	

#### 4.3 Structural Model

The present study has assessed the structural model using the PLS algorithm technique in the Smart-PLS software. The standardized root mean square residual (SRMR) value was used to assess model fitness; the SRMR value should be less than 0.08 considered adequate (Henseler et al., 2016). Thus, the SRMR value for the study model revealed 0.058 which indicating overall the model is adequate to fit. Next, according to Hair et al. (2017), the R2 (coefficient of determination) value reveals the explanatory variance of exogenous factors in the endogenous construct, and it interprets the structural model's strength. The collective impact on endogenous variables such as EI (R2 = 0.264) which explained 26% variance in EI and EB (R2 = 0.307) which explained 30% variance in EB, this shows a positive correlation among constructs. Previous studies back up these results, for example, Li et al. (2020), Neneh (2019), and Shirokova et al. (2016) explained variances in EB is only 10-30%, typically it had been observed in the entrepreneurial behavior-based model.

The proposed hypotheses were empirically tested using the bootstrapping technique to determine the level of significance between the studied variables. Out of thirteen hypotheses, only six hypotheses were revealed significant and supported, as shown in Figure 2, Table 5, and Table 6. The study articulated that H1 is related to EAT and EI, and H2 is related to EAT and EB. The results revealed that EAT was found to be insignificant with both outcome variables EI and EB. Hence, H1 and H2 are not supported. Previous investigations back up these results, for example, a Karachi, Pakistan-based study by Khan et al. (2019) highlighted that attitude does not influence consumer return/recycling intention. Contrary to this, scholars have found EAT has a significant impact on EI (Li et al., 2020; Karimi, 2020). One possible explanation is that Pakistani students may perceive being an entrepreneur as an unappealing career option because they are living in a low-middle-income country, where they have not had sufficient opportunities and resources to start a new venture as compared to developed countries. While, for establishing a new venture, sufficient resources are being required such as working capital, social capital (Ali & Yousuf 2019), and entrepreneurship education programs (Ahmed et al., 2020).

H3 and H4 are related to SN, EI, and EB. Table 5 displays a significant positive correlation between SN and EI ( $\beta_3 = 0.212$ ,  $t = 2.574$ ,  $p < .05$ ), while SN does not affect EB. Hence, H3 supported while H4 is not supported. Recent investigations back up these findings, for instance, a Karachi, Pakistan based study of Khan et al. (2019) revealed that SN and consumer's return/recycling intention are positively associated; likewise, Yarimoglu and

Gunay (2020) discovered that SN and Turkish customers' visit intentions towards green hotels are positively associated. Contrary to this, these results are inconsistent with the findings of Karimi (2020) in Iranian and Doanh and Bernat (2019) in Vietnam, they explored that subjective norm does not affect entrepreneurial intention. Next, our findings disagree with the study' findings of Mahmood et al. (2019) explored a positive connection between SN and pre-start-up behavior. In the study context, a conceivable explanation could be that students' families, peers, and friends believe that starting a new venture is a good thing, and even some family members and friends prefer to work with an entrepreneur in the early stages and help him/her to get success in his/her new business. Another reason could be that Pakistani culture depends upon the collectivistic society, henceforth all-important decisions are mostly influenced by families and peers such as stating a new business is an important decision, which ultimately affects entrepreneurial intention (Farrukh et al., 2019). Moreover, the world is badly affected by the COVID-19 pandemic, hence Pakistani students and their families may be intended to start a new venture but due to the coronavirus pandemic, their entrepreneurial behavior was postponed. It may be due to these reasons, an insignificant link between SN and EB.

H5 and H6 are related to PBC, EI, and EB. The results shown that PBC has positive influence on EI ( $\beta_5 = 0.265$ ,  $t = 3.338$ ,  $p < .05$ ), and EB ( $\beta_6 = 0.282$ ,  $t = 4.409$ ,  $p < .05$ ). Hence, H5 and H6 are both supported. Recent investigations back up the findings, for instance, for example, (Ahmed et al., 2020; Shi et al., 2020). Contrary to this these results are disagreed with the findings of the latest study of Yarimoglu and Gunay (2020) investigated that PBC and green hotel visit intention of Turkish customers were found to be insignificant. Furthermore, our results are agreed with Mahmood et al. (2019) and Ahmed et al. (2020), they highlighted that PBC and pre-start-up behavior have a significant relationship. In the context of the study, a thinkable description could be that students with high levels of motivation and self-confidence on their skills are more consistent and persistent in putting effort and feel easy of performing EB and have known the practical details to establish a new business venture. Thus, PBC was found to be positively significant with EI and EB.

H7 related to EI and EB, the results have shown that EI has positive impact on EB ( $\beta_7 = 0.352$ ,  $t = 5.432$ ,  $p < .05$ ). Hence, H7 is supported. Recent investigation back up these findings, such as Mahmood et al. (2019) explored a significant positive link between EI and pre-start-up behavior. Likewise, Li et al., (2020) found that intention toward using shared electric bicycles has a positive impact on behavior for using shared electric bicycles or behavior for low-carbon commuting. Contrarily, these findings disagree with Ahmed et al. (2020) they examined that EI and EB were found to be insignificant. In the study context, a possible explanation could be that the professional goal of some business graduates is to become an entrepreneur, so they take action to create a new venture rather than merely rely on intention. They believe that any business idea is nothing, idle, and worthless until it does not translate into reality or action. Henceforth, they can do anything to become an entrepreneur and they put their full effort and energy with zeal and zest to create and run their own new business venture.

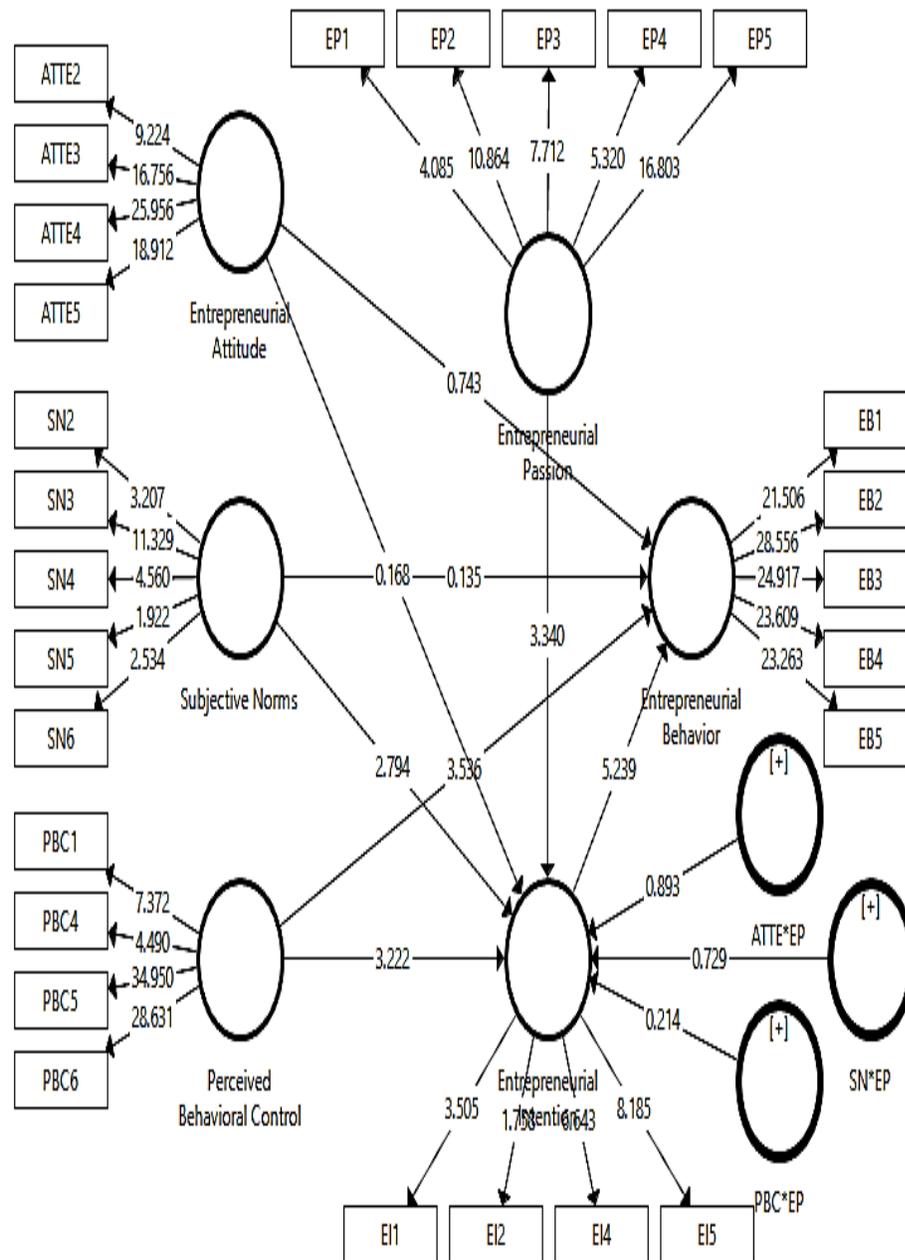
#### *4.4 Entrepreneurial Passion (EP) as Moderator*

H8, H9, and H10 presented the moderating effect of EP on the studied relationships. The results showed H8, H9, and H10 are insignificant, because EP does not moderate the association of EAT, SN, and PBC, and EI. Hence, H8, H9, and H10 are not supported (see Table 6), and are also presented in Figure 2 in the interaction results. In the study context, a plausible explanation could be that (i) it may not be stimulating to business students for discovering new ways to fulfill the unmet needs of the targeted market that can be commercialized or mainstreamed. (ii) Business graduates may dearth entrepreneurial skills in seeking for alternative ideas to introduce products/services to the market, such as product innovation or service innovation. Its reason can be the Pakistani education system, the universities need to offer a purposeful entrepreneurial program, innovation, entrepreneurial laboratories, and business incubation centers to create entrepreneurial skills among the students and encourage them towards self-employment. As a result, business graduates would become more confident in their self-belief and passionate to translate their entrepreneurial intention into action, reality (entrepreneurial behavior).

#### *4.5 Mediating Effect of Entrepreneurial Intention (EI)*

Next, the study's findings revealed a partial mediation between the studied relationships. H12 and H13 are both supported because of the results found that EI significant and positively mediates between the associations of subjective norms ( $\beta_{12} = 0.075$ ,  $t = 2.287$ ,  $p < 0.05$ ), PBC ( $\beta_{12} = 0.093$ ,  $t = 2.771$ ,  $p < 0.05$ ), and EB. Thus, H12 and H13 are supported. However, contrary to this, H11 was found to be insignificant (see Table 6). In the study context, a conceivable explanation could be that when business graduates are being more encouraged and helped by their family members, peers, and friends towards self-employment, resultantly they would be more confident and determined to translate their entrepreneurial intention into reality or behavior. Likewise, when students have sufficient skills, entrepreneurial laboratories, resultantly they are more committed to translating their entrepreneurial intention into entrepreneurial behavior. On the other hand, when students have not known the practical and operational detail of launching a new business venture due to a poor education system, dearth opportunities, and resources, resultantly they do not have an attitude towards entrepreneurship or self-employment.

## Role of Entrepreneurial Passion



**Figure 2: Structural Model Output**

**Table 5: Path Analysis**

Direct Paths		Path coefficient	T-values	Decisions
H1	Entrepreneurial Attitude → Entrepreneurial Intention	0.013 n.s	0.172	Not Supported
H2	Entrepreneurial Attitude → Entrepreneurial Behavior	0.053 n.s	0.744	Not Supported
H3	Subjective Norms → Entrepreneurship Intention	0.212**	2.574	Supported
H4	Subjective Norms → Entrepreneurial Behavior	-0.010 n.s	0.126	Not Supported
H5	Perceived Behavioral Control → Entrepreneurial Intention	0.265***	3.338	Supported
H6	Perceived Behavioral Control → Entrepreneurial Behavior	0.282***	4.409	Supported
H7	Entrepreneurial Intention → Entrepreneurial Behavior	0.352***	5.432	Supported
Note: * p < 0.05; ** p < 0.01; *** p < 0.000   n.s => not significance path coefficient => standardized beta   t value => >1.96				

**Table 6: Indirect Effects**

Indirect Paths		Path coefficient	T-value	Decisions
Moderating Effect of Entrepreneurial Passion				
H8	Entrepreneurial Attitude * Entrepreneurial Passion → Entrepreneurial Intention	-0.093 n.s	0.895	Not Supported
H9	Subjective Norms * Entrepreneurial Passion → Entrepreneurial Intention	0.061 n.s	0.706	Not Supported
H10	Perceived Behavioral Control * Entrepreneurial Passion → Entrepreneurial Intention	0.018 n.s	0.229	Not Supported
Mediating Effect of Entrepreneurial Intention				
H11	Entrepreneurial Attitude → Entrepreneurial Intention → Entrepreneurial Behavior	0.005 n.s	0.169	Not Supported
H12	Subjective Norms → Entrepreneurial Intention → Entrepreneurial Behavior	0.075**	2.287	Supported
H13	Perceived Behavioral Control → Entrepreneurial Intention → Entrepreneurial Behavior	0.093***	2.771	Supported

## 5 .Discussion

The presented hypotheses were empirically tested using the bootstrapping approach to determine the significance level between the studied constructs. As findings showed in Table 5, Table 6 and Figure 2, Only six hypotheses out of thirteen were found to be significant and supported, while remaining seven paths revealed insignificant. Next, in sequence each path has been discussed, compared with previous studies, and given plausible reasons of them in Pakistani educational context. Start from H1 and H2 are related to EAT, EI, and EB. Notably, the result showed that EAT is found to be insignificant with both endogenous variables EI and EB. Henceforth, H1 and H2 are not supported. Recent investigation back up these findings, for example a Karachi, Pakistan-based study of Khan et al. (2019) highlighted that attitude does not influence consumer return/recycling intention. Contrary to this, many prior studies have found EAT has a significant effect on EI (Miralles et al., 2017; Al-Jubari, 2019; Al-Jubari, 2019; Doanh & Bernat, 2019; Ferri et al., 2019; Farrukh et al., 2019; Zulfiqar et al., 2019; Van Trang & Doanh, 2019; Mahmood et al., 2019; Feola et al., 2019; Yarimoglu & Gunay, 2020; Karimi, 2020). One possible explanation is that Pakistani students may perceive being an entrepreneur as an unappealing career option, because they may perceive being an entrepreneur may infer more disadvantages than advantages. Another reason could be that students may perceive that being an entrepreneur would not give them great satisfaction, because they are living in a low-middle-income country, where they have not had sufficient opportunities and resources to start a new venture as compared to developed countries. While, for establishing a new venture, sufficient resources are being required such as working capital, social capital (Ali & Yousuf 2019), and supportive system (e.g., working environment, university support, lectures support, government support, and financial & industrial support (Feola et al., 2019), and entrepreneurship education programs (e.g., learning benefits, inspiration benefits, and incubation resources) (Ahmed et al., 2020).

H3 and H4 are related to SN, EI, and EB. Table 5 displays a significant positive correlation between SN and EI, while SN does not affect EB. Therefore, H3 supported and H4 is not supported. Recent investigations back up these conclusions, for example, SN and consumer return/recycling intentions are positively associated (Khan et al., 2019); similarly, Yarimoglu and Gunay (2020) discovered that SN and Turkish customers' visit intentions towards green hotels are positively associated. Besides, many prior studies have examined a significant positive association between SN and EI (Gird & Bagraim, 2008; Shah et al., 2020; Van Trang & Doanh, 2019; Li et al., 2020; Al-Jubari et al., 2019; Ahmed et al., 2020; Shi et al., 2020; Feola et al., 2019; Ferri et al., 2019; Farrukh et al., 2019). Contrary to this, these results are inconsistent with the findings of Karimi (2020) in Iranian and Doanh and Bernat (2019) in Vietnam, they explored that SN and EI found to be an insignificant relationship. Next, our findings disagree with the results of a recent study of Mahmood et al. (2019) explored a positive connection between SN and pre-start-up behavior. In the study context, a conceivable explanation could be that students' families, peers, and friends believe that starting a new venture is a good thing, and even some family members and friends prefer to work with an entrepreneur in the early stages and help him/her to get success in his/her new business. Another reason could be that Pakistani culture depends upon the collectivistic society, henceforth all-important decisions are mostly influenced by

families and peers such as starting a new business is an important decision, which ultimately affects EI (Farrukh et al., 2019). Similarly, Pakistani culture relied on a joint-family system, where most of the family-heads are hardly meet the basic needs of their dependents (spouse, parents, children) for instance, ROTI (foods), KAPRA (clothes), MAKAN (shelter/house) in a limited budget (Majeed et al., 2021), as they know that starting a new venture, do not free from the risk of business failure or loss, etc. The U.S. Bureau of Labor Statistics reported that over 20% of small entrepreneurs in the U.S. fail within the 1st year. Around 50% of them had failed by the end of their 5th year. Only about a third of entrepreneurs survive after 10th years. (<https://www.bls.gov/>). Moreover, the world is badly influenced by the COVID-19 pandemic, hence Pakistani students and their families may be intended to start a new venture but due to the coronavirus pandemic, their EB is postponed. It may be due to these reasons, an insignificant link between SN and EB of Pakistani students.

H5 and H6 are related to PBC, EI, and EB. Table 5 demonstrates a positive and significant relationship between PBC, EI, and EB. Thus, H5 and H6 are both supported. Recent investigations back up the findings, for instance, (Gird & Bagraim, 2008; Feola et al., 2019; Van Trang & Doanh, 2019; Al-Jubari et al., 2019; Doanh & Bernat, 2019; Karimi, 2020; Ahmed et al., 2020; Shi et al., 2020). Contrary to this, these results are disagreed with previous scholars' findings Khan et al. (2019) found that PBC does not influence EI in Pakistan. In addition, PBC and green hotel visit intention of Turkish customers found to be insignificant (Yarimoglu & Gunay 2020). Furthermore, our results are agreed with Mahmood et al. (2019) and Ahmed et al. (2020), they highlighted that PBC and pre-start-up behavior have a significant relationship. In the context of the study, a thinkable description could be that students with high levels of motivation and self-confidence on their skill are more consistent and persistent in putting effort and feel easy of performing EB, and have known the practical details to establish a new business venture. Contrary to this, some students with low levels of PBC may experience depression, stress, and feel difficulty in performing EB, which impairs or limits their business function and it can create obstacles and impediments for entrepreneurs to become successful businessman. Another reason could be that some students might have gotten a purposeful education and training from universities or other institutions that sustain students' self-efficacy and entrepreneurial orientation for establishing a new venture (Wilson et al., 2007; Pihie & Akmaliah, 2016).

H7 is relating to EI and EB, Table 5 displays a significant positive link between EI and EB. Hence, H7 is supported. The findings are agreed with Mahmood et al. (2019) examined that EI has a positive and significant relation with pre-start-up behavior. Likewise, Li et al., (2020) found that intention toward using a shared electric bicycle has a positive impact on behavior for using a shared electric bicycle or behavior for low-carbon commuting. Contrarily, these findings disagree with Ahmed et al. (2020) they examined that entrepreneurial intention and entrepreneurial behavior were found to be insignificant. In the study context, a possible explanation could be that the professional goal of some business graduates is to become an entrepreneur, so they take action to create a new venture rather than merely rely on intention. They believe that any business idea is nothing, idle,

and worthless until it does not translate into reality or action. Hence, they can do anything to become an entrepreneur and they put their full effort with zeal and zest to create and run their own new business venture. On the other hand, another description could be that some business students have the low intention of creating a business start-up because they might feel serious doubts about their entrepreneurial skills, innovation, and creativity, even they are hardworking and like to work under the umbrella of other such as job, etc. Its reason could be the Pakistani education system; the federal government and higher education commission should play their role to promote small-medium enterprises and entrepreneur culture in Pakistan and help universities in producing job creators instead of job seekers. The universities need to offer a purposeful entrepreneurial program, entrepreneurship courses, and business incubation centers to create entrepreneurial skills among the students. As a result, business graduates would become more confident in their self-belief and determined to translate their entrepreneurial intention into reality, action (entrepreneurial behavior).

H8, H9, and H10 are related to the role of EP as a moderator on the studied relationships. Table 6 shows EP does not moderate the association of EAT, SN, and PBC, and EI. Hence, H8, H9, and H10 are not supported (see Figure 2). In the study context, a plausible explanation could be that it may not be stimulating to business students for discovering new ways to fulfill the unmet needs of the targeted market that can be commercialized or mainstreamed. Second, business graduates may dearth entrepreneurial skills in seeking for alternative ideas to introduce products/services to the market, such as product innovation or service innovation. Third, they may dearth the ability to figure out how to improve an existing product/service, such as process innovation. Finally, students may be unable to find a new solution to the problem and glance over the environment for new opportunities. Its reason can be the Pakistani education system, the universities need to offer a purposeful entrepreneurial program, innovation, entrepreneurial laboratories, and business incubation centers to create entrepreneurial skills among the students and encourage them towards self-employment. As a result, business graduates would become more confident and passionate to convert EI into action (EB). Besides, the federal government and higher education commission must play their role to promote small-medium enterprises and entrepreneurial culture in Pakistan, and should help of universities in producing entrepreneur (job creators) rather than job seekers.

Lastly, the findings demonstrated a partial mediation between the studied relationships. Table 6 displays that H12 and H13 are both supported by findings, which show that EI significantly and positively intermediates the associations between SN, PBC, and EB. Thus, H12 and H13 are supported. While, H11 was found inconsequential. In the context of study, a conceivable explanation could be that when business graduates are being more encouraged and helped by their family members, peers, and friends towards self-employment, resultantly they would be more confident and determined to translate their entrepreneurial intention into reality or to take action or to create a new business venture infers to entrepreneurial behavior. Likewise, when students have sufficient entrepreneurial skills, are trained in entrepreneurial laboratories, are taught purposeful entrepreneurial courses, and known practical and operational detail of new business ventures, resultantly they are more committed to translating their entrepreneurial intention into entrepreneurial

behavior. Thus, they have more controlled behavior towards the creation process of new business and high chances of being successful. On the other hand, when students have not known the practical and operational detail of launching a new business venture due to poor education system (e.g., lack of entrepreneurial training, skills, innovation, creativity) dearth opportunities and resources, resultantly they do not have an attitude towards entrepreneurship or self-employment. henceforth, all key stakeholders (e.g., government, higher education commission, and universities) must need to play their role to promote entrepreneurial culture and small-medium enterprises in emerging countries like Pakistan. So that, Pakistan can help to United Nations to overwhelmed rapidly increasing unemployment and can contribute to 17-SDGs for instance “No Poverty” and “Zero Hunger”.

### *5.1 Theoretical Contribution*

The primary three theoretical contributions of this study are as follows. First, this study established a research mechanism for measuring the entrepreneurial behavior of Pakistani students. Our research combined the notion of planned behavior (TPB) with business graduates' entrepreneurial passion. This study looked at the moderating effect of EP in the link between antecedents of intention and EI. The findings showed that EP does not moderate the studied relationship. Its reason could be the poor education system of Pakistan; thus, the federal government and higher education commission must play their role to create entrepreneurial passion among students, for instance, to develop entrepreneurial skills, entrepreneurial laboratories, business incubation centers, etc. Second, this study investigated the influence of antecedents of intention (e.g., EAT, SN, and PBC) on two endogenous constructs EI and EB. The results have shown significant positive associations between SN, PBC, EI, and EB. Finally, this new research looked at the mediating role of EI the relationships between antecedents of intention (such as EAT, SN, and PBC) and EB. The empirical results have shown EI significantly and positively mediates between the relationships of SN, PBC, and EB.

### *5.2 Managerial Implication*

This study has three main managerial implications. First, the findings showed attitude towards entrepreneurship does not affect entrepreneurial intention and entrepreneurial behavior of Pakistani students due to the low-standard education system. The results showed that students may not have required entrepreneurial knowledge, skills, training for creating new business ventures, that's why they might not be shown their attitudes towards entrepreneurship, because without entrepreneurial education and training students do not feel confident of being successful entrepreneurs. Thus, the government, higher education institutions, universities, NGOs, and other education sectors must play their role in developing entrepreneurial skills and abilities among the students. Numerous prior studies (Al-Jubari, 2019; Al-Jubari et al., 2019; Karimi, 2020; Ahmed et al., 2020; Shi et al., 2020) had focused on merely entrepreneurial intention, while entrepreneurial behavior was a less focused construct. Therefore, this study has investigated the entrepreneurial behavior of Pakistani students and revealed noteworthy findings regarding students' attitudes towards entrepreneurship or to be self-employed.

Second, the results showed that subjective norm positively and significantly affects entrepreneurial intention while found to be insignificant with entrepreneurial behavior. Likewise, the findings showed PBC has a significantly and positively related to both endogenous constructs EI and EB. These findings can be helpful for policy-makers, higher education institutions, NGOs, small-medium enterprises, managers, and entrepreneurs. The current study examined that potential entrepreneurs or business graduates are significantly influenced by those people who are very close or important to them such as families' members, particularly parents, mentors, peers, and friends. Notably, Pakistan is a majorly Islamic country, so the people have strong religious faith, beliefs, and values. Thus, Pakistani students have strong religious values of "consultation", they believe that it is necessary to consult with another Muslim person (s) which he/she think important or close to him/her, before starting any important work (such as creating a new business venture). After consultation, Pakistani Muslim students feel more protective, secured, supportive, self-confident, self-believed, controlled behavior, determined, and more chance for being successful entrepreneurs.

Third, intention and passion are considered critical components in the business formation process. This study revealed noteworthy findings regarding entrepreneurial intention, the authors have investigated the EI mediates positively and significantly between the association of SN, PBC, and EB. Therefore, it is necessary for building entrepreneurial intention among students, should be taught and seen motivational stories of successful entrepreneurs to students via business seminars, conferences, corporate events, etc. Once entrepreneurial intention has been built, the next role comes of government and state bank creating and providing opportunities and resources to potential entrepreneurs or students for establishing a new venture or to become self-employed. Notably, this study also revealed the unusual and unique findings regarding Pakistani students' entrepreneurial passions. The authors investigated entrepreneurial passion does not moderate the association of EAT, SN, PBC, and EI. Therefore, the Pakistani's higher education commission, the federal government, universities, NGOs, and other key stakeholders must implement a high-level of education system (such as meaningful entrepreneurial programs and courses, entrepreneurial laboratories, incubation centers, innovative and creative training, and workshops to produce skillful entrepreneurial mindset students) in the educational institutions. As a result, universities can be able to build entrepreneurial passions and entrepreneurial attitudes among students for creating a new business venture or to become self-employed.

### *5.3 Limitations and Future Directions*

The authors highlighted some limitations regarding this research, the upcoming researchers can take into account these directions for future studies. First, this study is limited to the university students as a sample, which is deemed coherent with entrepreneurship study but still the findings cannot be generalized to other groups of the population, and the sample was taken merely from Lahore metropolitan city. Future studies will need to study other groups of the population such as service-sector employees or manufacturing-sector employees, further, they should extend the sample size over the other metropolitan cities of Pakistan for a deep understanding of people's entrepreneurship intention and behavior. Second, the authors used a subjective measurement/scale (it is based on how an individual

performed a task, regardless of what they experience while performing the task) to investigate the entrepreneurial behavior that validated in prior studies, if objective measurement/scale (on the other hand, it is referred to measures that have to do with what people say they actually experience) was used to investigate entrepreneurship behavior the results could be different. Therefore, upcoming scholars should use different sampling techniques and measures to examine entrepreneurial behavior in terms of improving the external validity of the constructs in the same education sector or other sectors. Third, this study investigated attitude towards entrepreneurship found to be insignificant with entrepreneurial intention and entrepreneurial behavior. Similarly, entrepreneurial passion does not moderate on the studied relationships, therefore, future scholars can investigate these constructs to extend sample size in the studied context or in the other sectors for a deeper understanding of EI and EB of students or employees. Finally, except for the TPB, alternatives theories such as moral foundation theory and value-belief-norm theory can be applied to investigate attitude and intention towards entrepreneurship.

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