

# From Passion to Practice: How Proactive Personality and Entrepreneurial Passion Influence Entrepreneurial Intentions and Behaviors in University Students

Jaweria Sajjad<sup>1</sup>, Shagufta Shaheen<sup>2\*</sup>, Amber Baseer<sup>3</sup>, Muhammad Bilal Maqsood<sup>4</sup>, Ume-Farwa<sup>5</sup>, Muznah Saleha<sup>6</sup>

<sup>1</sup>University of Central Punjab (UCP), Lahore, Pakistan Email: jaweriasajjad166@gmail.com

<sup>2\*</sup>University of Central Punjab (UCP), Lahore, Pakistan Email: shaguftafarhan1@gmail.com Shagufta.shaheen@ucp.edu.pk  
<https://orcid.org/0009-0008-7430-1857>

<sup>3</sup>University of Central Punjab (UCP), Lahore, Pakistan Email: amber.baseer@ucp.edu.pk <https://orcid.org/0000-0001-7520-6116>

<sup>4</sup>Department of Clinical Excellence, Eastern Health Cluster, Ministry of Health, Dammam, Saudi Arabia  
Email: maqsoodmub@gmail.com: <https://orcid.org/0000-0003-1358-0350>

<sup>5</sup>University of Central Punjab (UCP), Lahore, Pakistan Email: farwarafiq@hotmail.com <https://orcid.org/0009-0004-2349-5269>

<sup>6</sup>University of Central Punjab (UCP), Lahore, Pakistan Email: muznahsalehaqureshi@gmail.com <https://orcid.org/0009-0004-1481-7174>

**\* Corresponding Author:** Shagufta Shaheen

<sup>\*</sup>University of Central Punjab (UCP), Lahore, Pakistan Email: Shagufta.shaheen@ucp.edu.pk

## Abstract

Entrepreneurship is termed as key element in the economic and stable development of a country, while entrepreneurship is the global content and impact profitable growth, job creation, and invention. The current research was designed to study Proactive Personality, Entrepreneurial Passion, Entrepreneurial Intention, and Entrepreneurial Behavior among University Students. The sample consisted of (N=300) university students from the public and private sector of Lahore in the final year of their degree program, both males and females, with a purposive sampling method. In the present study, Pearson Product Moment Coefficient of Correlation Analysis, Multiple Linear Regression Analysis, and Hayes PROCESS simple Mediation Analysis were used to analyze the data through SPSS 26. The results of the study indicated that all the correlations among the variables are significant. Results of multiple linear regression analysis indicated that proactive personality, entrepreneurial passion, and entrepreneurial intention were the significant positive predictors for entrepreneurial behavior. Results for simple mediation analysis showed that entrepreneurial intention significantly mediated between proactive personality, entrepreneurial passion, and entrepreneurial behavior. In other words, university students with entrepreneurial intentions based on proactive personality and entrepreneurial passion engaged more in entrepreneurial behavior. The findings of this research hold some important implications for Pakistan's educator sectors and policy framers, and it also contributes toward helping the HEC develop programs that help in cultivating an entrepreneurial culture in Pakistan.

**Keywords:** Entrepreneurship, Proactive Personality, Entrepreneurial Passion, Entrepreneurial Intention, Entrepreneurial behavior.

## Introduction

Entrepreneurship is a global content that has sparked interest among researchers (Keyhani & Kim, 2020; Ratten & Jones, 2020). Entrepreneurship has played a significant role in technological innovation and organizational sector. It can reduce employment pressures and can promote economic development (Luo et al., 2022; Nguyen, 2021). Al- Qudah and colleagues (2022) emphasizes the significance of entrepreneurship in promoting sustainable development and economic assets. Sustainable development is pivotal for a country's success and industrialization. Research also indicates that entrepreneurship appreciatively impacts job creation and profitable growth (Cardella et al., 2020; Li et al., 2020). Entrepreneurial start-ups play a pivotal part in creating jobs in both public and private sectors (Neneh, 2019a). Entrepreneurship has led to profitable growth in developed countries like the USA, Japan, and Germany (Prakash et al., 2015). Pakistan and other developing nations still have low rates of entrepreneurship (Zareen et al., 2019). It is a fact that no government can give jobs to all graduates from every institute of their country. So, we came to know that we have to change the mindset of graduates from “seeking a job” towards the mentality of “creating jobs”. For this purpose, students must be passionate about their career.

Entrepreneurial passion is essential for successful entrepreneurship, going beyond just doing what you love to dedicating yourself to meaningful activities (Philippe et al., 2010; Vallerand et al., 2003;). This passion helps entrepreneurs overcome obstacles, stay committed, and turn personal interests into successful businesses (Ferreira-Neto et al., 2023). It's an emotional state that energizes individuals to recognize opportunities and start new ventures (Chen et al., 2009). For university students

aspiring to be entrepreneurs, this enthusiasm is crucial as it transforms ambition into action and maintains their focus on their entrepreneurial journey (Gagné, 2007; O’Keefe et al., 2018). Entrepreneurial passion is a positive emotional energy of “fire of desire” to explore or invent new opportunities while on the other hand entrepreneurial intention is a cognitive state and help person to build a perception to attain entrepreneurial goals (Neneh, 2019).

Entrepreneurial intention is a crucial element involves more than just conceptualizing a business idea; it encompasses the readiness to take concrete steps towards launching and growing a new enterprise (Kautonen et al., 2013; Obschonka et al., 2017). Therefore, understanding and fostering entrepreneurial intention is essential for converting aspirations into successful business ventures, reflecting an individual's commitment and readiness to invest in their entrepreneurial journey (Kristiansen & Indarti, 2004; Schlaegel & Koenig, 2014). Research indicates that proactive individuals often exhibit entrepreneurial traits, showing resilience and persistence in achieving their goals. They are driven by internal motivations and take personal responsibility rather than relying on external circumstances (Covey, 2020; Delle & Amadu, 2016). When a proactive individual perceives an opportunity, he puts his efforts to grab it (Prabhu et al., 2011). This proactive nature boosts individual career success, enhances organizational performance, and improves leadership effectiveness (Crant & Bateman, 2000; Fuller et al., 2010). Bateman and Crant (1993) define a proactive people have the tendency to start working on an idea instead of passively accepting existing conditions. They take necessary steps and plan strategies to target their outcome behavior (Neneh, 2019). “Behavior” is argued to be the most effective way to identify an entrepreneur (Gartner, 1994). Founding a business is a behavior that clearly defines entrepreneurship (Stewart et al., 1996). Such behavior involves a continuous cycle of identifying opportunities, developing strategies to leverage these opportunities, and executing plans with a readiness to adapt and evolve in response to emerging challenges (Farmer et al., 2009). Entrepreneurs who actively engage in these behaviors contribute to innovation, faster decision-making, and enhanced responsiveness to market needs (Martikainen, 2018; Zahra, 2005). By embracing entrepreneurial behavior, individuals not only advance their ventures but also drive broader economic benefits, demonstrating the critical role of proactive and adaptive strategies in today’s competitive business environment (Milanesi, 2018).

Proactive behavior is crucial for job creation and economic growth, as entrepreneurs generate employment for themselves and others, thus reducing unemployment (Akala & Adesoji, 2015; Ahmed et al., 2020). In 2024, Pakistan struggled with an economic crisis caused by poor management, global price hikes, floods, and political instability. Although help from the IMF brought some stability, growth remains slow at 1.8%, and poverty continues to impact 40% of the population. To get back on track, Pakistan needs to reform public enterprises, reduce unnecessary spending, and create a more business-friendly environment to encourage local growth and attract foreign investment (world bank 2024). Such support can reduce unemployment and advance the United Nations' Sustainable Development Goals include ending extreme poverty and making sure everyone has enough food. (International Labor Organization, 2020).

Entrepreneurship is a powerful engine driving economic growth and financial stability in Pakistan. Pakistan's efforts to reduce poverty have slowed down due to rising prices, low wages, and problems in industries outside of farming. In the first half of the 2024 financial year, the trade gap became smaller, down to \$0.8 billion, but money sent back home by workers abroad dropped by 6.8%, while inflation went up to 28.8%, hitting poor people the hardest. Even though higher taxes and international help increased the country's reserves to \$9.4 billion, economic growth is still slow, with the real GDP expected to grow by only 1.8% in 2024. These economic problems, like low foreign reserves, trade imbalances, and strict policies, show the increasing need for entrepreneurship in Pakistan (World bank, 2024). Moreover, entrepreneurship can spur innovation, giving Pakistani businesses a competitive edge in local and global markets. In fact, 65% of Pakistani entrepreneurs cite innovation as a key driver of their business strategy (Nabi et al., 2020). A recent report by the United Nations Development Program (UNDP) highlights the growth and evolution of Pakistan's youth entrepreneurship ecosystem, emphasizing the need for a more inclusive environment for aspiring entrepreneurs. By encouraging new ideas, creating jobs, and boosting economic activity, entrepreneurship can help grow the economy and reduce poverty, helping the country overcome these challenges.

### **Research Objectives**

- To understand the role of Proactive personality, Entrepreneurial passion, Entrepreneurial intention, and Entrepreneurial behaviour among business and non-business university students.
- To understand the mediating role of Entrepreneurial intention between Proactive personality, Entrepreneurial passion, and Entrepreneurial behaviour among business and non-business university students.

### **Literature Review and Hypothesis Development**

#### **Entrepreneurial Passion and Entrepreneurial Behavior**

Passion is a powerful desire of a person to engage in the activity they find very important and they enjoying while doing that activity. They also dedicate their considerable time and energy to the activity (Vallerand et al., 2003). Passion is the heart of entrepreneurship (Karimi, 2019). Cardon and colleagues (2013) defined passion in terms of entrepreneurship as a strong feeling of happiness experienced by entrepreneurs when they engage in activities that are personally meaningful. and central to their identity. According to Cardon and colleagues (2009), people who are passionate about entrepreneurship have strong motivational drives to pursue their positive, deep feelings towards the entrepreneurial activities they engage in. Entrepreneurial passion motivates entrepreneurs to spot opportunities. and launch new ventures and it may positively correlate with Entrepreneurial Behavior.

Past researches (Bao et al., 2017, Feng & Cheng, 2020, Tabak et al., 2024) Have demonstrated a positive link between Entrepreneurial Passion (EP) and Entrepreneurial Behavior (EB). Feng & Cheng (2020) studied the influence of EP on Entrepreneurs psychology and behavior based on the theory of self-efficacy. The findings revealed a connection between entrepreneurial passion, self-efficacy, and the psychological and behavioral aspects of entrepreneurs. Similarly, Bao et al. (2017) found a significant relationship between entrepreneurial passion, opportunity recognition, and entrepreneurial behavior. Therefore, the present study suggests that having Entrepreneurial Passion will lead individuals towards entrepreneurial behavior and EP is important and crucial for entrepreneurs to become a successful entrepreneur.

### **H1: Entrepreneurial Passion is positively related with Entrepreneurial Behavior of university students.**

#### **Proactive Personality and Entrepreneurial Behavior**

Proactive personality as a dispositional construct and the extent to which individuals take actions to shape their environment (Bateman & Crant, 1993). Individuals with proactive personality are those who consistently and actively propose constructive changes to improve system (Kumar & Shukla, 2022). These individuals exhibit forward-thinking, self-confident behavior and excel at taking initiative to control situations (Ertenü, 2008). They strive for success by engaging in additional learning activities, achieving personal milestones that reflect change, and demonstrating leadership skills (Bateman & Crant, 1993). Students who graduate must exhibit a strong sense of responsibility (Delle & Amadu, 2016) and Proactive personality is associated with responsibility by Covey (2020). Earlier studies have indicated a positive link between proactive personality and entrepreneurial behavior (Cai et al., 2021; Delle & Amadu, 2016; Li et al., 2020,). Proactive individuals excel in identifying opportunities and taking timely and appropriate actions (Marler et al., 2017). The proactive personality significantly influences the development of entrepreneurial behavior as researches increasingly indicates that various personality traits play roles in shaping entrepreneurial behavior (Neneh, 2019). "Behavior" is argued to be the most effective way to identify an entrepreneur (Gartner, 1994) and founding a business is one behavior that clearly defines entrepreneurship. The proposed hypothesis for the current research study is:

### **H2: Proactive Personality is positively related with Entrepreneurial Behavior of university students.**

#### **Entrepreneurial intention and entrepreneurial behavior**

Entrepreneurial intention describes a person's desire to start a new business or engage in entrepreneurial activities over traditional employment (Yi, 2020). Entrepreneurial intentions are motivating factors that influence individuals in their pursuit of entrepreneurial outcomes (Hisrich et al., 2016). Students living in environments that promote entrepreneurial activities often show increased interest in engaging in entrepreneurship (Teixeira & Davey, 2010). In this context, intention involves the mental process of planning and envisioning the actions necessary to create a new business or improve an existing one (Fini et al., 2012). Previous researches have shown the positive influence of entrepreneurial intention on entrepreneurial behavior (Ajzen & Sheikh 2013; Baluku et al., 2020; Naz et al., 2020,). These studies have revealed that those with strong entrepreneurial intentions tend to exhibit more positive entrepreneurial behaviors (Neneh, 2019). Intentions are shaped through the interaction between individuals and their environment with a focus on identifying influencing factors (Sun et al., 2011) and Entrepreneurs need a strong personal commitment to transform their intentions into tangible actions and successful ventures. This dedication involves consistently working toward their goals, overcoming challenges, and taking concrete steps to make their entrepreneurial ideas a reality. Therefore, the present studies proposed that:

### **H3: Entrepreneurial Intentions will have a positive influence on Entrepreneurial behavior.**

#### **The mediating role of entrepreneurial intention between proactive personality and entrepreneurial behavior**

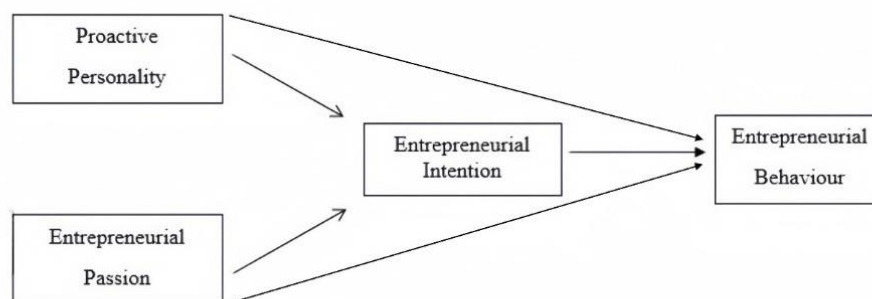
Influencing and shaping one's surroundings, despite situational challenges, characterizes a proactive personality (Zampetakis, 2008). This personality trait reflects a person's inclination to take purposeful actions and to actively pursue and implement their entrepreneurial intentions. It involves a proactive approach to identifying opportunities, making strategic decisions, and consistently working towards achieving entrepreneurial goals (Claes et al., 2005). Individuals with a proactive personality are especially skilled at spotting opportunities within challenges and are driven to take decisive actions to capitalize on these opportunities. They persistently pursue their goals, adapting their strategies as needed to achieve their objectives (Kumar & Shukla, 2022). Entrepreneurial intention describes a person's willingness and resolve to pursue entrepreneurial activities or launch a new business. It encompasses their preparedness to take on the challenges and responsibilities associated with entrepreneurship. Many researchers employ intention-based models to predict various personality types in relation to entrepreneurial intention, as these intentions motivate individuals to participate in entrepreneurial activities. This motivation ultimately reflects the level of effort, time, and resources an individual is willing to commit to developing and advancing a business. It encompasses their readiness to face challenges, make sacrifices, and persist in their efforts to achieve business goals and drive entrepreneurial success (Fuller et al., 2018; Muñoz-Bullón et al., 2015). Previous research indicates that having a proactive personality plays a crucial role in forecasting entrepreneurial intentions and behaviors. This trait helps individuals anticipate opportunities, take initiative, and effectively engage in entrepreneurial activities (Neneh, 2019; Van Gelderen et al., 2008). Consequently, individuals with a high degree of proactive personality are more inclined to actively design and implement the necessary actions to accomplish their goals. Previous researches have shown that the entrepreneurial intention can be used as a mediator (Cai et al., 2021; Ghazi et al., 2024). In this research study we will use the entrepreneurial intention as a mediator between proactive personality and entrepreneurial behavior. H4: Entrepreneurial Intentions will have a positive mediating effect between proactive personality and entrepreneurial behavior.

### The mediating role of entrepreneurial intention between entrepreneurial passion and entrepreneurial behavior:

Entrepreneurial passion is a key emotional state for entrepreneurs, characterized by deep personal value and strong emotional investment. It involves both cognitive and behavioral expressions of intense enthusiasm for starting and growing businesses, serving as a clear indicator of their commitment and drive (Chen et al., 2009). Moreover, entrepreneurial passion drives entrepreneurs to recognize opportunities and launch new ventures. It is essential for motivating business efforts and significantly contributes to achieving success in their entrepreneurial endeavors (Cardon et al., 2009). Passion for entrepreneurial activities often serves as a powerful catalyst for initiating the planning and development of new business ventures. In essence, a deep and pervasive sense of entrepreneurial passion in a given context is likely to fuel proactive and action-oriented intentions. This passion is not only a significant driver of entrepreneurial efforts but also plays a critical role in sustaining and advancing entrepreneurial careers, working together with entrepreneurial intentions to foster business success and innovation (Biraglia & Kadile, 2016). Entrepreneurial passion is thus likely to have a positive association with entrepreneurial intention as it enhances personal commitment and energizes individuals to complete critical tasks, and entrepreneurial intentions serves itself as a strongest predictor of entrepreneurial behavior. Previous researches used entrepreneurial intention as a mediator (Cai et al., 2021; Wiyanto et al., 2024). Therefore, it is hypothesized that entrepreneurial intentions can serve as a mediator between entrepreneurial passion and Entrepreneurial behavior.

H5: Entrepreneurial Intentions will have a positive mediating effect between entrepreneurial passion and entrepreneurial behavior.

**Figure 1**



## Methodology

### Data collection and Sample:

The current study employed a quantitative descriptive approach, utilizing survey methodology for data collection. Through cross-sectional design data was taken from Undergraduate students studying in both government and private sectors of Lahore for research purposes. Roscoe's (1975) criteria for determining sample size have been extensively utilized in recent times. Roscoe suggested that for most behavioral studies, a sample size of more than 30 but fewer than 500 is generally suitable, conversely, a sample size exceeding 500 might elevate the risk of Type II error (Sekaran & Bougie, 2016). Therefore, the total sample consisted of 300 undergraduate students randomly selected from 6 universities of both the private and government sectors of Lahore. Before contacting the teachers, the Principal/Vice Principal were briefed about the research then the survey questionnaires were distributed among the students. Participants were assured about the factors like confidentiality, their right of withdrawal, and their right to contact the researchers.

### Measures

Information regarding participants' age, gender, educational background, year of education, and family background was collected. To assess Proactive Personality, a scale consisting of 10 items developed by Bateman and Crant (1993) was utilized. The entrepreneurial passion of undergraduate students was assessed using the instrument devised by Biraglia and Kadile (2016) specifically designed for this purpose. This instrument comprises 5 items. For entrepreneurial intention we used scale developed by Liñán and Chen (2009). this scale consists of 6 items. The scale which measured entrepreneurial behavior of students was a 16-item scale created by Farmer et al., (2011).

### Data Analysis

Descriptive statistics were examined before testing the data for reliability, correlation, and regression. Table I presents the descriptive statistics for the study.

### Results

For the current study the analysis was computed using SPSS 26.0 software to find the results on the study variables. The results of the current study are given below.

Descriptive statistics are discussed here showing the demographic information of the participants evaluating the mediating role of entrepreneurial intentions on proactive personality, entrepreneurial passion and entrepreneurial behavior of undergraduate students. Table 1 showing the main demographics of the study are following;

**Table 1** Demographic Characteristics of Participants (N=300)

Variable	n	%
<b>Age</b>		
Less than 25 years	267	89
Equal to 25 years	21	7
Greater than 25 years	12	4
<b>Gender</b>		
Male	187	62.3
Female	113	37.7
<b>Educational background</b>		
Business	161	53.7
Nonbusiness	139	46.3
<b>Semester</b>		
7 <sup>th</sup> semester	175	58.3
8 <sup>th</sup> semester	125	41.7
<b>University sector</b>		
Private sector	173	57.7
Public sector	127	42.3
<b>Family background</b>		
Entrepreneurial	149	
Non-entrepreneurial	151	50.3
<b>Work experience</b>		
Yes	164	54.7
No	136	45.3

Note. N= 300, % = percentage.

The current study is related to undergraduate university students in which we explored the relationship between proactive personality, entrepreneurial passion, and the mediating role of entrepreneurial intention on entrepreneurial behavior. The demographic information of the participants is mentioned in table 1. The demographic profile of the 300 participants reveals a diverse and well-balanced sample in terms of age, gender, educational background, semester, university sector, family background, and work experience. The sample of the study was divided in three categories on the bases of age range which were less than 25 years old (89%), equal to 25 years old (7%), and greater than 25 years old (4%). The number of participants were divided into two categories on the basis of gender, males (62.3%) and females (37.7%).

The participants were also divided on the basis of their educational backgrounds which were business-related programs (53.7%), and non-business disciplines (46.3%). Semester-wise, more participants were in the 7th semester (58.3%) compared to the 8th semester (41.7%). The students were either enrolled in private sectors (57.7%) and public sectors (42.3%). Their Family background was entrepreneurial (49.7%) and non-entrepreneurial (50.3%). The students were with either work experience (54.7%), and with no work experience (45.3%).

**Table 2** Psychometric properties of Study Variables (N=312)

Variables	M	SD	Range	Cronbach's $\alpha$
PP	54.41	9.5	14-70	.87
EP	23.48	4.40	4-28	.88
EI	26.32	5.75	6-35	.74
EB	72.34	19.77	16-112	.91

Note. PP = Proactive Personality, EP= Entrepreneurial Passion, EI = Entrepreneurial intention, EB = Entrepreneurial Behavior

Table 2 shows psychometric properties (e.g., shows mean, standard deviation and Cronbach's alpha) of the scales used to measure study variables. All the Cronbach's  $\alpha$  values of scales indicate internal consistency that means all scales were reliable to use in this study.

**Table 3** Correlation matrix of Study Variables (N = 300).

Variables	M	SD	1	2	3	4
PP	54.3	9.46	-	.55**	.40**	.32**
EP	23.5	4.38		-	.62**	.39**
EI	26.2	5.84			-	.45*
EB	72.5	19.82				-



Note. \*\* $p < 0.01$ ; PP = Proactive Personality Scale; EP= Entrepreneurial Passion Scale; EI= Entrepreneurial Intention Scale; EB = Entrepreneurial Behavior Scale

A bivariate correlation analysis, Pearson product moment correlation was used in this research study to explore the relationship among all study variables which is presented in table 3. Results in correlation matrix table 3 shows that all the variables used in research are co-related with each other. Proactive personality has a moderate positive correlation with entrepreneurial passion (EP) ( $r = .55, p < .01$ ), also it has a low positive correlation with entrepreneurial intention (EI) ( $r = .40, p < .01$ ), and also it has a low positive correlation with entrepreneurial behavior (EB) ( $r = .32, p < .01$ ). Entrepreneurial Passion shows a high positive correlation with Entrepreneurial Intention (EI) ( $r = .62, p < .01$ ), and it also shows a low positive correlation with entrepreneurial behavior (EB) ( $r = .39, p < .01$ ). Entrepreneurial intention shows a low positive correlation with Entrepreneurial Behavior (EB) ( $r = .45, p < .05$ ). Entrepreneurial behavior shows a low positive correlation with Proactive Personality (PP) ( $r = .32, p < .01$ ), also it shows a low positive correlation with entrepreneurial passion (EP) ( $r = .39, p < .01$ ), and it also shows a low positive correlation with entrepreneurial intention (EI) ( $r = .45, p < .05$ ).

**Table 4** Multiple Linear Regression of Proactive Personality and Entrepreneurial Passion, Entrepreneurial Intention as predictor of Entrepreneurial Behavior as dependent variable. (N = 300).

Model	B	SE	$\beta$	t	p	95% CI
Constant	15.7	6.51		2.42	.016	
PP	.25	.127	.12	1.98	.039	[-.001, .0501]
EI	1.14	.225	.33	1.69	.041	[-.053, 1.149]
EP	.54	.323	.33	5.08	.000	[-.888, 1.398]
R <sup>2</sup>	.23					

Note. PP = Proactive Personality Scale; EI= Entrepreneurial Intention; EP = Entrepreneurial Passion, CI= Class Interval.

In previous analysis of correlation, results suggested that all study variables are correlated. Now multiple linear regression analysis was computed. Moreover, the purpose of this analysis was to identify the relational strength and magnitude of predictors and outcome variables. The results in the table 4 revealed that all the variable including proactive personality, entrepreneurial passion as an independent variable, and entrepreneurial intention as a mediator predicts the entrepreneurial behavior among university students. The R<sup>2</sup> value mentioned in the table shows that predictor variables explained 23% variance in the outcome variable with  $F(3,296) = 31.09, p < .00$ . The results suggest that proactive personality ( $\beta = .12, p < .001$ ) positively predicted entrepreneurial behavior. Entrepreneurial intentions are not a significant predictor of entrepreneurial behavior ( $\beta = .33, p < .001$ ). Entrepreneurial passion positively predicted with entrepreneurial behavior ( $\beta = .33, p < .001$ ).

**Table 5** Mediating effect of Entrepreneurial Intention on Proactive Personality and Entrepreneurial Behavior (N=300)

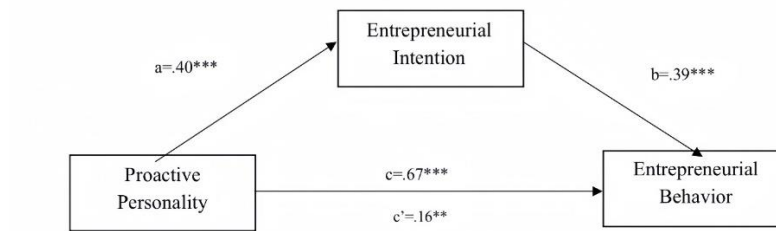
Variable/effect	B	SE	t	p	95% confidence interval
LL					
PP-EB	.16	.114	5.85	.000	.44
PP-EI	.40	.032	7.56	.000	.18
EI-EB	.39	.191	7.04	.000	.97
<b>Effects</b>					
Direct	.67	.115	2.95	.003	.11
Indirect	.328	.069			.19
Total	.670	.114	5.85	.000	.44
					UL
PP-EB	.16	.114	5.85	.000	.89
PP-EI	.40	.032	7.56	.000	.30
EI-EB	.39	.191	7.04	.000	1.7
Direct	.67	.115	2.95	.003	.57
Indirect	.328	.069			.46
Total	.670	.114	5.85	.000	.89

Note. B= Unstandardized coefficients; SE= Standard error; LL= Lower limit; UL= Upper limit; PP = Proactive Personality; EI = Entrepreneurial Intention, EB = Entrepreneurial Behavior. Based on 5000 bootstraps samples.

Mediation analysis was done in order to investigate the mediating effect Entrepreneurial Intention between Proactive Personality and Entrepreneurial Behavior, PROCESS (version 4.2) was used to conduct mediation analysis (using Model 4) and the results are presented above in table. The table shows that Proactive Personality (PP) was a significant predictor of Entrepreneurial Behavior (EB) ( $p < .001$ ). Proactive Personality is also a significant predictor of Entrepreneurial Intention (EI) ( $p < .001$ ). Entrepreneurial Intention (mediator) was also a significant predictor of Entrepreneurial Behavior ( $p < .001$ ). Entrepreneurial Intention, as a whole mediates the relation between Proactive Personality and Entrepreneurial Behavior ( $p < .001$ ).

Total effect was also significant ( $\beta = .670, p = .000, CI\ 95\% (LL=.444, UL=.895)$ ). The results are in accordance with our theoretical model and hypothesis and shows that EI strengthens the positive relationship between PP and EB. It can be deduced from these results that EI processes as an internal mechanism leading to the increase in Entrepreneurial Behavior of Business and Non-Business University students both if they possess Proactive Personality. The direct (c), indirect (c') and total effect (a\*b) are shown in figure 2.

Figure 2

**Table 6** Mediating effect of Entrepreneurial Intention on Entrepreneurial Passion and Entrepreneurial Behavior (N=300)

Variable/effect	$\beta$	SE	t	p	95% confidence interval	
					LL	UL
EP-EB	.817	.34	2.76	.006	.236	1.39
EP-EI	.62	.059	13.9	.000	.707	.939
EI-EB	.18	.225	5.23	.000	.736	1.62
<b>Effects</b>						
Direct	.39	.295	2.76	.006	.236	1.39
Indirect	.972	.205			.585	1.39
Total	1.78	.239	7.47	.000	.318	2.26

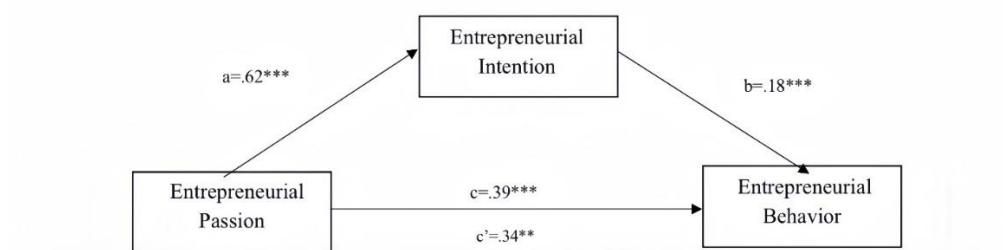
Note. B= Unstandardized coefficients; SE= Standard error; LL= Lower limit; UL= Upper limit; EP = Entrepreneurial Passion; EI = Entrepreneurial Intention, EB = Entrepreneurial Behavior.

#### Based on 5000 bootstraps samples.

Another mediation analysis was done in order to investigate the mediating effect of EI between Entrepreneurial Passion and Entrepreneurial Behavior, PROCESS (version 4.2) was used to conduct mediation analysis (using Model 4) and the results are presented below (see table 6). The table shows that Entrepreneurial Passion was a significant predictor of Entrepreneurial Behavior ( $p < .001$ ). Entrepreneurial Passion was also a significant predictor of Entrepreneurial Intention ( $p < .001$ ). Entrepreneurial Intention (mediator) was also a significant predictor of Entrepreneurial Behavior ( $p < .001$ ). Entrepreneurial Intention as a whole mediates the relation between Entrepreneurial Passion and Entrepreneurial Behavior ( $p < .001$ ).

Total effect was also significant ( $\beta = 1.78$ ,  $p = .000$ , CI 95% (LL=.318, UL=2.26)). The results are in accordance with our theoretical model and hypothesis and shows that Entrepreneurial Intention strengthens the positive relationship between Entrepreneurial Passion and Entrepreneurial Behavior. It can be deduced from these results that Entrepreneurial Intention processes as an internal mechanism leading to the increase in Entrepreneurial Behavior Business and Non-Business University Students if they possess Entrepreneurial Passion.

Figure 3



#### Discussion:

Entrepreneurship is increasingly becoming a cornerstone of economic growth and is now one of the largest sources of employment in many developed countries. Entrepreneurship significantly influences a country's economic growth, job creation, and innovation (Cardella et al., 2020). Many governments and private sectors rely on entrepreneurial startups to generate employment opportunities (Neneh, 2019a; Sánchez-García et al., 2018). It helps in creating job for not only in public sectors but also generates a huge amount of job opportunities in private sectors. Particularly notable are family-owned businesses, which play a significant role in driving this trend (Carsson, 1982). Historically, scholars like Baumol (1968) and Carsson (1982) have highlighted the pivotal role of entrepreneurship in economic development.

According to the Organization for Economic Cooperation and Development (OECD) (1998), entrepreneurship not only stimulates job creation but also fosters wealth generation. This means that individuals who start their own businesses contribute significantly to the economy by providing employment opportunities and generating income. This trend underscores the importance of nurturing entrepreneurial ventures as they are crucial to a thriving and dynamic economy. With the advancement of economic globalization, an increasing number of individuals opt to start their own businesses, driven by robust national and governmental support. This trend not only fosters economic development but also helps mitigate employment challenges to some extent (Sánchez & Sahuquillo, 2018). As well as it is important for the sustainable development of the country. Sustainable development is pivotal for a country's success and industrialization (Al- Qudah et al., 2022). The study is conducted to investigate the predictive relationship between proactive personality and entrepreneurial behavior among Business and Non-Business undergraduate last year students in Pakistan and the extent to which the relationship was mediated by entrepreneurial intentions. Table 1 shows descriptive characteristics of the sample that were used in this study.

The reliabilities of the scales used to measure study variables were computed and Table 2 shows that Cronbach's alpha reliability coefficient was satisfactory for all the scales and reliabilities of all scales ranged from .74 to .91. According to the first hypothesis there was a positive correlation among the study variables e.g., Proactive Personality, Entrepreneurial Passion, Entrepreneurial Intention, and Entrepreneurial behavior and is significantly positive (see table 3). The findings of the study were supported by several studies (Feng & Cheng, 2020; Iqbal et al., 2023; Li et al., 2020; Neneh, 2019; Zampetakis, 2008) in literature review. All these studies showed significantly positive relationship between proactive personality, entrepreneurial passion, entrepreneurial intention, and entrepreneurial behavior. These studies are explained in regression analysis.

The above discussed findings of the correlation study were extended in the multiple linear regression analysis and later in the mediation analysis. To explore the predicting role of proactive personality (PP), entrepreneurial passion (EP), and entrepreneurial intention (EI) on entrepreneurial behavior (EB). The second hypothesis of the study was that proactive personality, entrepreneurial passion and entrepreneurial intention will be significant predictor of entrepreneurial behavior. Regression analysis showed that 23% variance explained by all the variables PP, EP and, EI are the positive predictors of entrepreneurial behavior of this study. (see Table 5). This finding is supported by the work of Li et al. (2020) that clearly states that proactive personality influences entrepreneurial behavior. A proactive personality involves actively trying to influence one's changing environment. People with this trait tend to respond effectively to environmental challenges, which is particularly advantageous for students who already have the intention of becoming entrepreneurs (Li et al., 2020). This finding also supported by existing literature, suggesting that individuals with a proactive personality possess the skills to actively alter their environment and demonstrate initiative to persist until changes occur (Bateman & Crant, 1993). Zampetakis (2008) research conducted on students of Greek universities also support the finding of this study. It was suggested that Proactive students—those who actively seek out information and take the initiative to improve their situation or create new opportunities—are more likely to show entrepreneurial behavior. They are more intended to start their own businesses because they view entrepreneurship as a desirable path. The research conducted by Becherer and Maurer (1999) also supported the findings that clearly suggested that proactive personality significantly influence the entrepreneurial behavior of the entrepreneurs

Entrepreneurial Passion is the significant predictor of entrepreneurial behavior. Feng and Cheng (2020) support the finding by stating that there is an influence of entrepreneurial passion on the behavior and psychology of entrepreneurs. It is also stated that Entrepreneurial passion can positively influence an entrepreneur's persistence, boost positive emotions, and enhance the performance of their business (Wiklund et al., 2018). The study conducted by Cardon et al. (2017) also support this study by arguing that Entrepreneurial passion helps align the thoughts and actions of entrepreneurs, acting as the driving force behind innovation, persistence, and eventual success. Iqbal et al. (2023) conducted study to examine the link between entrepreneurial passion and entrepreneurial performance of small and medium sized enterprise owners. It is stated that Passion is crucial for recognizing and pursuing opportunities. Entrepreneurs who are passionate are more likely to identify and capitalize on opportunities that resonate with their interests and values. Their enthusiasm and intrinsic motivation help them persist through challenges, making it more likely for them to turn opportunities into successful ventures. Additionally, entrepreneurial passion fosters creativity and innovation, as passionate entrepreneurs are more willing to think outside the box, explore new solutions, and take calculated risks (Iqbal et al., 2023).

Entrepreneurial intention is the significant predictor of entrepreneurial behavior. the findings are supported by the research of Neneh (2019) that clearly states that entrepreneurial intention is increasingly recognized as a crucial factor influencing entrepreneurial behavior. While entrepreneurial behavior is intentional and driven by cognitive mechanisms, the foundation of entrepreneurial actions lies in the development of entrepreneurial intentions (Neneh, 2019). The findings align with Mahmood and colleagues (2019), who found that entrepreneurial intentions (EI) have a positive and significant relationship with pre-start-up behaviors. This finding is also supported by the study of Majeed and colleagues (2021) that clearly states that entrepreneurial intention is positively significant related to the entrepreneurial behavior in university students of Pakistan. Overall, in all these studies it has been highlighted that the individuals could only show entrepreneurial behavior if they would translate intentions into actions.

The third hypothesis of the study was to explore the mediating role of entrepreneurial intention in between proactive personality and entrepreneurial behavior. Results revealed that all paths in mediation analysis were significant, hence



entrepreneurial intention mediated between proactive personality and entrepreneurial behavior. The findings align with Cai and colleagues (2021), who stated that entrepreneurial intention positively mediates the link between dark tetrad personality traits and nascent entrepreneurial behavior. Their study showed that dark tetrad traits—narcissism, psychopathy, and Machiavellianism—are positively related to nascent entrepreneurial behavior. Additionally, entrepreneurial intention serves as a mediator in this relationship. It clearly been explained by this study that narcissist individuals take more risks, thus it is evident that high level or narcissism will help individuals to start their business. Individuals with psychopathic traits are often characterized as manipulative, indirect, and inclined towards seeking high levels of excitement and stimulation to achieve their goals. The study also indicates that Machiavellianism is associated with individuals who are self-interested, cunning, strategic, and deceitful, focusing on their own goals and strategically manipulating others' desires to fulfill their objectives. (Zheng et al., 2017). As these variables are positively predicting the entrepreneurial behavior, therefore, the study supports the findings of the study. The findings are also supported by the study conducted by Ghazi and colleagues (2024), which looked into how entrepreneurial intention mediates the relationship between entrepreneurship education and employability among university students in developing countries. Their research shows that entrepreneurial intention plays a crucial role in connecting the benefits of entrepreneurship education to better job prospects for students. This study emphasizes the importance of building entrepreneurial intention to improve the outcomes of entrepreneurship education. The point to be highlighted is that there is not much work done on the mediating role of entrepreneurial intention in the literature. This point is highlighted in this study that there is a gap in literature on mediation of entrepreneurial intention, but they defend this with employability and stated that employability is influenced by entrepreneurial intention. Another study conducted by Wiyanto and colleagues (2024) support the mediating role of entrepreneurial intention as mediator between self-efficacy and entrepreneurial success. This research clearly stated that impact of self-efficacy on success of entrepreneurs through the mediating effect of entrepreneurial intention. These mediating mechanisms offer a new perspective on how psychological factors influence entrepreneurial outcomes.

Another matrix for the mediation analysis was between relational entrepreneurial passion and entrepreneurial behavior which is mediated by entrepreneurial intention. The findings based on mediation analysis approved that entrepreneurial intention is mediating the relationship between entrepreneurial passion and entrepreneurial behavior. These findings are in line with few other studies that highlights the mediating role of entrepreneurial intention. The findings are also supported by Khan and colleagues (2024) who conducted a study on the mediating role of entrepreneurial intention between attitude towards entrepreneurship and entrepreneurial behavior. The results indicated that the indirect effect of perceived entrepreneurial intentions was a statistically significant predictor in the relationship between attitudes towards entrepreneurship and entrepreneurial behavior. This underscores the importance of perceived entrepreneurial intentions as a mediating factor, influencing how attitudes towards entrepreneurship can ultimately lead to entrepreneurial behavior. The positive attitude towards entrepreneurship enhances entrepreneurial passion, which significantly strengthens a person's intention to start a business. This entrepreneurial intention then acts as a crucial link that turns positive attitudes and passion into actual entrepreneurial behavior. Sahid and colleagues (2024) research also supported the finding and states that entrepreneurial intention mediates the relationship between entrepreneurial self-efficacy and business creation among graduates. Self-efficacy enhances self-confidence and control over the entrepreneurial activities in individuals which helps them building their own business. Likewise, entrepreneurial passion is the strong cognitive and behavioral expression associated with high personal value, and self-confidence to start own business. The relationship between entrepreneurial self-efficacy and business creation is complex and influenced by other factors, such as entrepreneurial intention. Research has shown that entrepreneurial intention mediates the connection between entrepreneurial self-efficacy and business creation among graduates. This means that graduates with high self-efficacy are more likely to engage in entrepreneurial activities if they have a strong intention to pursue entrepreneurship. (Sahid et al., 2024). Another study conducted by Lyu and colleagues (2024) clearly concluded the mediating role of entrepreneurial intention between the paths of Practical Focus Pedagogy to opportunity discovery and opportunity exploitation. Practical Focus Pedagogy is basically focuses on hands on real-world experience which help students in order to develop a strong intention to start their own businesses. This entrepreneurial intention, in turn, enhances their ability to identify and pursue new business opportunities.

### Implications

Research indicates that personality traits such as proactivity and a passion for entrepreneurship significantly influence the likelihood of starting a business. Individuals who take initiative and have a strong desire to innovate are more inclined to pursue entrepreneurial ventures. However, having the intention to start a business is not sufficient on its own; a genuine commitment to the entrepreneurial journey is crucial. This commitment is captured by the concept of "entrepreneurial intention."

The findings have several practical implications for entrepreneurship education, policy-making, and ecosystem development. They underscore the importance of nurturing proactive personality traits and stimulating entrepreneurial passion to enhance entrepreneurial intentions and behaviors. These insights are valuable for educators, policymakers, and investors as they seek to foster economic growth and innovation. For instance, federal and higher education institutions in Pakistan should focus on cultivating an entrepreneurial culture and supporting the development of small and medium enterprises. Instead of producing job seekers, universities should aim to produce job creators. Encouragement and support from family, friends, and peers significantly boost business graduates' confidence and determination to convert their entrepreneurial intentions into actionable business ventures. Moreover, hands-on training and practical experience through entrepreneurial labs and targeted courses enhance students' commitment to transforming their entrepreneurial ideas into successful businesses.

Initiatives such as the Prime Minister's Youth Entrepreneurship Scheme and the Small and Medium Enterprises Development Authority (SMEDA) have played a role in promoting entrepreneurial ventures in Pakistan, contributing to a reduction in unemployment rates in 2024. These programs demonstrate the effectiveness of supportive measures in translating entrepreneurial intentions into real-world outcomes and fostering a dynamic entrepreneurial environment.

## Conclusion

This research shows that proactive personality traits, entrepreneurial passion, and intentions are crucial for shaping entrepreneurial behavior among undergraduate students in Pakistan. Proactive individuals actively seek opportunities and adapt well to changes, which drives their entrepreneurial pursuits. Entrepreneurial passion fuels persistence and creativity, helping students overcome challenges and innovate.

Entrepreneurial intention is key to turning aspirations into actual business ventures, acting as a bridge between personal goals and entrepreneurial actions. The study highlights that intention links proactive personality and passion to real entrepreneurial behavior. Understanding and nurturing these traits and intentions are vital for building a vibrant entrepreneurial environment in Pakistan and beyond.

## References:

1. Ahmed, T., Chandran, V. G. R., Klobas, J. E., Liñán, F., & Kokkalis, P. (2020). Entrepreneurship education programmes: How learning, inspiration and resources affect intentions for new venture creation in a developing economy. *The International Journal of Management Education*, 18(1), 00327. <https://doi.org/10.1016/j.ijme.2019.100327>
2. Ajzen, I., & Sheikh, S. (2013). Action versus inaction: Anticipated affect in the theory of planned behavior. *Journal of applied social psychology*, 43(1), 155-162.
3. Al-Qudah, A. A., Al-Okaily, M., & Alqudah, H. (2022). The relationship between social entrepreneurship and sustainable development from economic growth perspective: 15 'RCEP' countries. *Journal of sustainable Finance & Investment*, 12(1), 44-61. <https://doi.org/10.1080/20430795.2021.1880219>
4. Al-Qudah, L. A., Ahmad Qudah, H., Abu Hamour, A. M., Abu Huson, Y., & Al Qudah, M. Z. (2022). The effects of COVID-19 on conditional accounting conservatism in developing countries: evidence from Jordan. *Cogent Business & Management*, 9(1), 2152156. <https://doi.org/10.1080/23311975.2022.2152156>
5. Baluku, M. M., Kikooma, J. F., Otto, K., König, C. J., & Bajwa, N. U. H. (2020). Positive psychological attributes and entrepreneurial intention and action: the moderating role of perceived family support. *Frontiers in psychology*, 11, 546745. <https://doi.org/10.3389/fpsyg.2020.546745>
6. Bao, J., Zhou, X., & Chen, Y. (2017). Entrepreneurial passion and behaviors: opportunity recognition as a mediator. *Social Behavior and Personality: an international journal*, 45(7), 1211-1220. <https://doi.org/10.2224/sbp.6492>
7. Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2018). Entrepreneurial intention among engineering students: The role of entrepreneurship education. *European research on management and business economics*, 24(1), 53-61. <https://doi.org/10.1016/j.jedeen.2017.04.001>
8. Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of organizational behavior*, 14(2), 103-118.
9. Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of organizational behavior*, 14(2), 103-118. <https://doi.org/10.1002/job.4030140202>
10. Baumol, W. J. (1968). Entrepreneurship in economic theory. *The American economic review*, 58(2), 64-71. <https://www.jstor.org/stable/1831798>
11. Becherer, R. C., & Maurer, J. G. (1999). The proactive personality disposition and entrepreneurial behavior among small company presidents. *Journal of small business management*, 37(1).
12. Biraglia, A., & Kadile, V. (2016). The Role of Entrepreneurial Passion and Creativity in Developing Entrepreneurial Intentions: Insights.
13. Cai, L., Murad, M., Ashraf, S. F., & Naz, S. (2021). Impact of dark tetrad personality traits on nascent entrepreneurial behavior: the mediating role of entrepreneurial intention. *Frontiers of Business Research in China*, 15, 1-19. <https://doi.org/10.1186/s11782-021-00103-y>
14. Cardella, G. M., Hernández-Sánchez, B. R., & Sánchez-García, J. C. (2020). Women entrepreneurship: A systematic review to outline the boundaries of scientific literature. *Frontiers in psychology*, 11, 1557. <https://doi.org/10.3389/fpsyg.2020.01557>
15. Cardon, M. S., Glauser, M., & Murnieks, C. Y. (2017). Passion for what? Expanding the domains of entrepreneurial passion. *Journal of Business Venturing Insights*, 8, 24-32. <https://doi.org/10.1016/j.jbvi.2017.05.00>
16. Cardon, M. S., Gregoire, D. A., Stevens, C. E., & Patel, P. C. (2013). Measuring entrepreneurial passion: Conceptual foundations and scale validation. *Journal of business venturing*, 28(3), 373-396. <https://doi.org/10.1016/j.jbusvent.2012.03.003>
17. Cardon, M. S., Gregoire, D. A., Stevens, C. E., & Patel, P. C. (2013). Measuring entrepreneurial passion: Conceptual foundations and scale validation. *Journal of business venturing*, 28(3), 373-396. <https://doi.org/10.1016/j.jbusvent.2012.03.003>
18. Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of management Review*, 34(3), 511-532. <https://doi.org/10.5465/amr.2009.40633190>

19. Chen, X. P., Yao, X., & Kotha, S. (2009). Entrepreneur passion and preparedness in business plan presentations: a persuasion analysis of venture capitalists' funding decisions. *Academy of Management journal*, 52(1), 199-214.<https://doi.org/10.5465/amj.2009.36462018>
20. Chen, X. P., Yao, X., & Kotha, S. (2009). Entrepreneur passion and preparedness in business plan presentations: a persuasion analysis of venture capitalists' funding decisions. *Academy of Management journal*, 52(1), 199-214.<https://doi.org/10.5465/amj.2009.36462018>
21. Claes, R., Beheydt, C., & Lemmens, B. (2005). Unidimensionality of abbreviated proactive personality scales across cultures. *Applied Psychology*, 54(4), 476-489.
22. Covey, S. R. (2020). *The 7 habits of highly effective people*. Simon & Schuster.
23. Delle, E., & Amadu, I. M. (2016). Proactive personality and entrepreneurial intention: Employment status and student level as moderators. *Journal of Advance Management and Accounting Research*, 3(7), 69-81.
24. Delle, E., & Amadu, I. M. (2016). Proactive personality and entrepreneurial intention: Employment status and student level as moderators. *Journal of Advance Management and Accounting Research*, 3(7), 69-81.
25. Ertenü, B. (2008). *The Role Psychological Empowerment between Managerial Practices and Organizational Citizenship Behavior* (Doctoral dissertation, Marmara Universitesi (Turkey)).
26. Farmer, S. M., Yao, X., & Kung-Mcintyre, K. (2011). The behavioral impact of entrepreneur identity aspiration and prior entrepreneurial experience. *Entrepreneurship Theory and practice*, 35(2), 245-273.<https://doi.org/10.1111/j.1540-6520.2009.00358.x>
27. Feng, B., & Chen, M. (2020). The impact of entrepreneurial passion on psychology and behavior of entrepreneurs. *Frontiers in Psychology*, 11, 1733.<https://doi.org/10.3389/fpsyg.2020.01733>
28. Ferreira-Neto, M. N., de Carvalho Castro, J. L., de Sousa-Filho, J. M., & de Souza Lessa, B. (2023). The role of self-efficacy, entrepreneurial passion, and creativity in developing entrepreneurial intentions. *Frontiers in Psychology*, 14, 1134618.<https://doi.org/10.3389/fpsyg.2023.1134618>
29. Fini, R., Grimaldi, R., Marzocchi, G. L., & Sobrero, M. (2012). The determinants of corporate entrepreneurial intention within small and newly established firms. *Entrepreneurship Theory and Practice*, 36(2), 387-414. <https://doi.org/10.1111/j.1540-6520.2010.0041>
30. Fuller Jr, J. B., Hester, K., & Cox, S. S. (2010). Proactive personality and job performance: Exploring job autonomy as a moderator. *Journal of managerial issues*, 35-51.
31. Fuller, B., Liu, Y., Bajaba, S., Marler, L. E., & Pratt, J. (2018). Examining how the personality, self-efficacy, and anticipatory cognitions of potential entrepreneurs shape their entrepreneurial intentions. *Personality and Individual Differences*, 125, 120-125.<https://doi.org/10.1016/j.paid.2018.01.005>
32. Gartner, W. B., & Vesper, K. H. (1994). Experiments in entrepreneurship education: Successes and failures. *Journal of business Venturing*, 9(3), 179-187.
33. Gazi, M. A. I., Rahman, M. K. H., Yusof, M. F., Masud, A. A., Islam, M. A., Senathirajah, A. R. B. S., & Hossain, M. A. (2024). Mediating role of entrepreneurial intention on the relationship between entrepreneurship education and employability: a study on university students from a developing country. *Cogent Business & Management*, 11(1), 2294514. <https://doi.org/10.1080/23311975.2023.2294514>
34. Hisrich, R. D., Petković, S., Ramadani, V., & Dana, L. P. (2016). Venture capital funds in transition countries: Insights from Bosnia and Herzegovina and Macedonia. *Journal of Small Business and Enterprise Development*, 23(2), 296-315.<https://doi.org/10.1108/JSBED-06-2015-0078>
35. Iqbal, M. A. B., Ishfaq, U., Khan, Y., Imran, A., Salahuddin, S., Batool, S., & Ullah, M. (2023). Entrepreneurial Passion And Entrepreneurial Performance. *Russian Law Journal*, 11(3), 2309-2319.
36. Karimi, S. (2020). The role of entrepreneurial passion in the formation of students' entrepreneurial intentions. *Applied Economics*, 52(3), 331-344.<https://doi.org/10.1080/00036846.2019.1645287>
37. Keyhani, N., & Kim, M. S. (2020). The aspiring teacher entrepreneur's competencies and challenges in an informal STEM environment. *Entrepreneurship Education*, 3(4), 363-391.<https://doi.org/10.1007/s41959-020-00030-8>
38. Kumar, R., & Shukla, S. (2022). Creativity, proactive personality and entrepreneurial intentions: examining the mediating role of entrepreneurial self-efficacy. *Global Business Review*, 23(1), 01118.<https://doi.org/10.1177/0972150919844395>
39. Kumar, R., & Shukla, S. (2022). Creativity, proactive personality and entrepreneurial intentions: examining the mediating role of entrepreneurial self-efficacy. *Global Business Review*, 23(1), 101118.<https://doi.org/10.1177/0972150919844395>
40. Li, C., Murad, M., & Ashraf, S. F. (2023). The influence of women's green entrepreneurial intention on green entrepreneurial behavior through university and social support. *Sustainability*, 15(13), 10123. <https://doi.org/10.3390/su151310123>
41. Li, C., Murad, M., Shahzad, F., Khan, M. A. S., Ashraf, S. F., & Dogbe, C. S. K. (2020). Entrepreneurial passion to entrepreneurial behavior: role of entrepreneurial alertness, entrepreneurial self-efficacy and proactive personality. *Frontiers in psychology*, 11, 1611.<https://doi.org/10.3389/fpsyg.2020.01611>
42. Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship theory and practice*, 33(3), 593-617.<https://doi.org/10.1111/j.1540-6520.2009.0031>
43. Luo, Q., Hu, H., Feng, D., & He, X. (2022). How does broadband infrastructure promote Telecommunications Policy, 46(10), 102440.<https://doi.org/10.1016/j.telpol.2022.102440>
44. Lyu, J., Shepherd, D., & Lee, K. (2024). The impact of entrepreneurship pedagogy on nascent student entrepreneurship: An entrepreneurial process perspective. *Studies in Higher Education*, 49(1), 62-63. <https://doi.org/10.1080/03075079.2023.2220722>

45. Mahmood, T. M. A. T., Al Mamun, A., Ahmad, G. B., & Ibrahim, M. D. (2019). Predicting entrepreneurial intentions and pre-start-up behaviour among Asnaf millennials. *Sustainability*, 11(18), 4939. <https://doi.org/10.3390/su11184939>
46. Majeed, A., Ghumman, A. R., Abbas, Q., & Ahmad, Z. (2021). Role of entrepreneurial passion between entrepreneurial attitude, subjective norms, perceived behavioral control, and entrepreneurial intention: measuring the entrepreneurial behavior of Pakistani students. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 15(3), 636-662. <https://hdl.handle.net/10419/246075>
47. Marler, L. E., Botero, I. C., & De Massis, A. (2017). Succession-related role transitions in family firms: The impact of proactive personality. *Journal of Managerial Issues*, 57-81. <https://www.jstor.org/stable/45176534>
48. Martikainen, S. (2018). Entrepreneurial Behavior in Managers. <https://urn.fi/URN:NBN:fi:amk-2018121721990>
49. Milanese, M. (2018). Exploring passion in hobby-related entrepreneurship. Evidence from Italian cases. *Journal of Business Research*, 92, 423-430. <https://doi.org/10.1016/j.jbusres.2018.04.020>
50. Muñoz-Bullón, F., Sánchez-Bueno, M. J., & Vos-Saz, A. (2015). Nascent entrepreneurs' personality attributes and the international dimension of new ventures. *International Entrepreneurship and Management Journal*, 11, 473-492. DOI 10.1007/s11365-013-0284-1
51. Naz, S., Li, C., Zaman, U., & Rafiq, M. (2020). Linking proactive personality and entrepreneurial intentions: A serial mediation model involving broader and specific self-efficacy. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 166. <https://doi.org/10.3390/joitmc6040166>
52. Neneh, B. N. (2019). Performance implications of the interrelationship between risk-taking and family support for women-owned businesses: evidence from South Africa. *International Journal of Entrepreneurship and Small Business*, 38(1-2), 102-119. <https://doi.org/10.1504/IJESB.2019.102494>
53. O'Keefe, P. A., Dweck, C. S., & Walton, G. M. (2018). Implicit theories of interest: Finding your passion or developing it? *Psychological science*, 29(10), 1653-1664. <https://doi.org/10.1177/0956797618780643>
54. Obschonka, M., Hakkarainen, K., Lonka, K., & Salmela-Aro, K. (2017). Entrepreneurship as a twenty-first century skill: entrepreneurial alertness and intention in the transition to adulthood. *Small business economics*, 48, 487-501. DOI 10.1007/s11187-016-9798-6
55. Prakash, D., Jain, S., & Chauhan, K. (2015). Entrepreneurial intensity in relation to presence of entrepreneurship development cell: A study of institutes offering professional courses in national capital region Delhi, India. *The International Journal of Management Education*, 13(1), 95-105. <https://doi.org/10.1016/j.ijme.2015.01.004>
56. Sahid, S., Norhisham, N. S., & Narmaditya, B. S. (2024). Interconnectedness between entrepreneurial self-efficacy, attitude, and business creation: A serial mediation of entrepreneurial intention and environmental factor. *Heliyon*, 10(9). DOI: <https://doi.org/10.1016/j.heliyon.2024.e30478>
57. Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. *Entrepreneurship theory and practice*, 38(2), 291-332. <https://doi.org/10.1111/etap.12087>
58. SHAHZAD KHAN, D. M. D. (2024). Exploring the Perceived Mediating Role of Entrepreneurial Intentions among Entrepreneurs: An Empirical Study of Young Peshawar-Based Entrepreneurs. *Remittances Review*, 9(1), 2611-2637. DOI: <https://doi.org/10.33282/rr.vx9il.113>
59. Stewart, G. L., Carson, K. P., & Cardy, R. L. (1996). The joint effects of conscientiousness and self-leadership training on employee self-directed behavior in a service setting. *Personnel Psychology*, 49(1), 143-164.
60. Sun, J., Buys, N., Wang, X., & McAuley, A. (2011). Using the concept of resilience to explain entrepreneurial success in China. *International Journal of Management and Enterprise Development*, 11(2-4), 182-202. <https://doi.org/10.1504/IJMED.2011.044637>
61. Tabak, F., Qian, S., & Brannon, D. (2024). Entrepreneurial passion and the big five: Impact on entrepreneurial behavior. *Journal of General Management*, 03063070241269382. <https://doi.org/10.1177/03063070241269382>
62. Teixeira, A. A., & Davey, T. (2010). Attitudes of Higher Education students to new venture creation: a preliminary approach to the Portuguese case. *Industry and Higher Education*, 24(5), 323-341.
63. Vallerand, R. J., Blanchard, C., Mageau, G. A., Koestner, R., Ratelle, C., Léonard, M., ... & Marsolais, J. (2003). Les passions de l'âme: on obsessive and harmonious passion. *Journal of personality and social psychology*, 85(4), 756. <https://doi.org/10.1037/0022-3514.85.4.756>
64. Van Gelderen, M., Brand, M., Van Praag, M., Bodewes, W., Poutsma, E., & Van Gils, A. (2008). Explaining entrepreneurial intentions by means of the theory of planned behaviour. *Career development international*, 13(6), 538-559. <https://doi.org/10.1108/13620430810901688>
65. Wiklund, J., Yu, W., & Patzelt, H. (2018). Impulsivity and entrepreneurial action. *Academy of Management Perspectives*, 32(3), 379-403. <https://doi.org/10.5465/amp.2016.0177>
66. Wiyanto, H., Firdausy, C. M., Payangan, O. R., Maupa, H., & Sulaiman, S. The Effect of Self-Efficacy on Entrepreneurial Success: A Study of Entrepreneurial Intentions as Mediators. *International Research Journal of Economics and Management Studies IRJEMS*, 3(2). Doi: 10.56472/25835238/IRJEMS-V3I2P116
67. Yi, R., Lyu, B., Wang, H., & Huang, W. (2020). Entrepreneurial passion, entrepreneurial expectation and decision-making among college students. *Journal of Psychology in Africa*, 30(4), 323-329. <https://doi.org/10.1080/14330237.2020.1796094>
68. Zampetakis, L. A. (2008). The role of creativity and proactivity on perceived entrepreneurial desirability. *Thinking skills and creativity*, 3(2), 154-162. <https://doi.org/10.1016/j.tsc.2008.07.002>
69. Zareen, S., Khan, Z., & Amin, A. (2019). Sempirical analysis of the determinants of the preferences for public sector jobs in District Peshawar. *FWU Journal of Social Sciences*, 13(2), 108-117.

70. Zheng, W., Wu, Y. C. J., Chen, X., & Lin, S. J. (2017). Why do employees have counterproductive work behavior? The role of founder's Machiavellianism and the corporate culture in China. *Management Decision*, 55(3), 563- 578. <https://doi.org/10.1108/MD-10-2016-0696>.