

Personality and Entrepreneurial Intentions of Final Year Business Students in Pakistan: The Mediating Role of Entrepreneurial Education and Social Norms.

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ARTICLE INFO	ABSTRACT
Article History: Received: Revised: Accepted: Available Online:	Personality traits and situational characteristics influence the level of entrepreneurial intention in individuals. This study investigated the relationship between the five-factor model of personality, entrepreneurial education, social norm and entrepreneurial intention of final-year business students. Based on the cognitive appraisal theory, the mediating role of entrepreneurial education and social norms was proposed between five personality factors and entrepreneurial intention. A cross-sectional and a quantitative research design was adopted. Data was collected by administering a survey to final year bachelor of business management students of a public sector university. The data from 200 students was analyzed through partial least square structural equation modelling in SMART PLS 3. The results revealed that openness to experience, neuroticism, entrepreneurial education and social norms were significantly related to entrepreneurial intentions. Openness to experience and conscientiousness was related to entrepreneurial education, while openness to experience, conscientiousness and neuroticism were related to social norms. The mediation analysis revealed that entrepreneurial education and social norms mediate the relationship between openness to experience and conscientiousness with entrepreneurial intentions, while social norms negatively mediate the relationship between neuroticism and entrepreneurial intentions. Interestingly social norms and entrepreneurial education fully mediate the relationship between conscientiousness and entrepreneurial intentions. This study's findings have helped us to understand how social norms and entrepreneurial education shape the way different personality traits influence the entrepreneurial intention of students. Interventions to enhance the quality of entrepreneurial education and social norms supporting entrepreneurship would promote entrepreneurship among individual high in openness to experience and conscientiousness.
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INTRODUCTION

Entrepreneurship is "the process of creating, developing, and leading a new venture or enterprise" (Kuratko, 2016). Entrepreneurship involves identifying and pursuing opportunities for innovation, growth, and value creation, often through creating and managing a new business or organization. It involves taking risks and using one's skills, knowledge, and resources to turn ideas into reality, often

in the face of uncertainty and challenges. Entrepreneurship plays a significant role in the development of a country as entrepreneurial activities help create jobs and provide an impetus to the growth of the economy (Valliere, Peterson, & Development, 2009). The role of entrepreneurship in wealth creation and economic development is well-documented (Antoncic, Bratkovic Kregar, Singh, & DeNoble, 2015). Therefore, by enhancing entrepreneurial activities in their country, emerging economies can enhance their GDP, exports, innovation and employment opportunities (Al Mamun, Fazal, & Muniady, 2019; Syed, Butler, Smith, & Cao, 2020).

Entrepreneurial intention is the "expressed behavioural intention to become an entrepreneur" (Zhao, Seibert, & Lumpkin, 2010). The current research aims to study the antecedents of entrepreneurial intentions of final-year business students of a public sector university. Students represent a country's future because they represent the next generation of leaders, innovators, and workers. They will be responsible for driving economic growth, solving social and environmental challenges, and shaping the future direction of their countries. Therefore, what drives students to opt for entrepreneurship as a career choice is an essential consideration for researchers. It can help educators and policymakers design appropriate curricula and programs and develop interventions and policies that promote entrepreneurship as a viable career option.

It is generally accepted that both contextual and personality characteristics influence entrepreneurial intention. Krueger Jr, Reilly, and Carsrud (2000) proposed an entrepreneurial intention model that incorporates personal and contextual factors, including individual attitudes, subjective norms, and perceived opportunities and barriers. Liñán and Chen (2009) found that both individual and contextual factors influenced entrepreneurial intentions in a sample of university students in Spain. In addition to personality, entrepreneurial education and social norms as external factors were significantly related to entrepreneurial intentions. Zhao et al. (2010) conducted a meta-analysis of studies examining the relationship between the five-factor model (FFM) of personality and entrepreneurial intention. They found that personality and contextual factors played a role in predicting entrepreneurial intentions. The five personality factors are openness to experience, conscientiousness, extraversion, agreeableness and neuroticism.

A review of existing research gave us three rationales for conducting this study. First, we identified that the results of multiple studies relating five personality factors to entrepreneurial intentions are somewhat mixed, indicating that this relationship may differ across various cultures and samples. For instance, Antoncic et al. (2015) compared the five dimensions of FFM with entrepreneurs and non-entrepreneur in Slovenia. Their results depicted that agreeableness, extroversion and openness to experience are more relevant traits for entrepreneurs, while contentiousness and neuroticism were more relevant for non-entrepreneurs. Biswas and Verma (2021) reported that four out of five dimensions of FFM significantly predicted management students' behavioural intention to adopt entrepreneurship. In their research which was conducted in India, agreeableness was not a significant predictor. Finally, Ismail et al. (2009) conducted a study with undergraduate students in Malaysia. Their study found that only openness and extraversion are related to entrepreneurial intention among

the five dimensions of FFM. These differences in how FFM relates to entrepreneurial intentions behave us to conduct research in Pakistan which is under represented in entrepreneurial research.

Second, there is a scarcity of literature that simultaneously analyze personality and contextual factors within a single research framework. Entrepreneurship in Pakistan has faced a number of challenges in recent years, including economic instability, inadequate access to finance, lack of infrastructure, and a weak regulatory environment. However, a number of factors have also supported the growth of entrepreneurship in Pakistan, including a large and growing population, a relatively young and educated workforce, and a growing middle class. Nevertheless, according to the Global Entrepreneurship Monitor (GEM) report for 2021, the rate of entrepreneurial activity in Pakistan is relatively low, with around 4% of the adult population actively starting or running new businesses. One of the reasons is a cultural norm that places greater emphasis on education and professional careers. Many families in Pakistan encourage their children to pursue higher education and secure jobs in traditional fields such as medicine, engineering, and law rather than starting their own businesses (World Bank, 2020). This can create social pressure for young people to pursue these types of careers rather than taking the risk of starting their own businesses. Similarly, entrepreneurial education in Pakistan has gained increasing attention in recent years as policymakers and educators have recognized the potential for entrepreneurship to contribute to economic development and job creation in the country (Ali, Ali, Khan, & Ali, 2021; Aslam, Awan, & Khan, 2012). Therefore, in this study, we aim to analyze social norms towards entrepreneurship and entrepreneurial education as antecedents of entrepreneurial intentions and personality FFM.

Third and most importantly, current entrepreneurial research has largely ignored the notion that personality traits shape the way individuals interpret and appraise their environment, which may influence their behavioural response (Ellsworth & Scherer, 2003). According to appraisal theory (Lazarus, 1991), individuals' perceptions of contextual factors can mediate the relationship between their personality and behaviour. Since personality profoundly affects how individuals appraise a situation, it is possible that due to varying personalities, students' intention towards entrepreneurship is influenced by how they appraise the social norms towards entrepreneurship and entrepreneurial education. Therefore, based on appraisal theory, we propose that social norms and entrepreneurial education mediate the relationship between FFM and entrepreneurial intentions.

Based on the above discussion, there are three research objectives of the current study:

1. To assess the impact of the five dimensions of FFM on the entrepreneurial intention of university students in Pakistan
2. To assess the impact of social norms and entrepreneurial education on the entrepreneurial intention of university students in Pakistan.
3. To assess if social norms and entrepreneurial education mediate the relationship between FFM and the entrepreneurial intention of university students in Pakistan.

LITERATURE REVIEW

This study is based on the “Resource-based view (RBV)” founded by Barney, (1991), which refers to the innovation capabilities, industry 4.0, and continuous improvement as valuable resources that can be used to achieve sustainability by the firms through gaining competitive advantage, (Barrutia & Echebarria, 2015). Moreover, nowadays, businesses with the help of talent usage and improvements enhance their sustainability edge. Therefore, a current study is based on the underpinning theory of RBV.

FFM and Entrepreneurial Intention

The five-factor model of personality is a widely accepted framework for understanding and measuring personality. It describes personality in five broad dimensions: openness, conscientiousness, extraversion, agreeableness, and neuroticism (Goldberg, 1990). The Big Five model of personality has been studied in relation to entrepreneurial intention. Research suggests that certain personality traits may be related to entrepreneurial intention, with some traits being more conducive to entrepreneurship and others being less so.

Openness to experience

Individuals high in openness to experience are characterized by risk-taking, original thinkers, artistic-minded, willing to try new things and show a broad range of interests (Goldberg, 1990). Because it is essential to identify an entrepreneurial opportunity, openness to experience can be seen as a significant factor for entrepreneurs. One of the key characteristics of entrepreneurship is the propensity for action. Entrepreneurs seize possibilities and turn concepts into successful companies. One of the primary jobs that entrepreneurs engage in during the entrepreneurial process is identifying business opportunities, which is a prerequisite when starting a new firm. Openness may also be related to entrepreneurship, as it may facilitate identifying and pursuing new opportunities. A previous meta-analysis found that entrepreneurs score higher on openness to experience than non-entrepreneurs (Zhao et al., 2010). This leads to our first hypothesis:

H1a: The openness to experience of business students is positively related to their entrepreneurial intentions.

Conscientiousness

Conscientiousness is characterized by a tendency towards efficiency, responsibility, diligence, attention to detail and organization (Goldberg, 1990). According to Zhao and Seibert’s (2006) meta-analysis of the FFM and entrepreneurship status, conscientiousness had a stronger association with entrepreneurship status than a management position. The overlap between conscientiousness and entrepreneurial characteristics lies in the need for achievement (Antoncic et al., 2015). People who are score high in need for achievement accept responsibility for their actions, favour choices with a modest amount of risk, detest monotonous, routine tasks, and are eager to grasp the specifics of decision outcomes. The urge for achievement can be regarded as a conscientiousness trait by contrasting these

traits' content with the content of the big five variables. Similarly, these characteristics are also common in entrepreneurs. In addition, conscientiousness may be related to entrepreneurship, as it may facilitate the development and implementation of efficient and well-researched business plans (Zhao et al., 2010). Therefore, we hypothesize that:

H1b: The conscientiousness of business students is positively related to their entrepreneurial intentions.

Extraversion:

Extraversion encapsulates an individual's outgoing, social, assertive, and confident nature (Goldberg, 1990). Given the outgoing and social nature of extrovert individuals and the need for an entrepreneur to meet and mingle with a variety of people in their business venture, such as customers, suppliers, vendors, investors etc., it is plausible that extraversion may be related to entrepreneurship. Moreover, it may facilitate the development of networks and the ability to pitch and sell ideas (Bazkiaei, Heng, Khan, Saufi, & Kasim, 2020). Furthermore, a recent study on a sample of wide age groups also reported a positive relationship between extraversion and entrepreneurial tendencies (Zelekha & Kavé, 2022). Therefore, we propose that:

H1c: The extraversion of business students is positively related to their entrepreneurial intentions.

Agreeableness

Agreeableness combines the dispositional traits of being cooperative and friendly (Goldberg, 1990). People high in agreeableness are more trusting, generous and likeable. However, the question that arises is how relevant is agreeableness trait for entrepreneurs. Often it is seen that entrepreneurs are more impulsive in their approach and achievement-oriented and have a high need for control (Antonicic et al., 2015). Therefore, entrepreneurs are less likely to be highly pleasing or agree with others. A meta-analytic review by Zhao et al. (2010) concluded from previous research that entrepreneurs are relatively low in agreeableness traits. Therefore, we propose that:

H1d: Agreeableness of business students is negatively related to their entrepreneurial intention.

Neuroticism

Neuroticism is the distortional tendency to experience negative emotions and exhibit emotional instability. These emotions include anger, irritability, sadness and anxiety (Goldberg, 1990). Individuals high in neuroticism do not respond efficiently to environmental stress. They appraise ordinary challenges as threatening and can interpret simple setbacks as hopelessness (Widiger & Oltmanns, 2017). The opposite of neuroticism is emotional stability. Previous literature indicates that emotional stability is a quality that makes a person successful in professional endeavours (Barrick, Mount, & Judge, 2001; Rauch & Frese, 2007). Emotional stable people are autonomous, independent and individualistic (Goldberg, 1990), all of which are qualities of entrepreneurs as well. This suggests that there may be a conflict between entrepreneurship and the neuroticism element. Neuroticism may

also be negatively related to entrepreneurship, as it is associated with lower risk and uncertainty tolerance. Hence, we propose that:

H1e. The neuroticism of business students is negatively related to their entrepreneurial intentions.

Social Norms, Entrepreneurial Education and Intentions

Social norms, which are the unwritten rules and expectations that govern behaviour within a society (Grandin & Barron, 2005), can influence an individual's decision to pursue entrepreneurship (Giannetti & Simonov, 2004). Research on university students has shown that social norms are related to opportunity confidence (Emami & Khajeheian, 2019). Social norms can both facilitate and inhibit entrepreneurial intentions. On the one hand, social norms that support entrepreneurship and risk-taking can encourage individuals to pursue entrepreneurial ventures. For example, a culture that values innovation and encourages individuals to take risks may foster a more entrepreneurial mindset.

On the other hand, social norms that discourage risk-taking and deviation from traditional career paths may inhibit entrepreneurial intentions. For example, individuals may be less likely to pursue entrepreneurial ventures if a society values stability and security over innovation and risk-taking. Overall, it can be concluded that the impact of social norms on entrepreneurial intentions depends on the specific standards that exist within a given society and the individual's perception of these norms. Furthermore, social norms explain the existence of non-monetary benefits one gain by indulging in entrepreneurial activities (Giannetti & Simonov, 2004). Therefore, we propose that:

H2: Positive appraisal of social norms for entrepreneurship leads to higher intention for entrepreneurship among business students.

Entrepreneurial education refers to educational programs and courses that teach entrepreneurship skills and knowledge. According to Wilson (2011), entrepreneurship education is designed to help individuals develop the attitudes, behaviours, and capacities needed to succeed as entrepreneurs. This type of education goes beyond simply teaching students how to start a business and encompasses various learning experiences within an educational environment. The ultimate goal of entrepreneurship education is to cultivate a desire for self-reliance, an awareness of opportunities, and an ability to adapt to change and tolerate risk and ambiguity. This is achieved by modifying attitudes and instilling attributes, intentions, behaviours, knowledge, and skills that enable individuals to participate fully in all aspects of life and create value, either for financial gain or personal satisfaction (Ndofirepi, 2020). Previous research has shown that students' perceptions of entrepreneurial education can influence their attitudes towards entrepreneurship and their willingness to engage in entrepreneurial activities (Ndofirepi, 2020; Vodă & Florea, 2019; Zhang, Li, Zeng, Zhang, & Lu, 2022). This leads to the conclusion that:

H3: Positive appraisal of entrepreneurial education leads to higher intention for entrepreneurship among business students.

Social Norms and Entrepreneurial Education as Mediators

According to the appraisal theory, individual behaviour is determined by the individual's appraisal of a situation, which involves evaluating the personal significance of the event, the potential consequences, and the available coping options (Lazarus & Folkman, 1984). An individual's Big Five personality traits (i.e., openness, conscientiousness, extraversion, agreeableness, and neuroticism) may influence their appraisal of entrepreneurial intentions by shaping the way they perceive social norms feasible for entrepreneurship and their perception of entrepreneurial education (Cheng & Furnham, 2016).

For example, an individual with a strong tendency towards openness and conscientiousness may be more likely to engage in entrepreneurial activities if they perceive entrepreneurial education as a positive and valuable experience (Şahin, Karadağ, & Tuncer, 2019). Those highly open to experience are likely to perceive entrepreneurial education as helpful and to be more receptive to new ideas and concepts, which may increase their interest in entrepreneurship. Similarly, Individuals with high levels of conscientiousness may be more likely to see the value in investing time and resources in entrepreneurial education and may be more likely to apply what they have learned to their business pursuits. Finally, individuals with high levels of extraversion may be more likely to seek entrepreneurial education opportunities and engage in networking and other activities that may support their entrepreneurial pursuits (Zhang et al., 2022).

On the contrary, those with high levels of agreeableness may be less likely to take risks and to pursue entrepreneurial opportunities and may be more likely to perceive entrepreneurial education as unnecessary or risky. Neuroticism may also negatively affect an individual's perception of entrepreneurial education. Individuals with high levels of neuroticism may be more risk-averse, less likely to pursue entrepreneurial opportunities, and less likely to see the value in entrepreneurial education. This above discussion leads to the following set of hypotheses

H4: a) openness to experience, b) conscientiousness, and c) extraversion are positive, while d) agreeableness and e) neuroticism are negatively related to students' perception of entrepreneurial education.

H5: Student's perception of entrepreneurial education mediates the relationship of a) openness to experience, b) conscientiousness, c) extraversion, d) agreeableness and e) neuroticism with entrepreneurial intention.

Similarly, suppose an individual has a robust internalization of social norms that support entrepreneurship. In that case, they may be more likely to pursue entrepreneurial intentions due to the positive appraisal of these norms (Emami & Khajeheian, 2019). For example, individuals with a high degree of openness, extraversion, agreeableness and conscientiousness may be more likely to pursue entrepreneurial activities if they perceive that such behaviour is socially acceptable and expected within their community or cultural group. On the other hand, those who do not internalize such norms

may be less likely to exhibit entrepreneurial intentions, even if they possess personality traits typically associated with entrepreneurial behaviour (Furnham & Cheng, 2016). Similarly, highly neurotic people are less likely to perceive social norms as desirable for starting their own venture due to risk averse nature leading to a lower intention for entrepreneurship.

This above discussion leads to the following set of hypotheses

H6: a) openness to experience, b) conscientiousness, c) extraversion d) agreeableness are positive while and e) neuroticism is negatively related to students' perception of entrepreneurial education.

H7: Students' perception of social norms mediate the relationship of a) openness to experience, b) conscientiousness, c) extraversion, d) agreeableness and e) neuroticism with entrepreneurial intention.

The following diagram depicts the conceptual framework of the study:

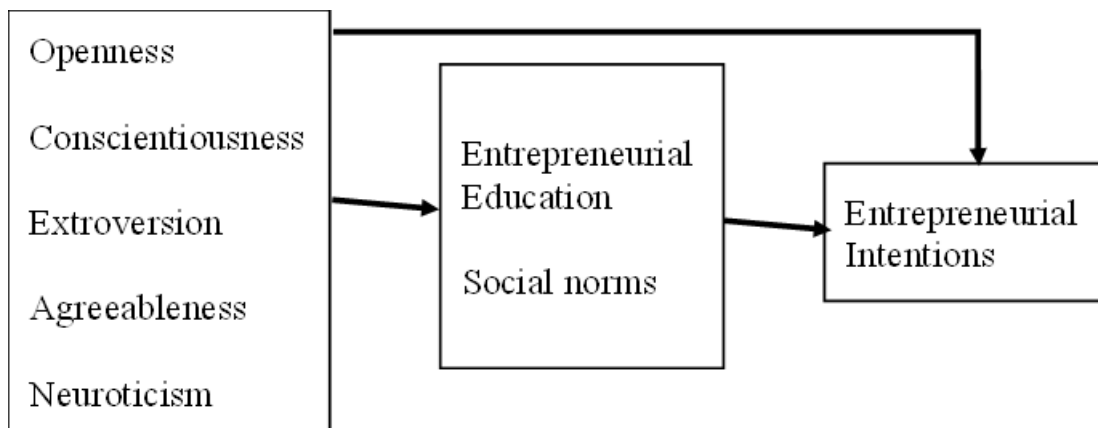


Figure 1: Schematic Diagram of the Conceptual Framework

RESEARCH METHODOLOGY

Research Design and Participants

This study used a quantitative research design with a survey method to collect data from 200 students enrolled in the final semester of a bachelor's in business administration program at a public sector university. The data was collected at a single point in time, and the sample was selected to minimize variability in contextual factors, particularly entrepreneurial education. All of the students in the sample had already taken an entrepreneurship course in the seventh semester, and the sample was evenly split between males and females (58% males and 42% females). The average age of the sample was 20.4 years, with a standard deviation of 2.1 years. Of the total sample, 46.5% belonged to a business family. Family income was as follows: 0.5% of the sample had less than 25 thousand rupees per month, 44.5% had family income between 25 thousand and 50 thousand rupees per month; 20.5%

had family income between 100 thousand and 200 thousand rupees per month and 13.5% had family income greater than 200 thousand rupees per month.

Measurements

We adopted a five-item scale from Liñán and Chen (2009) to measure entrepreneurial intentions. The questions were formulated to gauge a student's intention to adopt entrepreneurship as a profession in the future. The sample question is, "My professional goal is to become an entrepreneur." The FFM was measured by 25 items adopted from Goldberg (1999), with five items each for every dimension, such as "I see myself as someone who: is talkative (Extroversion), has a forgiving nature (Agreeableness), is reliable (Consen), is depressed (neuro), is a deep thinker (open). We used four items to measure social norms. Three items were adapted from Emami and Khajeheian (2019). We slightly rephrased the three items to make them align with our research. These items were as follows 1) The important people in my life think that doing business is necessary. 2) My close friends and/or family elders welcome my idea of doing business 3) Those whose ideas are very important to me will support (emotionally) me in the entrepreneurial venture. We added an item to include the acceptance of an entrepreneurial mindset. The item is as follows 4). My circle of close people is encouraging if I want to discuss a new idea about my own business. Finally, students' perception of entrepreneurial education was measured by a scale developed on the pattern of Turker and Sonmez Selçuk (2009) scale of perceived educational support. Four Items are: 1) Entrepreneurship course curriculum has taught me the necessary technical and business management skills for starting a new business, 2) Entrepreneurship course has encouraged me to develop creative business ideas, 3) Entrepreneurship course has improved my ability to identify new business opportunities 4) Entrepreneurship course has helped me to develop an entrepreneurial mindset. All the questions were measured on a five-point Likert scale from 1) strongly disagree, 2) disagree, 3) neither agree nor disagree, 4) agree, 5) strongly agree.

Data Analysis

Partial least squares structural equation modelling (PLS-SEM) is a statistical technique that is used to estimate the relationships between latent (unobserved) variables and their indicators (observed variables). PLS-SEM is well-suited for analyzing data from research designs that involve multiple paths and interactions between variables, as it can handle complex models with multiple latent variables (Hair, Hult, Ringle, & Sarstedt, 2017). In PLS-SEM analysis, a two-step procedure is adopted. First, the proposed model is checked for measurement model. We conducted a reliability analysis to assess the internal consistency of the measurement model. This was done by calculating composite reliability and Cronbach's alpha and examining the factor loadings for each item. We established convergent and discriminant validity of the measurement model by calculating the average variance extracted (AVE) and examining the Fornell-Larcker criterion and HTMT ratios (Henseler, Ringle, & Sarstedt, 2015).

The second stage in PLS-SEM analysis is to test the structural model. The structural model specifies the relationships between the latent variables. It includes the path coefficients representing the strength and direction of the relationships between the latent variables. We used the 3000 bootstrapping functions to obtain bias-corrected and accelerated (BCa) confidence intervals to assess the statistical significance of the model's direct path coefficients and mediation (specific indirect effects). Moreover, we tested the structural model for the coefficient of determination (R^2) to explain the variance in the dependent variables caused by the independent variables. F-square statistics were also reported for effect size.

RESULTS AND DISCUSSION

Measurement Model

We loaded all the reflective factors on their respective latent construct. First, we removed all the factors less than 0.5 loadings and checked for AVE values. Next, we removed a few factors with relatively low loading until all of the factors had adequate AVE values greater than 0.5. Finally, we removed two items from extroversion, one from agreeableness, and one from neuroticism. Table 1 depicts evidence for reliability (Cronbach alpha >0.60 and composite reliability >0.70) and convergent validity (AVE > 0.50) of all of the constructs (Hair et al.). Table 2 depicts evidence for discriminant validity (Fornell-Larcker method and HTMT). For the Fornell-Larcker method, the square root of the AVE of each construct should be greater than the correlation among the constructs. HTMT value less than 0.9 indicate discriminant validity between latent constructs (Teo et al. 2008).

Table I: Reliabilities and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Intention	0.913	0.935	0.743
Social Norms	0.855	0.902	0.698
Education	0.861	0.900	0.645
Agreeableness	0.711	0.821	0.535
Conscientiousness	0.794	0.858	0.549
Extrovert	0.656	0.812	0.591
Neuroticism	0.878	0.907	0.711
Openness	0.809	0.867	0.566

Table II: Discriminant validity (Fornell-larcker value and HTMT ratios)

		1	2	3	4	5	6	7	8
1	Agreeableness	0.731	0.867	0.652	0.571	0.617	0.183	0.743	0.636
2	Conscientiousness	0.652	0.741	0.813	0.682	0.79	0.079	0.845	0.797

3	Education	0.516	0.688	0.803	0.775	0.604	0.067	0.687	0.829
4	Intention	0.465	0.596	0.691	0.862	0.515	0.116	0.677	0.809
5	Extrovert	0.422	0.575	0.463	0.407	0.769	0.145	0.617	0.563
6	Neuroticism	0.119	-0.009	-0.01	-0.118	-0.089	0.843	0.127	0.118
7	Openness	0.566	0.691	0.581	0.593	0.463	0.047	0.753	0.763
8	Social Norms	0.498	0.671	0.714	0.717	0.425	-0.109	0.644	0.835

Note: bold value in the diagonal represents the square root of AVE values. Values below the diagonal represent a correlation between latent constructs. Values above the diagonal represent HTMT values.

Structural Model

First, we tested the theoretical model by adding all of the demographics as the control variable. The results revealed none of the demographics was significantly related to entrepreneurial intention. Control variables were not retained for further analysis. As depicted in table 3, the re-estimation of the structural model revealed that openness to experience $\beta = 0.157$, $p < 0.05$ was a significant positive and neuroticism $\beta = -0.087$, $p < 0.05$ was a significant negative predictor of entrepreneurial intention. Therefore, H1a and H1e were accepted, while H1b, H1c and H1d were not accepted. Our results revealed that social norms $\beta = 0.355$, $p < 0.001$ and entrepreneurial education $\beta = 0.324$, $p < 0.001$ were significantly and positively related to entrepreneurial intention. Therefore, H2 and H3 were accepted. We found mixed results in the direct relationship between five personality factors and mediators. Openness to experience was positively related to Entrepreneurial Education, $\beta = 0.177$, $p < 0.01$ and Social Norms, $\beta = 0.343$, $p < 0.001$. Conscientiousness was positively related to Entrepreneurial Education, $\beta = 0.469$, $p < 0.001$ and Social Norms, $\beta = 0.390$, $p < 0.001$. Finally, neuroticism was significantly related to social norms, $\beta = -0.129$, $p < 0.05$. Hence, H5a, H6a, H5b, H6b, and H6e were accepted while H5c, H6c, H5d, H6d and H5e were rejected.

Table III: Path Coefficients, P-Values and Effect Size

Hypothesis	Relationship	Beta	P Values	Significance	F-Square
H1a	Openness -> Intention	0.157	0.029	yes	0.027
H1b	Conscientiousness -> Intention	-0.011	0.455	no	0
H1c	Extrovert -> Intention	0.014	0.406	no	0
H1d	Agreeableness -> Intention	0.044	0.284	no	0.003
H1e	Neuroticism -> Intention	-0.087	0.039	yes	0.018
H3	Education -> Intention	0.324	0	yes	0.106
H2	Social Norms -> Intention	0.355	0	yes	0.121
H5a	Openness -> Education	0.177	0.013	yes	0.031
H6a	Openness -> Social Norms	0.343	0	yes	0.123
H5b	Conscientiousness -> Education	0.469	0	yes	0.163
H6b	Conscientiousness -> Social Norms	0.39	0	yes	0.119
H5c	Extrovert -> Entre Education	0.076	0.17	no	0.007
H6c	Extrovert -> Social Norms	0.004	0.471	no	0

H5d	Agreeableness -> Entre Education	0.081	0.166	no	0.007
H6d	Agreeableness -> Social Norms	0.063	0.219	no	0.004
H5e	Neuroticism -> Entre Education	-0.017	0.39	no	0.001
H6e	Neuroticism -> Social Norms	-0.129	0.017	yes	0.034

The F^2 values indicate that effect sizes range from low to medium. The adjusted R Square values for social norms, and entrepreneurial education and entrepreneurial intention were 0.517, 0.489 and 0.587 respectively are substantial. The FFM, social norms and entrepreneurial education together explains 58.7% variance in entrepreneurial intentions. The FFM explains 51.7% variance in social norms and 48.9% variance in entrepreneurial education.

Mediation Analysis

There were 10 mediation hypotheses in our study, out of which five were accepted. The bootstrapping results (Table 4) show that entrepreneurial education and social norms significantly mediated the relationship between openness to experience, conscientiousness, and entrepreneurial intention. However, only social norms negatively mediated the relationship between neuroticism and entrepreneurial intentions.

Table IV: Bootstrapping results for Mediation Testing

Hypothesis	Mediation	Beta	5.00%	95.00%	Significance
H5a	Openness -> Education -> intention	0.057	0.017	0.122	yes
H5b	Conscientiousness -> Education -> intention	0.152	0.075	0.256	yes
H5c	Extrovert -> Education -> intention	0.024	-0.013	0.072	no
H5d	Agreeableness -> Education -> intention	0.026	-0.016	0.082	no
H5e	Neuroticism -> Education -> intention	-0.006	-0.04	0.026	no
H7a	Openness -> Social Norms -> intention	0.122	0.058	0.213	yes
H7b	Conscientiousness -> Social Norms -> intention	0.139	0.074	0.224	yes
H7c	Extrovert -> Social Norms -> intention	0.001	-0.035	0.034	no
H7d	Agreeableness -> Social Norms -> intention	0.022	-0.02	0.086	no
H7e	Neuroticism -> Social Norms -> intention	-0.046	-0.095	-0.009	yes

Discussion

Entrepreneurial intention is important because it is a crucial predictor of entrepreneurial behaviour (Krueger Jr et al., 2000). Individuals with strong entrepreneurial intentions are more likely to take the steps necessary to start and grow a business, such as seeking out opportunities, developing a business plan, and seeking funding. In addition, entrepreneurial intention can help individuals develop the skills

and mindset necessary to succeed as entrepreneurs, such as creativity, critical thinking, and resilience. Therefore, entrepreneurial intention for Pakistani students is necessary to develop the skills and mindset necessary to succeed as an entrepreneur (Batool, Razzaq, & Imam, 2022; Mahmood, 2016).

The study had three objectives, and multiple hypotheses were formulated to analyze these objectives. First, we tested the five-factor model of personality as the determinant of students' entrepreneurial intentions. FFM is an important personality framework for individual assessment to opt for entrepreneurship as a career choice. The findings revealed that some of the dimensions are more important determinants while others do not have many contributions. Second, we analyzed the influence of social norms for entrepreneurship and entrepreneurial education on entrepreneurial intention. As hypothesized, we found a significant relationship between students' perception of entrepreneurial education and conducive social norms with entrepreneurial intentions. Third, using the appraisal theory as theoretical underpinning, we tested for social norms and entrepreneurial education as a mediator between the five-factor model and entrepreneurial intention.

As expected and in line with previous studies (Zhao & Seibert, 2006; Zhao et al., 2010), we found openness to experience to be the most important determinant of the students' entrepreneurial intention. It was also revealed that individuals high in the personality trait of openness of experience are more in favour of entrepreneurial education and perceive the social norms as more conducive to starting their own entrepreneurial venture. Finally, we found that both perceived social norms and entrepreneurial education partially mediate the openness-entrepreneurial intention relationship. The strong relationship between openness to experience with entrepreneurial outcomes is not surprising since the trait is a combination of creativity, imaginativeness, and risk taker are the most relevant attributes of an entrepreneurial mindset.

Another personality trait which seems directly important to the positive appraisal of social norms and entrepreneurial education and indirectly important to entrepreneurial intentions is conscientiousness. It seems very intuitive that people dispositioned to show perseverance, discipline, carefulness and efficiency are more likely to engage in entrepreneurial activities only when they feel fully prepared and have analyzed the social situation (Antoncic et al., 2015). Therefore, they feel entrepreneurial education is one aspect of preparing for the future venture. Similarly, their future business planning also involves a positive appraisal of social norms or conducive environment to operate their business efficiently. Perhaps this is why entrepreneurial education and social norms fully mediate the relationship between conscientiousness and entrepreneurial intentions since there is no significant direct relationship but only an indirect one.

Contrary to our expectations, we found that a more extroverted person does not predict entrepreneurial perceptions (education and social norms) and intentions. Another study conducted in the USA also found similar results (Butz, Hanson, Schultz, & Warzynski, 2018). One may think that entrepreneurs should be more extroverted as networking skills and assertiveness are important attributes of a successful business. However, extroverts may be more attracted to social or collaborative ventures than solo entrepreneurship. This may lead to a weaker relationship between extraversion and

entrepreneurial intentions. Similarly, in today's digital age, many business opportunities can be pursued remotely or online, which may be more suitable for introverts who prefer to work independently or in quieter, less social settings. Introverts may also be well-suited to online businesses because they tend to be more reflective and analytical, which can be helpful when developing and executing a business plan. They may also be more focused and efficient, which can be beneficial when working independently.

We also found no evidence that agreeableness is significantly related to entrepreneurial education, social norms and entrepreneurial intention. Agreeable people are cooperative, sympathetic, and kind-hearted. However, entrepreneurial behaviour may involve taking risks and making difficult decisions that may go against the wishes of others. Agreeable individuals may be less likely to engage in this behaviour due to their tendency to avoid conflict and prioritize maintaining positive relationships. In addition, agreeableness is often associated with a desire for stability and security, which may not be conducive to the uncertainty and risk-taking that are often involved in entrepreneurial ventures.

Neuroticism is a negatively poised dimension of FFM. Although in our results, neuroticism was not related to entrepreneurial education, we found evidence that it is statistically significantly and negatively related to social norms and entrepreneurial intentions. This result is in corroboration with previous findings (Butz et al., 2018; Zhao et al., 2010). In addition, social norms also negatively mediated the neuroticism-entrepreneurial intention relationship. This negative relationship shows that people who are predisposed to be impulsive, emotionally unstable and have unreasonably negative thoughts do not intend to opt for self-employment, which requires the ability to handle stressful situations and have self-confidence (Bazkiaei et al., 2020). Neuroticism is also linked to lower self-esteem and self-confidence (Surtees & Wainwright, 1996), which may make individuals less likely to believe in their own abilities to succeed as entrepreneurs.

To the best of our knowledge, this is the first research to study the mediating role of entrepreneurial education and social norms in the relationship between FFM and entrepreneurial intentions. Overall, these results have helped us understand how five types of personality dimensions related to the entrepreneurial intention of business students in Pakistan. Our results, in some cases, are congruent with existing research, but there are some interesting deviations as well. For instance, the mediating effect of contextual factors underlines the importance of social influence and educational factors for enhancing the willingness of openness to experience conscientious and emotionally stable people towards entrepreneurship.

Research on the relationship between the Big Five personality traits, social norms, entrepreneurial education and entrepreneurial intentions among business students can be important for several reasons. This study has contributed to understanding the psychological and personal factors influencing entrepreneurial behaviour. This knowledge can inform the development of theories and models of entrepreneurial behaviour, which can be used to guide future research and practice. Understanding how these factors influence entrepreneurial intentions can help researchers, educators, and practitioners to identify the most effective strategies for encouraging and supporting entrepreneurial

pursuits among business students. It can also help identify potential challenges or barriers individuals may face when pursuing entrepreneurial careers, such as low self-confidence or a lack of knowledge about entrepreneurship. This knowledge can be used to develop interventions or support systems to help individuals overcome these challenges.

CONCLUSION AND POLICY IMPLEMENTATION

Implications

Research on the relationship between the Big Five personality traits, social norms, entrepreneurial education and entrepreneurial intentions among business students can be important for several reasons. This study has contributed to understanding the psychological and personal factors influencing entrepreneurial behaviour. This knowledge can inform the development of theories and models of entrepreneurial behaviour, which can be used to guide future research and practice. Understanding how these factors influence entrepreneurial intentions can help researchers, educators, and practitioners to identify the most effective strategies for encouraging and supporting entrepreneurial pursuits among business students. It can also help identify potential challenges or barriers individuals may face when pursuing entrepreneurial careers, such as low self-confidence or a lack of knowledge about entrepreneurship. This knowledge can be used to develop interventions or support systems to help individuals overcome these challenges.

Limitations

There are several limitations of the current study, which can urge future researchers to repeat this research to enhance our findings' validity. One limitation of our study is the use of a non-representative sample. Our sample consisted of business undergraduate students at a single university. However, our aim was to test the impact of personality and entrepreneurial education on intentions. First, using a sample from a single department allowed us to control for the nuisance effect of situation factors that could have arisen while using a sample from different universities. Second, in Pakistan, the entrepreneurship course is mostly offered to the business students. Nevertheless, we recommend that future researchers use a wider sample by adding more public and private universities.

Another limitation of our study is the use of self-report measures to collect data. Self-report measures are subject to several potential biases, such as response and self-report bias. While we took steps to reduce these biases by using well-validated measures and providing clear instructions for completing the survey, these biases may still have influenced the results. To address this limitation in future research, it would be useful to use multiple methods to collect data, such as interviews or observations, to provide a more comprehensive understanding of the phenomenon being studied.

Overall, these limitations should be considered when interpreting the results of our study. While our findings provide important insights into the relationship between personality and entrepreneurial

intentions among business students, it is important to acknowledge the limitations of our study and consider the implications for future research.

Conclusion

The study of the relationship between the Big Five personality traits and entrepreneurial intention with the mediating role of entrepreneurial education and social norms revealed interesting findings. While entrepreneurial education and social norms were found to mediate the relationship between openness and conscientiousness and entrepreneurial intention, they did not mediate the relationship between extroversion, agreeableness, and neuroticism and entrepreneurial intention.

These findings have important implications for the development of interventions to promote entrepreneurship. Specifically, interventions that focus on promoting entrepreneurial education and changing social norms may be more effective for individuals who have higher levels of openness and conscientiousness. However, interventions that target other personality traits may need to focus on different factors, such as access to resources, mentorship, or other support systems.

Overall, this study highlights the importance of considering the broader social and economic context in which entrepreneurship takes place, as well as the complex interplay between individual differences and contextual factors. Further research is needed to better understand the mechanisms through which personality traits influence entrepreneurial intention and to develop more effective interventions that take into account these complex relationships.

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