

Revisiting Emotional Competencies and Entrepreneurial Intention: Exploring the Mediating Role of Self-Efficacy and Entrepreneurial Attitude

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ABSTRACT

Keywords:

Emotional competencies, entrepreneurial intentions, theory of planned behavior, cognitive variables, undergraduate business students, Khyber Pakhtunkhwa

This study examined how emotional competencies (EC) and subjective norms (SN) affect entrepreneurial intentions (EI) among undergraduate business students in Khyber Pakhtunkhwa. An enhanced Theory of Planned Behavior was used to analyze EC's direct and indirect effects on EI through the antecedents of cognitive variables. The survey collected primary data from 351 undergraduate business students at ten public sector management science colleges in Khyber Pakhtunkhwa. Structural equation modeling (SEM) through SmartPLS was used to examine the mediating role of self-efficacy and entrepreneurial attitude. The findings indicated that EC strongly and significantly influenced EI and its cognitive variables, including entrepreneurial attitude (EA) and self-efficacy. However, the results did not show a direct relationship between higher EC and stronger entrepreneurial intention, suggesting that emotional competencies may not necessarily increase EI. The study implies that individuals with higher EC are more likely to become entrepreneurs because their cognitive abilities, which are linked to emotional competencies, are better. Entrepreneurship education programs should include EC-focused material and methodology to develop undergraduate business students' entrepreneurial intentions and behaviors. According to the study, academics and policymakers should prioritize cognitive and emotional competencies to foster entrepreneurship and economic growth in the country.

INTRODUCTION

Commerce and business educational institutions primarily generate knowledge and stimulate economic activities (Harrison & Turok, 2017; Trippel et al., 2015; Lööf & Broström, 2008;

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Goldstein & Renault, 2004). These educational institutions work as agents in the entrepreneurial process and are crucial for shaping students' entrepreneurial behaviors. Thus, student entrepreneurship is intentional and voluntary, especially the decision to become an entrepreneur (Presley et al., 2010; Krueger et al., 2000). Entrepreneurial intentions usually result in new firms (Linan & Santos, 2007; Prodan & Drnovsek, 2010; Souitaris et al., 2007). GUESSS (Global University Entrepreneurial Spirit Students' Survey) Pakistan (2020-2021) found that 27.5 percent of university graduates intend to become entrepreneurs. However, 36.5% of students started their firm five years after graduation, highlighting their entrepreneurial challenges. The report also found that over 40% of students have not taken university entrepreneurial programs, workshops, or courses. Yet, it is another challenge for policymakers and competent authorities of educational institutions to create an entrepreneurial climate and conducive environment within the academic institutions (Samaranayake & Takemura, 2020). Cardon et al. (2012) said that entrepreneurship includes an emotional component, highlighting the importance of cognitive characteristics in inducing entrepreneurial intention. Emotional processes are widely studied in the business context, which affects the individual approach, including the organizational strategy and interpersonal characteristics (George, 2000; Weiss et al., 1999) and the decision-making process (Isen & Labroo, 2012; Isen, 2001). Judgment and behavior are influenced mainly by emotional processes (Cohen, 2005), which also helps us to understand the entrepreneurial views, actions, and decisions that occur, particularly in an uncertain situation (Baron, 2008). The specific region of the brain processes the emotional and cognitive mechanism, which is the individual strength to make their judgment in the decision-making process and to express their feelings (Baron et al., 2007; Gross, 2004).

As mentioned earlier, Baron (2008) documented the vital role of the emotional process in ongoing entrepreneurship studies, observing that cognitive processes affect several dimensions of cognitive behaviors. Identifying and addressing mental and emotional issues is also essential because the environment is unpredictable and uncertain in which potential entrepreneurs operate. Therefore, it is tough to separate and isolate the entrepreneurial intentions from the rational and emotional points of view because some aspects of emotions affect the processing of cognitive information (i.e., decision-making) on the behavioral aspects (Welpel et al., 2012, p. 70); Boyatzis, 2008). Hayton and Cholakova (2012) proposed a framework based on the expectancy theory of motivation, which was introduced by (Vroom, 1964) and which is also based on the emerging theory of Planned Behavior (Ajzen,

1991) that significantly simplifies the understanding of how individual emotional competencies can affect the human perceptions of entrepreneurial intentions. The theories mentioned above also acknowledge that emotional intelligence (EI) leads to proactive action to minimize uncertainty over the accuracy of business ideas, feasibility, and desirability (Dimov, 2007).

Previous studies show linkages between emotional intelligence and entrepreneurship (Pradhan & Nath, 2012; Rhee & White, 2007; Shane & Venkataraman, 2000) and documented that becoming an entrepreneur results from personality attributes. Those persons who usually exhibit a strong level of entrepreneurial intentions would produce more positive behavior and therefore find more to regulate their emotions (George, 2000), thus showing more tendencies toward emotional competencies (EC), which promotes entrepreneurial intentions among the individuals (Vuorio et al., 2022; Padilla et al., 2014). This study focuses on emotional competency (EC) instead of emotional intelligence (EI), and this consideration is for several reasons. Emotional competencies differ from the skills of intelligence, which reflect the ability to do something efficiently. Individuals can presumably change their potential into practical actions within a particular course. Therefore, this study used the concept of emotional competencies as a tool instead of the concept of emotional intelligence. However, no research has examined how emotional competencies affect entrepreneurial intentions among undergraduate business students in Khyber Pakhtunkhwa. Studies investigated earlier from an educational perspective that the training of emotional competencies could improve the ability of a person to make better decisions after regulating their emotions Brackett et al., (2012). However, the education sector in this area is essential to study, mainly through the emerging evidence that young graduates lack interpersonal skills, which are highly demanded in the marketplace (Bedwell et al., 2014).

Problem Statement

All emerging countries, like Pakistan, where millions of business school students graduate each year, face unemployment (Shah et al., 2022). However, business students now choose government jobs over creating their enterprises (Yates, 2022; Ullah et al., 2020). Therefore, no job creation is encouraged (Li et al., 2019). Pakistan lags behind neighboring countries due to a lack of entrepreneurs (Sarwar et al., 2021). Current schooling does not meet the needs of budding entrepreneurs (Shah et al., 2022). The education system emphasizes writing and memorization, enabling students to create new business ideas and take risks to start new businesses in the country (Zaman, 2013). Commercial and business educational institutions

must identify and develop potential entrepreneurs among business graduates to solve this problem (Ahmad et al., 2018). Business graduates' cognitive skills boost their intentions toward entrepreneurship (Ramo et al., 2009). Thus, emotional competencies like self-awareness, self-regulation, self-motivation, social skills, and, most importantly, empathy influence business start-up decisions. That's why business students' emotional issues can impact key business aspects (Boyatzis & Saatchioglou, 2008). In addition to emotional difficulties, self-efficacy influences business graduates' entrepreneurial intentions (Zellweger et al., 2011). Even after graduating, students are unsure of what to start, how to establish a business, and achieve goals. Students lack a business attitude since they don't want to adapt to new market trends and think large for their jobs (Kolvereid, 1996). Subjective norms (social pressure) also hinder business graduates' start-up efforts (Sarwar et al., 2021). Subjective norms are the expectation that a significant individual or group will endorse a specific behavior (Velástegui & Chacón, 2021). The subjective norm results from social pressure, which portrays people as conforming to others' beliefs (Sarwar et al., 2021).

However, no research has examined how emotional competencies affect entrepreneurial intention in Khyber Pakhtunkhwa business graduates. Furthermore, there is evidence that young graduates in this region lack the interpersonal skills highly demanded in the marketplace (Bedwell et al., 2014). Therefore, the education sector in Khyber Pakhtunkhwa needs to focus on developing the emotional competencies of business graduates to promote entrepreneurship and improve their ability to make good decisions after regulating their emotions (Brackett et al., 2012; Boyatzis & Saatchioglou, 2008).

LITERATURE REVIEW

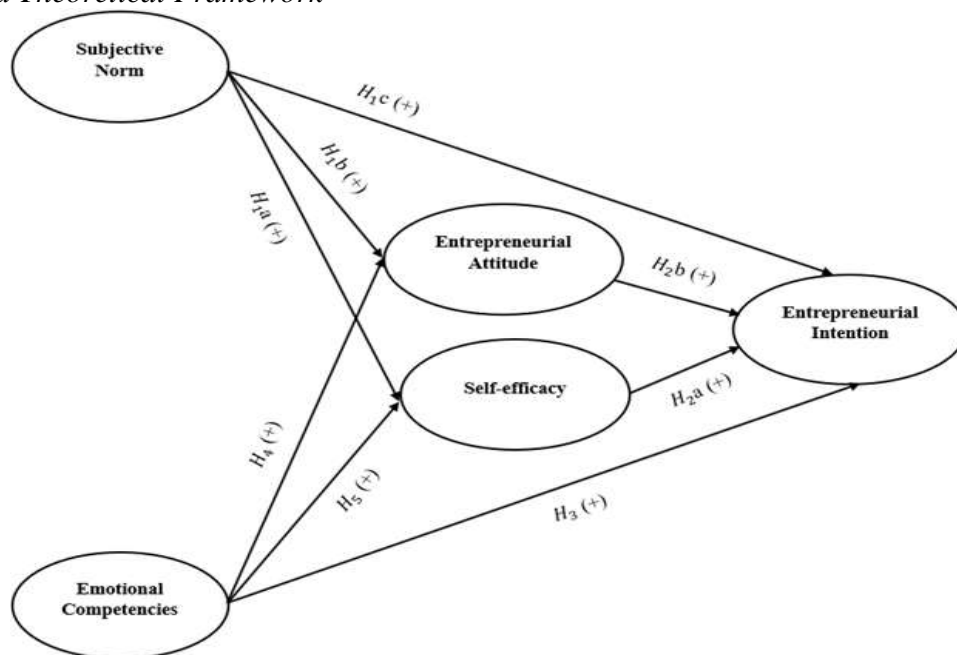
Recent entrepreneurial intention research has extensively examined the Daniel Goleman emotional competency paradigm. The paradigm emphasizes emotional awareness, self-regulation, motivation, empathy, and social skills. Multiple studies show that each element affects entrepreneurial intentions. Chen et al. (2020) discovered that Chinese university students with emotional awareness had higher entrepreneurship intentions. According to this study, emotionally aware people are more likely to have the self-knowledge to find and explore economic possibilities. According to Neider and Schmitt-Rodermund (2016), Self-regulation was positively associated with entrepreneurial intention in German university students. This study shows that self-regulation helps entrepreneurs manage stress and uncertainty. According to Huang et al. (2019), motivation is strongly correlated with entrepreneurial goals in Taiwanese university students. According to this study, motivated

people are more likely to overcome hurdles to reach entrepreneurial goals. Al-Jubari et al. (2019) said that empathy positively correlated with entrepreneurial goals in Iraqi university students. Empathetic people can better grasp stakeholders' needs and viewpoints, including consumers, employees, and partners. Finally, Carvalho et al. (2018) discovered that Brazilian university students with social skills had higher entrepreneurial inclinations. According to one study, solid social skills help people create relationships with stakeholders and communicate their ideas. Overall, the literature links the Daniel Goleman model of emotional competency to entrepreneurial intentions. Aspiring entrepreneurs with emotional abilities are more likely to overcome emotional hurdles, create solid stakeholder connections, and achieve their business goals.

Based on the theory of planned behavior (TPB), the current study proposed the following theoretical framework;

Figure 1

Proposed Theoretical Framework



HYPOTHESES DEVELOPMENT AND THEORETICAL FOUNDATIONS

Entrepreneurial Attitude, Subjective norms, and self-efficacy affect college students' entrepreneurial intention.

TPB predicts EI with rational components such as subjective norms (SN), self-efficacy (SE), and entrepreneurial attitudes (EA) (Ajzen 1991). These are adequate indicators of intention and behavior in many fields of entrepreneurship study. Reference persons, including family, friends, and coworkers, can strongly influence EI, including entrepreneurship (Ajzen 2001;

Chang et al. 2009). Reference people's values increases SE perceptions (Cooper 1993; Fernández-Pérez et al. 2014; Matthews and Moser 1995). For students who rely on their family financially and emotionally, emotional support can impact their decision to stay or resign (Liñán and Santos 2007; Chang et al. 2009). SN has a favorable and direct link with EI in entrepreneurship research (Usaci 2015; Karimi et al. 2014; Engle et al. 2010; Carr and Sequeira 2007; Kolvereid and Isaksen 2006;), some other Scholars say it may be the poorest of the three indications. Others found that SN has little or no impact in Western society, where people are more independent and respect their goals and successes (Schlaegel and Koenig 2014). Multiple studies indicate that SN indirectly affects EI by influencing SE and EA (Liñán et al. 2011; Liñán and Chen 2009; Matthews and Moser 1996; Cooper 1993; Scherer et al. 1991). This study examines direct and indirect effects to understand SN's function. Thus:

H₁: *SN directly and positively affects college students' SE (H1a), EA (H1b), and EI (H1c).*

The Influence of Entrepreneurial Attitude on Entrepreneurial Intentions

Studies show that EA predicts entrepreneurial intention and behavior. Students will gain confidence in their capacity to detect business possibilities early or take entrepreneurial risks with higher degrees in this industry (Kickul et al. 2009). Degrees in EA are valuable; thus, students are more likely to invest time and money (Schwarz et al. 2009). SE predicts university EI best, argues Karimi et al. (2014). García-Rodríguez et al. (2015) said that EA and SE perceived Behavioral Control as antecedents of EI. Yurtkorua et al. (2014) found EA prediction was higher than SE. Thus:

H₂: *EA (H2a) and SE (H2b) positively affect college students' EI.*

College students' emotional competencies and entrepreneurial intentions

Entrepreneurship theory has focused on competencies. Competence refers to the ability to effectively apply one's knowledge and skills in various settings (González and Wagenaar 2003; Boyatzis 1982; McClelland 1973). Technical, methodological, participative, and self-knowledge underpin it (Yániz 2008). Competency is final and contextual. Thus, good managers have this feature. Great potential does not mean being competent (Cherniss and Goleman 2001). Competencies commonly measure learning program success. They impact job performance, can be evaluated based on established criteria, and can be developed through training. Academic literature and entrepreneurship programs prioritize business over entrepreneurial skills (Hills 1988; Solomon et al. 2002). Entrepreneurship skills should be taught alongside business skills (Rasmussen et al., 2011).

Cardon et al. (2012) say entrepreneurship is emotional. Some values, attitudes, motives, personality traits, and talents predispose people to entrepreneurship (Collins et al. 2004; Rauch and Frese 2006; Stewart and Roth 2007). Zampetakis et al. (2009) found that entrepreneurial and organizationally supported employees have more robust emotional intelligence, which helps them manage, monitor, and analyze their and others' emotions. Emotional intelligence recognizes, understands, and employs emotional information to operate well (McClelland 1973; Boyatzis 2009). Unlike IQ, emotional competence can be taught and mastered; hence, authors prefer it (Brasseur et al. 2013; Kotsou et al. 2011). How someone detects, expresses, interprets, controls, and uses their own and others' emotions. The related behaviors people perceive and manage their own and others' feelings are called emotional competencies (EC) in this study. EC predicts leadership, management, and entrepreneurship (Padilla-Meléndez et al. 2014). Our priorities include environmental connections, learning, and personal development (Boyatzis & Saaticioglu 2008). EC understanding evolved, according to Garner (2010). Initially generic, emotional competency now includes several emotion-related skills. To effectively navigate emotions, one must possess emotional awareness, proficiency in utilizing and comprehending emotion-related vocabulary, comprehension of facial expressions and their triggers, knowledge of cultural norms about the emotional display, and mastery in regulating emotional intensity to suit the context and audience. Based on emotional intelligence, Goleman (1998) says emotional competence is an acquired capacity that leads to excellent work performance. Emotional intelligence is the ability to recognize, understand, and use emotional information about oneself, social intelligence about others, and cognitive intelligence about thinking and analyzing data and situations.

This study utilizes emotional competencies (EC) as a behavioral proxy for emotional intelligence, drawing from the works of Goleman (1998) and Cherniss and Goleman (2005). EC is categorized into five distinct clusters or groups: self-awareness, self-regulation, self-motivation, empathy, and social skills. These clusters encompass the ability to recognize and understand one's emotions, regulate and control emotional responses, maintain motivation, demonstrate empathy towards others, and consistently and effectively exhibit appropriate social skills. Research conducted by university students suggests that emotional intelligence (EC) may have an impact on entrepreneurship, as indicated by Goleman (1998) and Padilla-Meléndez et al. (2014). Furthermore, Finch et al. (2015) studied the fact that EC may be a stronger predictor of success than personality traits. Thompson (2009) said that students who

possess a greater level of entrepreneurial intentions (EI) also tend to have higher levels of emotional competencies (EC). This is crucial for effective management, leadership, and entrepreneurship. Based on these factors, we put forward the following hypothesis:

H₃: *College students' EC directly and positively affect their EI.*

Impact of Emotional Competencies on Entrepreneurial Attitude

How emotional competencies affect self-efficacy and entrepreneurship. EA assesses entrepreneurialism (Ajzen and Fishbein 1980). EC may alter EA in entrepreneurial phenomena, while competencies shape EI through EA (Krueger 2003). Emotions and incentives drive entrepreneurs' EA (Gray et al. 2006). Separating emotional and intellectual perspectives is complex because emotions alter how cognitively processed information affects behavior (Welpel et al. 2012, 70). Emotional intelligence improves EA and increases student entrepreneurship (Souitaris et al., 2007). Strengthened EC improves EA, productivity, creativity, risk-taking, and entrepreneurship. Thus:

H₄: *EC directly and positively affects college students' EA.*

The Influence of Emotional Competencies on Self-efficacy

Self-efficacy (SE) refers to an individual's belief in their ability to effectively generate motivation, utilize cognitive skills, and perform suitable actions, as defined by Wood and Bandura (1989, p. 364). People with better emotional intelligence, self-confidence, and environmental control (Wong and Law 2002) who don't shy away from challenges have more robust SE. Rejecting negative feelings makes people self-confident, aware of their feelings, and enterprising (Hadizadeh et al. 2009). EC encourages entrepreneurial SE skills like risk-taking, receptivity to opportunity, inventiveness, and better planning. Positive EC makes young entrepreneurs more stress-tolerant, confident, and in control of business start-up activities like finding opportunities and conquering obstacles. Students with EC are more self-confident, productive, and efficient (Padilla-Meléndez et al. 2014; Goleman 1998) and thus:

H₅: *EC directly and positively affects college students' SE.*

Recent research has examined the association between subjective norms and entrepreneurial intentions, emphasizing the intricate mechanisms involved. Pham et al. (2023) discovered that subjective norms indirectly affect entrepreneurial intention through the serial mediation of entrepreneurial self-efficacy and attitude toward entrepreneurship. Additionally, research found that the link is influenced by entrepreneurial education. The authors propose that policymakers foster an entrepreneurial culture to augment start-up intentions. A study

conducted by Ayi Syabani et al. (2024) revealed that subjective norms favorably impact Indonesian university students' entrepreneurial intentions. Both studies highlight the significance of subjective norms in influencing entrepreneurial intentions, with Pham et al. (2023) offering a more comprehensive analysis of the components that mediate this relationship. These findings enhance comprehension of the elements influencing entrepreneurial intentions and provide valuable insights for formulating successful methods to foster entrepreneurship.

A study by Hasmidyani et al. (2020) revealed that entrepreneurial attitude mediates the link between subjective norms and entrepreneurial intentions. The research findings indicate that subjective norms and an entrepreneurial attitude substantially influence entrepreneurial intention, while entrepreneurship education does not significantly impact it. The presence of an entrepreneurial attitude acted as the mediating factor in the relationship between entrepreneurship education and entrepreneurial intention, fully mediating the link. The entrepreneurial attitude mediated the relationship between subjective norms and entrepreneurial intention, providing partial mediation.

H₆: *SE and EA strongly and positively mediate SN and EI.*

Several recent research have examined the connections between emotional intelligence, self-efficacy, and entrepreneurial intention among university students. Studies by Bayraktar et al. (2023) and Chien-Chi et al. (2020) have demonstrated that emotional intelligence and self-efficacy positively influence entrepreneurial intention. Self-efficacy has been recognized as a factor that influences the relationship between emotional intelligence and entrepreneurial intentions, as indicated by studies conducted by (Bayraktar et al. 2023; Chien-Chi et al., 2020; Hilal Çelik Ağırman, 2018; Nwibe & Ogbuanya, 2024). The survey conducted by Nwibe and Ogbuanya in 2024 found that perceived competence and persistence, characteristics of self-efficacy, had substantial partial mediating effects. Chien-Chi et al. (2020) found that social-emotional competence favored entrepreneurial intention. However, the impact of personal affective competence on entrepreneurial intention was not as evident. The results emphasize the significance of emotional intelligence and self-efficacy in influencing the entrepreneurial intentions of students (Bayraktar et al., 2023). The research enhances our comprehension of the elements that impact entrepreneurial behavior, specifically in social entrepreneurship and technology education (Chien-Chi et al., 2020; Nwibe & Ogbuanya, 2024).

H₇: *SE and EA strongly and positively mediate EC and EI.*

RESEARCH METHODOLOGY

The study included 351 Khyber Pakhtunkhwa public sector management science colleges, BBA and BS-Commerce students. During class, 351 college students completed the survey. The survey approach was used for primary data collection, and SEM (Smart PLS) was used to estimate reliability and validity measures (items loading, Cronbach's alpha, composite reliability, and average variance extracted) *see Table 2* (HTMT ratio) *see Table 3*, and Fornell Larcker Criterion – *see Table 4*, path and structural model statistical results.

DATA ANALYSIS AND RESULTS

Descriptive Statistics

According to sample characteristics, 67.6% lived in cities and 23.3% in rural areas. The average age of the students was 23 years, with 70.3% male and 29.6% female. The study included 55.4% BS. Commerce majors and 44.7% BBA majors. Only 16% of 6th-semester respondents attended the survey, but 47.6% of 8th-semester respondents did. Pashto speakers were 52.1% and Urdu speakers 47.9%. Students with sibling/parent business experience were 36.8% vs 63.3% who said no. About 34.2% of fathers were enrolled, while 49.6% of mothers were uneducated (see table 1).

Table 1

Participant's Characteristics

Demographic variable	Cases	Frequency	Percentage
College Location	Urban area	269	76.6
	Rural area	82	23.3
Age	Under 22	97	27.6
	22-24	179	51.0
	Above 24	75	21.3
Gender	Male	247	70.3
	Female	104	29.6
Discipline	BBA	157	44.7
	BS-Commerce	194	55.3
Level of semester	6 th	56	16.0
	7 th	128	36.5
	8 th	167	47.6
Respondent language	Urdu	168	47.9
	Pashto	183	52.1
Participants area of living	Urban area	179	51.0
	Rural area	172	49.0
Participant's business experience	Yes	106	30.2
	No	245	69.8

Participant's parents/siblings exp			
	Yes	129	36.8
	No	222	63.3
Level of father education			
	Matriculation	120	34.8
	Under-graduation	38	10.8
	Graduation	94	26.8
	Post-graduation	14	4.0
	None	85	24.2
Level of father education			
	Matriculation	143	40.7
	Under-graduation	13	3.7
	Graduation	19	5.4
	Post-graduation	2	0.6
	None	174	49.6

Path Measurement Model Analysis

The data was evaluated using structural equation modeling (SEM), a statistical technique with numerous advantages. Structural equation modeling (SEM) is capable of effectively dealing with measurement errors, variables that have many indicators, and making comparisons between several groups (Koufteros et al., 2009). We employed the Anderson and Gerbing (1988) two-step approach. The researchers initially conducted a confirmatory factor analysis (CFA) to assess the reliability and validity of the model's scales. This procedure was critical to determining measurement instrument psychometric characteristics. Second, the structural model needed to assess causal linkages was obtained. The researchers averaged the observed items by groupings of entrepreneurial skills (EC), generating five parcels, to comprehend better the proposed model's EC components (Little et al., 2002). This approach created more robust and reliable indicators of the underlying EC dimensions. As shown in Table 2, each parcel demonstrated acceptable internal consistency, further strengthening the validity of the measurement model. SEM, with its rigorous two-step approach, enabled the researchers to assess the measurement properties of the constructs comprehensively and subsequently examine the hypothesized structural relationships. This analytical strategy ensured a robust and reliable examination of the theoretical model, providing valuable insights into the entrepreneurial competencies and their role within the study's framework. In our research, the author chose the type II model, which is reflective and formative with a repeated indicator approach, to estimate the first lower-order component model.

Validity and Reliability

The study employed a measurement model for the first order, as depicted in Figure 2. This model illustrates the item loadings for all lower-order constructs. According to Sethi and King (1994), the current study carefully considered and eliminated several assessment items

with factor loadings below the 0.50 level. Nevertheless, the study thoroughly analyzed and justified the elimination of any measuring indicator, as advised by Shi et al. (2005). Consequently, items with higher factor scores were deliberately kept in the final assessment model (Figure 2). To thoroughly evaluate the psychometric properties of the model, the researchers conducted an assessment of Cronbach's Alpha, composite reliability (CR), and average variance extracted (AVE) for all the indicators linked to the lower-order constructs (Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, 2017; Hair et al., 2021; Fornell & Larcker, 1981). Table 2 displays that all the indicators exhibited CR values above 0.7 and AVE values surpassing 0.5, indicating a robust measurement model with high reliability and validity (Kline, 1998).

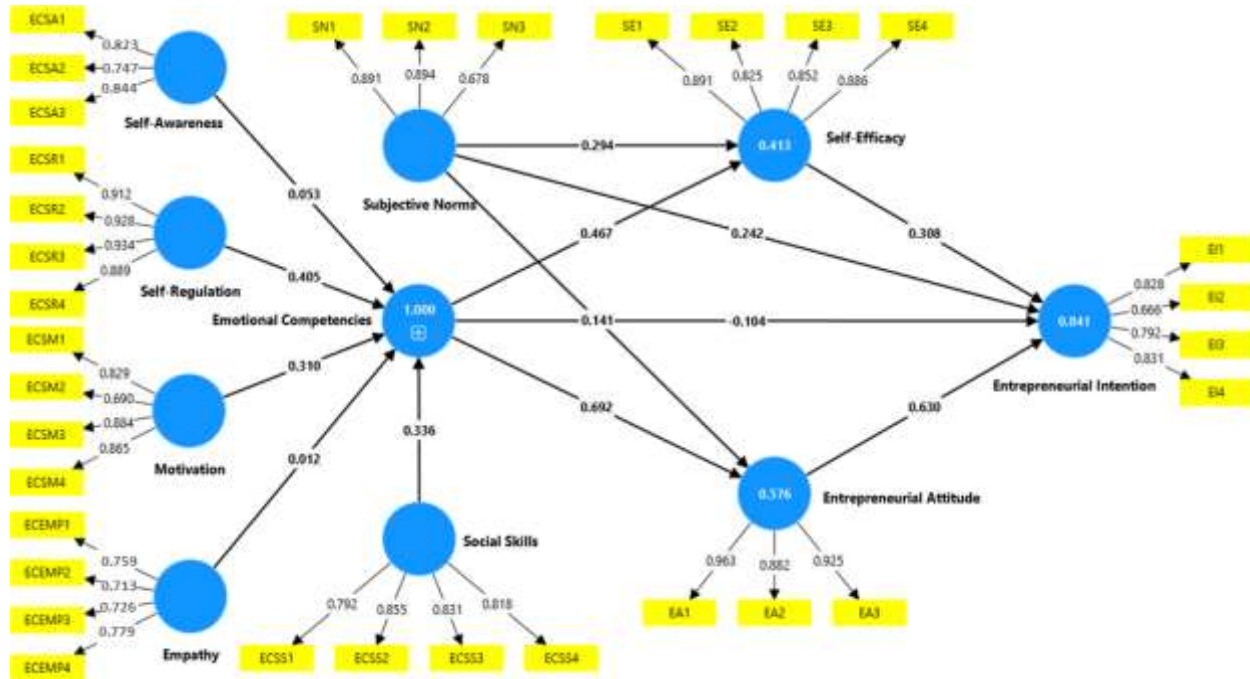
Table 2*Reliability measures of the Latent Variables*

Latent variable factors	Item codes	Item loadings	Cronbach's Alpha	Composite reliability (CR)	Average Variance Extracted (AVE)
Self-awareness	SA1	0.823	0.848	0.85	0.650
	SA2	0.747			
	SA3	0.844			
Self-regulation	SR	0.912	0.933	0.934	0.778
	SR2	0.928			
	SR3	0.934			
	SR4	0.889			
Self-motivation	SM1	0.829	0.836	0.891	0.673
	SM2	0.690			
	SM3	0.884			
	SM4	0.865			
Empathy	EMP1	0.759	0.832	0.83	0.547
	EMP2	0.713			
	EMP3	0.726			
	EMP4	0.779			
Social Skills	SS1	0.792	0.842	0.844	0.573
	SS2	0.855			
	SS3	0.831			
	SS4	0.818			

Table 18 shows the latent variable factors of emotional competencies: self-awareness, self-regulation, self-motivation, empathy, and social skills.; items loading >0.708; Composite Reliability (CR > 0.7); Average Variance Extracted (AVE > 0.5).

Figure 2

1st Order Model



Discriminant Validity:

1. Heterotrait-Monotrait (HTMT) Ratio

Evaluating discriminant validity is an essential process to ensure the measurement of constructs within a research model. The current study followed the guidelines set forth by Hair et al. (2021) and incorporated the recommendations of recent methodological breakthroughs in this field. The discriminant validity of the constructs was assessed by calculating the Heterotrait-Monotrait (HTMT) ratio of correlations, as presented in Table 3. The HTMT methodology, introduced by Henseler et al. (2015), is considered a more reliable measure for identifying discriminant validity when compared to conventional methods (Henseler et al., 2015). The HTMT ratio quantifies the degree of correlation between the items of one construct and the items of another construct, considering the constructs' reliability. As per the established criteria, the HTMT score should be below 0.85 (Klein, 2016; Tabri & Elliott, 2012), which suggests that the constructs are separate and measure distinct concepts. The findings displayed in Table 3 indicate that all the HTMT values in the present investigation were lower than the 0.85 threshold, indicating that the constructs possess sufficient discriminant validity.

Table 3
Heterotrait - monotrait ratio (HTMT)

	Empathy	Motivation	Self-Awareness	Self-Regulation	Social Skills
Empathy					
Motivation	0.117				
Self-Awareness	0.505	0.538			
Self-Regulation	0.094	0.836	0.506		
Social Skills	0.168	0.752	0.618	0.632	

2. Fornell - Larcker Criterion

The discriminant validity was assessed during data analysis. Discriminant validity, defined by Hair et al. (2021), refers to the extent to which a construct or variable demonstrates differentiation from other elements within the study model, supported by empirical data. The Fornell-Larcker criterion was used to assess discriminant validity in the study (Table 4). The Fornell and Larcker (1981) method compares the square root of the average variance extracted (AVE) for each construct to the correlations between that construct and all other model components. Table 4 demonstrates that the square root of the average variance extracted (AVE) for each construct's diagonal is significantly larger than its correlation coefficients with all other constructs. The results indicated that the model elements are unique and assess distinct underlying concepts, meeting discriminant validity criteria (Hair, Hult, Ringle, & Sarstedt, 2017). The Fornell-Larcker criterion shows that the current study's conceptions are distinct. Thus, the study results and analytical conclusions are more reliable. Discriminant validity proves that the measured constructs capture various components of the theoretical framework under inquiry.

Table 4: Fornell - Larcker Criterion

	Empathy	Motivation	Self-Awareness	Self-Regulation	Social Skills
Empathy	0.476				
Motivation	0.069	0.821			
Self-Awareness	0.133	0.282	0.619		
Self-Regulation	0.054	0.743	0.353	0.916	
Social Skills	0.103	0.818	0.400	0.835	0.824

Structural Model and Mediation Analysis

Mediation is part of the structural model evaluation. Self-efficacy (SE) and entrepreneurial attitude (EA) mediated the connection between subjective norm (SN), emotional competencies (EC), and entrepreneurial intention (EI). A mediation analysis examined how self-efficacy (SE) and entrepreneurial attitude (EA) mediate the link between subjective norm (SN), emotional competencies (EC), and entrepreneurial intention (EI) among college

students. Table 6 shows that SN indirectly affects EI via SE and EA (H6: $\beta = 0.191$, $t = 7.450$, $p < 0.001$). Overall, SN substantially impacted EI ($\beta = 0.242$, $t = 10.899$, $p < 0.001$). However, when the mediator was included, the effect of SN on EI remained substantial ($\beta = 0.248$, $t = 11.011$, $p < 0.001$). This suggests that self-efficacy (SE) and emotional attitude (EA) partially mediate the association between subjective norm (SN) and entrepreneurial intentions (EI). Thus, the results supported H6.

This study confirmed Hypotheses 1a and 1b, which state that perceived subjective norms, entrepreneurial attitudes, and self-efficacy were strongly correlated. The results also confirmed Hypothesis 1c, which proposed a positive correlation between subjective norms and entrepreneurial intentions. Simply put, the evidence reveals that when influential individuals approve of a person's desire to become an entrepreneur, it can improve their attitude toward entrepreneurship and their confidence in their ability. However, Emotional Competencies do not directly lead to stronger entrepreneurial intentions, as previously thought. These findings provide insight into the intricate connection between entrepreneurial attitudes, subjective norms, self-efficacy, and intentions of the student entrepreneurial activities.

The study found that emotional competencies (EC) positively affect both entrepreneurial self-efficacy (SE) ($\beta = 0.459$, $p < 0.01$) and entrepreneurial attitude (EA) ($\beta = 0.678$, $p < 0.01$). A significant negative influence of EC on entrepreneurial intention (EI) was found ($\beta = -0.114$, $p < 0.01$). The findings show that college students with more entrepreneurial ability have a better entrepreneurial mentality and believe they can become entrepreneurs. This study supports Hypotheses 4 and 5, which show favorable relationships between EC, SE, and EA. The data do not support Hypothesis 3, which predicted a negative correlation between EC and EI, leading to its rejection. Further analysis shows a substantial correlation between entrepreneurial intention (EI) and both self-efficacy (SE) ($\beta = 0.310$, $p < 0.01$) and attitude (EA) ($\beta = 0.635$, $p < 0.01$). These findings corroborate Hypotheses 2a and 2b, which expected that SE and EA would directly benefit EI.

The evidence shows that emotional competencies affect college students' entrepreneurial self-efficacy and attitudes. However, it does not directly increase entrepreneurial intentions. Entrepreneurial intentions are influenced mainly by students' view of their capacity to succeed and their overall attitude toward entrepreneurship. The analysis in this paper goes beyond direct construct effects. In line with Hair et al. (2010), the study analyzed the indirect and total effects of variables in the theoretical model. To ascertain the overall impact of

constructs in the model, Dillon et al. (1996) computed the multiplication of direct effects along the composite path.

Further analysis in Table 6 shows significant indirect effects between components. The study found that subjective norms (SN) indirectly impact entrepreneurial intention (EI) via self-efficacy (SE) (0.302×0.310) and attitude (EA) (0.153×0.635). Research indicates that emotional competencies (EC) indirectly affect entrepreneurial intention (EI) via self-efficacy (SE) and entrepreneurial attitude (EA). SN has a combined impact of 0.432 ($p < 0.001$) on EI, while EC has a cumulative effect of 0.459 ($p < 0.001$). Results indicate that subjective norm (SN) primarily affects entrepreneurial intention (EI) through its impact on entrepreneurial attitude (EA). In contrast, emotional competencies (EC) predominantly affect EI through self-efficacy (SE). This study examined the direct, indirect, and overall effects of the variables of interest to understand better the complex network of interactions within the proposed theoretical framework. Additional analysis shows that entrepreneurial self-efficacy and attitude significantly impact entrepreneurial intention among college students in Khyber Pakhtunkhwa province, influenced by subjective norms and competencies.

Figure 3

Structural Model (Bootstrapping results for mediation analysis)

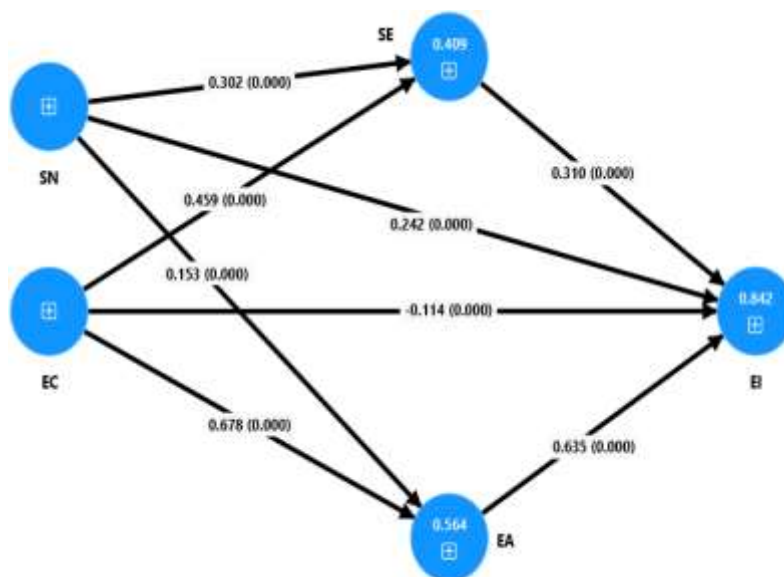


Table 5*Mediation Analysis*

Variables	Total Effects			Direct effects			Indirect effects			Percentile bootstrap 95% confidence interval		Remarks	
	Coefficients	T-value	P-value	Coefficients	T-value	P-value	Hypothesis	Coefficients	T-value	P-value	Lower		Upper
SN -> EI	0.432	12.684	0	0.242	10.899	0	H6	0.191	7.45	0	0.141	0.241	Supported
SN -> SE	0.302	6.734	0	0.302	6.734	0							Supported
SN -> EA	0.153	4.474	0	0.153	4.474	0							Supported
EC -> EI	0.459	11.936	0	-0.114	3.484	0	H7	0.573	14.317	0	0.495	0.652	Partially Supported
EC -> SE	0.459	10.625	0	0.459	10.625	0							Supported
EC -> EA	0.678	18.122	0	0.678	18.122	0							Supported
SE -> EI	0.31	9.91	0	0.31	9.91	0							Supported
EA -> EI	0.635	17.262	0	0.635	17.262	0							Supported

Note: Standardized Structural Coefficients; $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$, SN: Subjective norm, EC: Emotional competencies, EI: Entrepreneurial intention, SE: Self-efficacy, and EA: Entrepreneurial attitude.

CONCLUSION, RECOMMENDATIONS AND FUTURE DIRECTIONS

Conclusion

The study showed that emotional competencies (EC) strongly influence undergraduate business students' entrepreneurial intentions. Academics and policymakers must prioritize EC in developing and implementing college-level entrepreneurship courses and curriculums (Bécharde & Grégoire, 2005; García & Torres, 2020). Integrating EC-focused material and pedagogy enhances entrepreneurship education, boosting entrepreneurial intention and actions among undergraduate business college students. The study's main focus was the direct and indirect effects of EC on EI through cognitive antecedents of entrepreneurial attitude and self-efficacy. The study developed a comprehensive model using the Theory of Planned Behavior (TPB) framework to predict and understand entrepreneurial intentions in undergraduate business college students. The results show that EC significantly affects EI and its cognitive antecedents. The study also emphasizes the connection between mental and emotional factors in decision-making, providing a sound theoretical framework for understanding entrepreneurship education's effectiveness. According to a previous study (Cardona et al., 2005), entrepreneurs must balance emotional and rational aspects while making decisions.

Interestingly, no association was found between higher emotional competencies and undergraduate college students' stronger tendency towards entrepreneurship. This suggests that having only emotional competencies may not lead more students to start a business. The study indicates that those with higher emotional competencies are more inclined towards entrepreneurship. Emotional competencies (EC) improve cognitive flexibility and help individuals overcome biases that hinder opportunity identification. EC can promote and stimulate entrepreneurial intention and behaviors. The study confirms the positive impact of entrepreneurial attitude (EA) (Usaci, 2015; Moriano et al., 2014; Zhang et al., 2014; Iakovleva et al., 2011; Engle et al., 2010) and self-efficacy (SE) (Moriano et al., 2014; Engle et al., 2010; Mcgee et al., 2009; Barbosa et al., 2007) on undergraduate business college students' entrepreneurial intentions (EI). The study also found that subjective norms (SN) improve entrepreneurial attitude (EA) (Engle et al., 2010; Sequeira et al., 2007; Kolvereid & Isaksen, 2006) and self-efficacy (SE) (Engle et al., 2010; Carr & Sequeira, 2007; Kolvereid & Isaksen, 2006). No direct effect of emotional competencies on entrepreneurial intention (EI) was found (Liñán & Chen, 2009). The literature shows that TPB characteristics strongly influence entrepreneurial intentions (Schlaegel & Koenig, 2014). Future studies should include a comprehensive entrepreneurial intention model based on many theoretical frameworks to strengthen the findings.

Limitation

The study focused on Pakistan's Khyber Pakhtunkhwa province. The results may not apply to other regions with distinct cultures and economies. The sample was limited to undergraduate business students, which may limit its application to other academic areas. Participants' self-reported data may have been biased and inaccurate. The cross-sectional study design makes causal linkages challenging to establish. Long-term impacts should be studied longitudinally. The study did not examine how personality traits or demographic factors might moderate or mediate the variables' correlations.

Recommendations

College entrepreneurship programs should include emotional competency material and teaching approaches. This can involve self-awareness, self-regulation, motivation, social skills, and empathy. Encourage entrepreneurs to balance cognitive and emotional factors in decision-making and problem-solving. Give students business simulations, internships, and mentorship programs to boost their self-efficacy and entrepreneurial spirit. Encourage entrepreneurial thoughts and behaviors in college students by encouraging an entrepreneurial

culture on campus, hosting entrepreneurship activities, and offering access to entrepreneurial tools and assistance. Encourage educational institutions, governments, and businesspeople to collaborate to adapt entrepreneurship education programs to the entrepreneurial ecosystem. Regularly assess and update entrepreneurship education programs to ensure they address cognitive, emotional, and practical components of entrepreneurial development. Addressing these limitations, exploring future research directions, and implementing the recommended strategies can help educators and policymakers improve entrepreneurship education and develop emotionally competent and entrepreneurial college students.

Future Directions

Similar research should be done in other regions and with more varied student populations to test generalizability. Use longitudinal study methods to examine how emotional abilities and entrepreneurship education affect student entrepreneurial goals and practices. Explore how personality traits, demographic factors, and cultural values may moderate or mediate the interactions of the research variables. Examine how specific entrepreneurship education methods improve students' emotional competencies and entrepreneurial goals. Examine the relationship between emotional competencies, entrepreneurial intentions, and entrepreneurial behavior and the characteristics that help turn intentions into action. To investigate entrepreneurial goals' mechanisms and contextual elements, use qualitative research methodologies like in-depth interviews or focus groups.

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