

# **Examining the Entrepreneurial Mindset and Entrepreneurial Intentions**

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*We examined factors contributing to developing entrepreneurial intentions (EI) and the relationship between EI and the entrepreneurial mindset (EM) among nascent student entrepreneurs. Further, we seek to increase awareness among business practitioners of the value of nascent entrepreneurs to the economy. Utilizing the theory of reasoned action and the theory of planned behavior, we investigated personal and contextual factors related to EI. We surveyed 400 US business college students, comparing those with EI (n=228) and those without EI (n=178). Our findings indicated that compared to respondents who did not have EI, respondents who possessed EI reported several significant personal factors. Specifically, they were more likely to view themselves as entrepreneurs, have family members who owned their own businesses, lead group projects as students, and have previously worked in a startup business. Additionally, the contextual factor of the Covid-19 pandemic positively affected business students who possessed EI.*

*Keywords: entrepreneurial intentions, entrepreneurial mindset, theory of reasoned action, theory of planned behavior, nascent entrepreneurs*

## **INTRODUCTION**

Encouraging the development of entrepreneurial intentions (EI) and the entrepreneurial mindset (EM) among nascent entrepreneurs is vital to US national economic growth. Scholars have found that entrepreneurial intentions (EI), the desire to start one's own business, are a reliable predictor of future entrepreneurial behavior (Krueger, Reilly, & Carsrud, 2000). Both personal and contextual factors provide the basis for an individual's EI. While psychologists have studied personal factors for many years, management researchers have recently investigated both personal and contextual factors regarding EI (Linan & Fayolle, 2015). Researchers have described an entrepreneurial mindset as the mental perspective preceding individuals' actions and feeding their emotions as the source of innovation and entrepreneurship (Kuratko, Fisher, & Audretsch (2021). In this study, we employ the term entrepreneurial mindset to indicate those fully committed to entrepreneurship, meaning they possess entrepreneurial intentions and perceive themselves as entrepreneurs.

The entrepreneurial process begins when individuals recognize that they want to start their own business. Nascent entrepreneurs may commence with an idea that they would like to develop into a business (internal motivation) or with the desire to start their own business and then search for a business to start (external motivation). After nascent entrepreneurs identify their desire to start a business, activities such as opportunity recognition, idea generation, feasibility analysis, business model creation, and business plan formulation may follow (Chwolka & Raith, 2012).

The theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) and the theory of planned behavior (TPB) (Ajzen, 1988) provide a theoretical foundation to examine EI. Grounded on the assumption that human behavior is reasonable, the TRA and TPB propose that the performance of a particular behavior is based on the intention to perform that behavior (Ajzen, 1991). Therefore, once individuals recognize the required opportunities, they may access needed resources and perform the intended behavior (Nishimura & Tristan, 2011).

In examining EI and EM, we have chosen university business school students as the respondents. Business school students may better represent nascent entrepreneurs than full-time business employees. Carter & Han (2015) described nascent entrepreneurs as individuals actively trying to start a new business, alone or with others. However, established firm employees already have employment; therefore, they may not be the best respondents for research about entrepreneurial intentions or starting a new company. In addition, individuals within established firms may be prone to a "survival bias." The employment experiences in existing businesses are not necessarily the same as those of starting a business. Further, studying existing firms' employees leaves out many cases of failed startups (Johnson, Parker, & Wijbenga, 2006).

To better understand the EI and EM of nascent student entrepreneurs, we employed a survey approach to test hypotheses that compared nascent student entrepreneurs who possessed EI and those who did not. Further, we investigated the personal and contextual factors that may have influenced the formation of EI. Therefore, our research questions were: (1) What is the relationship between EI and EM? And (2) Which personal and contextual factors significantly contribute to developing EI in nascent entrepreneurs?

This study makes several crucial contributions regarding nascent student entrepreneurs. First, we seek to increase understanding that entrepreneurship is a feasible and desirable career choice for US university students. Second, we establish a relationship between EI and EM. Third, we highlight personal factors that advance EI. Fourth, we provide evidence that contextual factors may promote or inhibit the development of EI. Fifth, we confirm studies from the US and globally supporting the efficacy of EI, EM, TRA, and TPB. Finally, we encourage US business practitioners to provide opportunities for nascent entrepreneurs to work together as strategic partners or as sources of new product ideas. It is well known that small businesses, including startups, complement large firms in the US economy by serving as suppliers and providing outsourcing services, such as billing services or managing health care benefits (Canis & Yacobucci, 2011; U.S. Small Business Administration, 2011).

## **CONCEPTUAL BACKGROUND AND HYPOTHESES DEVELOPMENT**

Next, we assess the conceptual background of the theory of reasoned action, the theory of planned behavior, EI, and EM. Then, we formulate hypotheses to explain the relationship between EI and EM and the development of EI among nascent entrepreneurs.

### **The Theory of Reasoned Action**

The theory of reasoned action (TRA) is a decision theory that explains motivation using the intention to perform a behavior. According to the TRA, we can predict a person's behavior through their attitudes toward performing a specific activity (Fishbein & Ajzen, 1975). The attitudes must be particular to the behavior and not generalized (Ajzen, 1988). Further, the TRA suggests that an individual's intentions to perform a behavior are influenced by subjective norms which emanate from a person's perceptions of what others think about the performance of the specific behavior (Vallerand et al., 1992). Both personal attitudes and normative factors directly affect behavioral intentions, while other external factors influence behavior

indirectly (Tsai, Chen, & Chen, 2012). Therefore, the TRA is suitable for investigating students' career choices (Addison & Chou, 2007).

### **The Theory of Planned Behavior**

The theory of planned behavior (Ajzen, 1991) updated the TRA and proposed that intention significantly predicts subsequent behavior (Kautonen et al., 2013). Ajzen (2011) described intention as a person's readiness to perform a specific behavior. In other words, people do what they intend to do (Sheeran, 2002). For example, researchers have defined entrepreneurial intentions (EI) as an individual's desire to own or start a business (Bae et al., 2014). According to the TPB, intention rests on three antecedents, including (1) a favorable or unfavorable evaluation of the behavior, termed attitude, (2) perceived social pressure to perform the behavior or not, called a subjective norm; and (3) the perceived ease or difficulty of performing the behavior (Kautonen et al., 2013).

### **Entrepreneurial Intentions and the Entrepreneurial Mindset**

Entrepreneurship researchers have asked why some people identify entrepreneurial opportunities and others do not (Naumann, 2017). We suggest that the source of entrepreneurship and innovation resides within the minds of individuals. Thus, the entrepreneurial mindset enables nascent entrepreneurs to generate new ideas, manage problems, produce imaginative solutions, and take decisive actions (Kuratko et al., 2021). There are multiple definitions of EM in entrepreneurship literature. For example, McGrath & MacMillan (2000, p. 15) stated that EM was the "ability to sense, act, and mobilize under uncertain conditions." In addition, many authors stressed that EM involves thinking. For example, Haynie & Shepherd (2007, p. 9) reported that EM was the "ability to adapt thinking process to a changing context and task demands."

In her review of the EM literature, Naumann (2017) found seven attributes associated with EM, including (1) cognitive tuning, which involves solving a task at hand, (2) heuristic-based decision logic, which enables fast decision-making, (3) alertness to entrepreneurial opportunities, (4) prior knowledge, including work experience, personal events, and education, (5) social interaction in networks, (6) meta-cognition, involving reflective thinking, and (7) cognitive adaptability, using flexibility in decision-making.

Kuratko et al. (2021) described three different facets of EM, including (1) the cognitive aspect (how entrepreneurs think), (2) the behavioral aspect (how entrepreneurs engage with opportunities), and (3) the emotional aspect (how entrepreneurs feel about entrepreneurship). Therefore, the entrepreneurial mindset integrates thoughts, actions, and feelings.

We propose that the concepts of EM and EI are closely associated. Individuals who possess EI will likely think of themselves as entrepreneurs, consistently think of starting a new business, taking entrepreneurial actions, and being emotionally involved in the entrepreneurial process. Therefore, we hypothesize the following.

***Hypothesis 1:** Business students who possess EI will more likely perceive themselves as entrepreneurs with an entrepreneurial mindset than those who do not.*

### **Entrepreneurial Intentions and Demographic and Personal Factors**

Personal factors are essential to advance our knowledge concerning EI and include personality qualities, abilities, education, family background, cultural background, and gender (Linan & Fayolle, 2015). Researchers have explored the relationship between EI and many personal and demographic variables. For example, concerning EI, researchers have studied age and gender Farrukh et al., (2018); citizenship and prior industry experience (Bewaji et al., 2015); education, racial identity, and entrepreneurial education (Evans, 2010); race (Singh & Crump, 2007); differences between countries (Van Auken et al., 2006); educational level, employment status, and wage/salary level (Bishop & Surfield, 2013), and immigrants (Raijman, 2001). Therefore, we hypothesize the following:

**Hypothesis 2:** *There will be significant differences between business students who possess EI and those who do not regarding gender, age, marital status, or university major.*

#### *Birth Order Within the Family*

We also chose to investigate the respondents' birth order within the family and its impact on EI. For example, researchers have cited primogeniture as a long-standing issue in family businesses. In a New Zealand study, Keating and Little (1997) found that firstborn sons were preferred in selecting the successor in family firms. In a US study, Staurou (1999) found that sons, especially firstborn sons, were preferred over daughters, who were not considered for leadership roles in the family firm. Family firm leaders may still follow the logic of selecting the firstborn son as the next-generation leader. According to an Italian study, primogeniture remains a common choice among family firms embedded in socioemotional wealth (Calabro et al., 2017). According to researchers, primogeniture may still play a role around the world and in the US to influence the career choice of young individuals (Cater, Young, & Doty, 2023). Therefore, we propose that firstborn individuals are more likely to want to start a business, stemming from the historical family influence of primogeniture. Consequently, we propose the following:

**Hypothesis 3:** *Business students who are firstborn in their families will be more likely to possess EI than later-born business students.*

#### *Family Member Business Owners*

Following the TRA (Fishbein & Ajzen, 1975) and TPB (Ajzen, 1991), it is reasonable to expect that perceived social pressure to start a business may come from an individual's family background. Farrukh et al. (2018) suggested that family background factors, such as family members who own a business, may affect students' EI. Having an entrepreneurial family background may impact the choice to pursue an entrepreneurial career through the formation of attitudes, subjective norms, and perceived behavioral control. Business-owning parents may teach their children about business ownership and increase their business knowledge and acumen (Shirokova et al., 2016). Parents may encourage their children to start their own businesses (Aldrich, Renzulli, & Langton, 1998) or directly assist their children's entrepreneurial endeavors by providing social capital, such as contacts with suppliers, customers, and business partners (Shirokova et al., 2016). Finally, parents may transfer financial capital to their children to aid business formation (Bae et al., 2014). The aid and encouragement of entrepreneurially inclined family members, especially parents, may increase the desire to start one's own business. Therefore, we hypothesize the following:

**Hypothesis 4:** *Business students who possess EI will be likelier to have a family member who has owned a business than those who do not.*

#### *Role Models*

Role models include a wide variety of potential influencers of nascent entrepreneurs and consist of individuals considered worthy of imitation or emulation (Vultos, 2010). Examples of role models range from well-known businesspeople, such as Elon Musk, Bill Gates, and Warren Buffet, with whom respondents may have no personal relationships, to people nascent entrepreneurs know individually, such as friends or relatives (Cheprasov, 2022). Gibson (2004) proposed that role identification and social learning theories may best explain role models' influence. Role identification refers to a person's belief that the qualities of another person (the model) are similar to their motives and character; thus, the individual may learn from their example.

Regarding entrepreneurship, it is more likely that role models may be personal acquaintances and play a significant role in deciding to start a new business (Bosma et al., 2012). In a study in Iran, entrepreneurial role models have been found to positively influence EI among college students (Karimi et al., 2013). Moreover, in a US study, Evans (2010) found that the presence of role models was strongly related to EI among black youths. Given these results on diverse respondents, we may infer that role models enhance

individuals' EI. Regarding the TRA and TPB, role models may be seen as a form of social pressure to act (Addison & Chou, 2007). Additionally, role models may be active by directly influencing an individual in the entrepreneurial learning experience, even giving advice and counsel (Van Auken et al., 2006). Therefore, we propose the following.

**Hypothesis 5:** *Business students who possess EI will be likelier to have a role model than those who do not.*

#### *Mentors*

In the commercial context, mentoring has been described as a relationship between a senior associate and a junior employee to develop the skills and abilities of the junior member (Kram, 1983). Explanations of mentoring reside primarily in social exchange theory (SET) (Payne & Huffman, 2005). SET postulates that trusting, loyal, and mutual relationships develop over time through negotiated rules and norms of reciprocity (Cropanzano & Mitchell, 2005). Further, mentors support their proteges in two key areas: career and psychosocial (Payne & Huffman, 2005). Career functions include sponsoring the mentee for promotion within the organization, shielding them from the harmful influences of powerful people, providing information to make the mentee known to the firm's leaders, and giving challenging assignments to prepare the protege for more critical responsibilities. The mentor serves as a friend and counselor in psychosocial functions, such as assisting the mentee in developing a sense of identity, competency, and effectiveness (Samei & Feyzbakhsh, 2016).

Applied to the TRA and TPB theories, entrepreneurially inclined mentors may encourage individuals to engage in entrepreneurial behavior by providing a favorable evaluation of starting one's own business (attitude), applying social pressure to engage in entrepreneurship (subjective norm), and aiding the perception that entrepreneurial activities may be easily performed (Kautonen et al., 2013). Therefore, we suggest that having an entrepreneurial mentor may help the development of nascent entrepreneurs in starting a business. Consequently, we propose the following:

**Hypothesis 6:** *Business students who possess EI will be likelier to have a mentor than those who do not.*

#### **Higher Education Effects**

Researchers have found that entrepreneurship education is vital to the growth and development of entrepreneurs within the community (Ismail et al., 2015). Entrepreneurship education helps create a positive image for entrepreneurs and suggests the option of entrepreneurship as a profession to graduates (Vasiliadis & Poullos, 2007). However, many students do not possess extensive work experience: therefore, the university environment may be more salient for them (Bergmann et al., 2016). Universities that offer entrepreneurial education may positively affect the EI of nascent student entrepreneurs. Such universities may encourage EI by offering entrepreneurial courses and exhibiting shared values and norms that favor the entrepreneurial mindset (Shirokova et al., 2016). Entrepreneurial educators should teach business skills, such as marketing, finance, accounting, and management, and personal skills, such as leadership and communication. In addition, universities may provide access to internships, mentors, entrepreneurial student organizations and groups (Ismail et al., 2015). With activities both inside the classroom and outside the community, entrepreneurship educators may encourage the development of EI for nascent student entrepreneurs.

Therefore, we propose the following:

**Hypothesis 7:** *Business students who possess EI will be more likely to take entrepreneurship courses at their university than those who do not.*

**Hypothesis 8:** *Business students who possess EI will be likelier to lead university student group projects than those who do not.*

***Hypothesis 9:*** Business students who possess EI will be likelier to participate in university student organizations than those who do not.

### **Work Experience Effects**

Dyer (1994) suggested that socialization experiences may influence the decision to become an entrepreneur, including (1) early childhood experiences, (2) prior startup experience, (3) work experience, and (4) education. For example, researchers in India reported that, for nascent student entrepreneurs, part-time work experience might positively affect EI (Satyalakshmi, 2017). However, because of their young age, students typically lack industry experience in general and startup business experience in particular (Bergmann et al., 2016). Further, different types of business experience have led to varying effects on respondent EI. For example, in a South African study, Gird and Bagraim (2008) found that previous entrepreneurial experience positively impacted student EI, but Zhang et al. (2014) found a negative effect of business experience on university students in China. However, a consensus of scholars suggests that startup experience positively affects student EI (Bignotti & Roux, 2020). Therefore, we propose the following.

***Hypothesis 10:*** Business students who possess EI will be likelier to have worked for a startup company than those who do not.

### **Contextual Factors**

Contextual factors provide a background for understanding entrepreneurial intentions. We view contextual factors as broad forces affecting many individuals within a society, such as economic issues like corporate downsizing, market volatility, governmental regulatory changes (Bird, 1988), and social trends. Although individuals' personal characteristics may be most important concerning the propensity to start a business, contextual factors also play a role in the process (Bergmann et al., 2016).

### ***Covid-19 Pandemic***

This study was conducted during the Covid-19 pandemic; therefore, we investigated the pandemic as a significant contextual factor affecting respondents in this study. It is well known that the pandemic affected entrepreneurship significantly around the world. First, and most substantially, globally, the pandemic took 4 million lives as of the end of June 2021 (Belitski et al., 2021). Social distancing guidelines, intended to protect people from the virus, severely damaged businesses in the service sector, where physical proximity is essential and small businesses and entrepreneurs are prevalent. Therefore, Covid-19 disproportionately affected small businesses versus large firms and self-employed individuals compared to employed individuals (Belitski et al., 2021). This detrimental effect involved the closure of thousands of US small businesses. A survey of more than 5,800 small firms in the US found that 43% were expected to be closed by December 2020. Some of the most heavily affected small businesses were hospitality, retail, personal services, and entertainment (Bartik et al., 2020).

Nevertheless, the pandemic also revealed the need for startup businesses to provide new products and services and to improve business processes. Small businesses have augmented their digital access, increased their innovation, and enhanced their productivity to deal with the turbulence of the pandemic (Swiss School of Business Research, 2022). The Covid-19 crisis will end, which should be another cue for entrepreneurs to start new businesses (Derderian, 2022). We suggest that the respondents with EI may view entrepreneurship as an open avenue for future endeavors. We propose that the pandemic as a contextual factor has heightened the interest of respondents with EI in starting a business. Therefore, we hypothesize the following:

***Hypothesis 11:*** The recent experience of the Covid-19 pandemic will positively influence the desire to start their own business of those who possess EI compared to those who do not.

## **METHOD**

### **Sample and Data Collection**

Our principal purpose was to gain an understanding of the entrepreneurial mindset of the business students. Initially, we received permission to research human subjects from the university's Institutional Review Board. In the survey instructions, we informed all respondents that the survey was anonymous, and we obtained their informed consent. We used the Qualtrics software system to gather survey responses online, where respondents received a dedicated link to complete the survey. Our study focused on a sample of 400 business school students from a regional state university in a southwestern US state. The primary reason for using students was to study the entrepreneurial intention processes in the early stages. Therefore, we were able to obtain a survey, including subjects with EI and those without EI, in one sample (Krueger et al., 2009). We did not assume that a respondent's attendance in an entrepreneurship or management class qualified as evidence of EI (Schmidt et al., 2012). Students may attend classes for various reasons, such as completing a study regimen to meet graduation standards. Also, the self-reported survey separated respondents who reported EI (n=229) versus those without EI (n=136) or neutral (n=57). Further, this enabled us to control for the respondents' level of education, a factor that may affect EI (Altinay et al., 2012).

### **Participants**

After eliminating incomplete or multiple survey responses, we received 400 usable surveys from 498 students participating in management courses in the College of Business at a southwestern US state regional university during the spring, summer, and fall semesters of 2021, for a response rate of 80%. Male students comprised 212 (53%) of the respondents, while 188 (47%) were female. The respondents' median age was 23, ranging from 18 to 50. Approximating the reported ethnic/racial composition of the university, the respondents were 66% white, 18% Hispanic, 13% African American, and 4% Asian American. The majority of the respondents were upperclassmen (75% were seniors and juniors); 16% were underclassmen (sophomores and freshmen); and 9% were graduate students (MBAs). We used appropriate screening questions and quality checks (Meade & Craig, 2012). The respondents received no monetary compensation for participating in the self-report questionnaire.

### **Statistical Analysis**

Having reached the goal of 400 respondents in the Qualtrics survey, we transferred the data into Excel and then SPSS. Our computations included frequencies, crosstabs, and Chi-Square ( $\chi^2$ ) when we tested our hypotheses that compared the respondent groups with and without EI. We used two non-parametric of Chi-Square ( $\chi^2$ ) to test for significant differences and the R package using Spearman Rank Correlation to test for associations.

## **FINDINGS**

In this section, we report on the results of our study. After examining the frequencies of responses to our survey, we performed analyses to determine if there were differences between the two groups of respondents: those individuals who possessed EI and those who did not. Also, we investigated whether there were positive correlations between the variables. Finally, we broke the results of the study down into five areas: (1) the entrepreneurial mindset, (2) personal factors, (3) higher education effects, (4) work experience effects, and (5) contextual effects.

### **Hypotheses for the Study**

Using Chi-Square analysis, we found that five of the eleven hypotheses were significant for those possessing EI compared to those without. See Table 1.

**TABLE 1**  
**SUMMARY OF DIFFERENCES CONCERNING THOSE WHO POSSESS EI AND**  
**THOSE WHO DO NOT**

Hypothesis	Characteristics	Chi-Square (x) <sup>2</sup>	d.f.	Probability	Spearman Rank Correlation	
					(rho)	p-value
<b>Entrepreneurial Mindset</b>						
1	Perception of being an entrepreneur	455.109	16	<.001**	.7485	<.001
<b>Personal Factors</b>						
2	Gender	2.774	4	0.596		
	Age	10.429	12	0.578		
	Marital Status	0.727	4	0.948		
	Class	10.770	16	0.823		
	Area of Study (Major)	26.111	32	0.759		
3	Birth order	7.532	12	0.821		
4	Family ownership	14,996	4	0.005*		
5	Having a role model	1.321	4	0.858		
6	Having a mentor	2.289	4	0.683		
<b>Higher Education Effects</b>						
7	Having a course in Entrepreneurship	17.735	16	0.340		
8	Leadership in class group projects	24.050	16	0.088	.881	.01051
9	Participated in student organizations	20.229	16	0.210		
<b>Work Experience Effects</b>						
10	Worked for a startup	14.399	4	0.006*		
<b>Contextual Effects</b>						
11		208.907	16	<0.001**	.47557	<.001

\*\*Significant at the .01 level. \*Significant at the .05 level.

*The Entrepreneurial Mindset*

We found that 57% of the respondents expressed possessing EI, stating they definitely or probably planned to start their own business. The top reasons for starting their own business were being their own boss and financial gain. We found that 60% of the respondents considered themselves entrepreneurs and possessed an entrepreneurial mindset. The source of entrepreneurship resided within the minds of the individual respondents (Kuratko et al., 2021). See Table 2.



**TABLE 2**  
**ENTREPRENEURIAL INTENTIONS AND ENTREPRENEURIAL MINDSET: FREQUENCIES**

<b>Planning on Starting a Business (EI)</b>	<b>No.</b>	<b>Percent</b>
Definitely yes	112	28%
Probably yes	116	29%
Unsure	115	29%
Unlikely	44	11%
Definitely not	13	3%
<b>Total</b>	<b>400</b>	<b>100%</b>
<b>Entrepreneurial Mindset: Do you consider yourself to be an entrepreneur?</b>		
Definitely	109	27%
Probably yes	132	33%
Unsure	110	28%
Unlikely	28	7%
No	21	5%
<b>Total</b>	<b>400</b>	<b>100%</b>

We found that of those possessing EI (57% of the total respondents), 82% perceived themselves as entrepreneurs. That is, they had an entrepreneurial mindset. Moreover, a significant difference exists between those with and without EI regarding their perception of being an entrepreneur ( $\chi^2 = 4555.109$ , d.f.=16,  $p < .001$ ). Also, using Spearman's  $\rho = .74$ ,  $p < .001$ , a strong positive relationship exists between one's perception of being an entrepreneur and planning to start a business. Therefore, we accept Hypothesis 1.

*Personal Factors*

We report on the following personal factors: selected demographic variables, birth order within the family, family member business owners, role models, and mentors. A summary of statistical values is shown in Table 1.

**Selected Demographic Variables.** Using Chi-Square analysis, we found no significant differences in the demographics among those with EI and those who did not possess EI regarding gender, age, university major, classification, or marital status. Therefore, we reject Hypothesis 2.

**Family Background.** As a result of our literature review, we examined two major factors concerning family background: birth order within the family (Calabro et al., 2017) and family member business ownership (Farrukh et al., 2018). The reported birth order within the respondents' family was 41%, only child or firstborn, 26%, middle child, and 33%, last born. In addition, 49% of the respondents indicated that a family member had owned a business. See Table 3.

**TABLE 3**  
**FAMILY BACKGROUND FREQUENCIES**

<b>Family Background</b>	<b>No.</b>	<b>Percent</b>
<b>Birth Order</b>		
Only child	28	7%
First born	137	34%
Middle born	105	26%
Last born	130	33%
<b>Total</b>	<b>400</b>	<b>100%</b>

<b>Family members owning a business</b>		
Yes	195	49%
No	205	51%
<b>Total</b>	<b>400</b>	<b>100%</b>

**Birth Order.** Concerning birth order within the family, we found no significant differences between those with EI and those who did not possess EI, using Chi-Square analysis. Therefore, we reject Hypothesis 3.

**Family Member Business Owner.** Regarding the presence of a family member business owner, we found a significant difference between respondents with EI and those who did not have EI. Our results were as follows:  $\chi^2 = 14.996$ , d.f.=4 p < .005. Therefore, we accept Hypothesis 4.

#### **Personal Factors: Role Models and Mentors**

Role models, those individuals considered worthy of imitation (Vultos, 2010), and mentors, described as senior managers who aid the development of junior associates (Kram, 1983, may influence the development of EI. A majority, 90%, of the respondents indicated they had a role model. The leading role models were family members, followed by teachers/professors, friends, and peers. Furthermore, 60% of the respondents indicated they had a mentor, such as family members, friends, and co-workers. See Table 4.

**TABLE 4**  
**PERSONAL FACTORS: FREQUENCIES OF ROLE MODELS ND MENTORS**

<b>Having a Role Model</b>	<b>No.</b>	<b>Percent</b>
Yes	361	90%
No	39	10%
<b>Total</b>	<b>400</b>	<b>100%</b>
<b>Types of Role Models</b>		<b>% of 361*</b>
Family members	289	80%
Friends/peers	170	47%
Teacher/professors	200	56%
Other	119	33%
<b>Having a Mentor</b>		
Yes	238	60%
No	163	40%
<b>Total</b>	<b>400</b>	<b>100%</b>
<b>Type of Mentor</b>		<b>% of 238*</b>
Family member	128	54%
Friends	186	78%
Co-worker	152	64%
Social/church/professional	112	47%
Other	45	19%

\*Some respondents gave more than one role model or mentor.

#### *Role Model*

Regarding having a role model, we found no significant differences between those with EI and those who did not possess EI, using Chi-Square analysis. Therefore, we reject Hypothesis 5.

### *Mentor*

Regarding having a mentor, we found no significant differences between those with EI and those who did not possess EI, using Chi-Square analysis. Therefore, we reject Hypothesis 6.

### **Higher Education Effects**

University entrepreneurship educators may positively affect student EI by offering courses in entrepreneurship (Shirokova et al., 2016) or activities within the classroom and community (Ismail et al., 2015). Of the respondents, 36% indicated that they had taken a course in entrepreneurship, 67% revealed that they were almost always, often, or occasionally a leader in a group project, and 24% stated that they participated in student organizations. See Table 5.

**TABLE 5  
HIGHER EDUCATION EFFECTS**

<b>Course in Entrepreneurship</b>	<b>No.</b>	<b>Percent</b>
Yes	145	36%
No	255	64%
<b>Total</b>	<b>400</b>	<b>100%</b>
<b>Leader in Class Group Projects</b>		
Almost always	56	14%
Often	92	23%
Occasionally	119	30%
Rarely	38	10%
Almost never	90	23%
<b>Total</b>	<b>395</b>	<b>100%</b>
<b>Participation in Student Organizations</b>		
Almost always	18	5%
Often	23	6%
Occasionally	52	13%
Rarely	78	19%
Never	229	57%
<b>Total</b>	<b>400</b>	<b>100%</b>

### *Entrepreneurship Course*

Concerning taking a class in entrepreneurship, we found no significant differences between those with EI and those who did not possess EI, using Chi-Square analysis. Therefore, we reject Hypothesis 7.

### *Group Project Leadership*

We found that a significant difference exists between those possessing EI and those who do not regarding leadership in a class group project. The results were as follows:  $\chi^2 = 24.050$  d.f.=16 p = .08. Also, using Spearman's correlation coefficient, p-value=. 010, rho=.881. The statistical results showed a significant and positive correlation. Therefore, we accept Hypothesis 8.

### *University Student Organization Participation*

Concerning participating in university student organizations, we found no significant differences between those with EI and those who did not possess EI, using Chi-Square analysis. Therefore, we reject Hypothesis 9.

### Work Experience Effects

Researchers have found that part-time work experience may positively affect EI (Satyalakshmi, 2017). In this study, a majority of the respondents, 81%, indicated that they work while attending college. In addition, startup experience may also increase EI (Bergmann et al., 2016). For example, 128, or 32%, of the respondents reported working at a startup company. See Table 6.

**TABLE 6**  
**WORK EXPERIENCE EFFECTS**

<b>Presently Working</b>	<b>No.</b>	<b>Percent</b>
Working	325	81%
Not Working	75	19%
<b>Total</b>	<b>400</b>	<b>100%</b>
<b>Worked for a Startup</b>		
Yes	128	32%
No	272	68%
<b>Total</b>	<b>400</b>	<b>100%</b>

The survey results showed that 67% of those respondents who had previously worked for a startup definitely or probably planned to start a business in the future (possessed EI). Therefore, a significant difference exists between those with and without EI regarding whether they previously worked for a startup. Chi-Square  $\chi^2 = 14.399$  d.f.=4,  $p < .006$ . Therefore, we infer that students who have worked for a startup business are more likely to start their own business in the future. Consequently, we accept Hypothesis 10.

### Contextual Factor – Covid-19 Pandemic Influence

Although the Covid-19 pandemic seriously harmed small businesses globally (Belitski et al., 2021), there are avenues for entrepreneurs to pursue in the aftermath of the pandemic (Derderian, 2022). Of those respondents who definitely or possibly will start a business, 78% stated that Covid-19 was a factor in their thinking. See Table 7.

**TABLE 7**  
**CONTEXTUAL FACTOR - COVID INFLUENCE**

<b>Covid-19 Influence in Starting a Business</b>	<b>No.</b>	<b>Percent</b>
Definitely yes	76	19%
Possibly	92	23%
Unsure	88	22%
Probably not	84	21%
Definitely not	58	15%
<b>Total</b>	<b>398</b>	<b>100%</b>

### Contextual Effects - Covid-19 Pandemic Influence

We found a significant difference between those possessing EI and those without EI regarding the influence of the Covid-19 pandemic. Chi-Square = 208.90, d.f.+16,  $p < .001$ . Also, using Spearman's correlation,  $\rho = .4756$ ,  $P\text{-value} < .001$ . We may infer that there is a relationship between students who plan to start a business and the pandemic. Therefore, we accept Hypothesis 11.

In summary, the results of this study indicated that five of our eleven hypotheses were acceptable. Moreover, we found the following hypotheses to be significant. H1: Perception of being an entrepreneur, H5: Family member ownership in a business, H9: Student leadership in class group projects, H10: Previously worked for a startup business, and H11: Positive influence of the Covid-19 pandemic.

## DISCUSSION

We employed a theoretical basis for this study in the TRA (Fishbein & Ajzen, 1975) and the TPB (Ajzen, 1991). These theories emphasize intentions to behave in a specific manner that may be strengthened by favorable individual attitudes emanating from subjective norms. For example, following Kautonen et al. (2013) we found that EI and EM are favorable attitudes toward performing entrepreneurial activities, that social pressure to engage in entrepreneurship may come from family member business owners, and that perceived ease in starting a business may stem from experience in a startup (Kautonen et al., 2013).

In this study, we focused on the relationship between EM and EI and factors relating to the development of EI. In this way, we have produced an outline of factors relating to how nascent student entrepreneurs may develop their interest in starting a business. We view the possession of EI (Krueger et al., 2000), denoting the desire to engage in entrepreneurship, and then the perception of being an entrepreneur, including EM (Kuratko et al., 2021), as strongly prefiguring entrepreneurial activity in the future. Our results confirm that a robust positive relationship between EI and EM exists.

Further, Naumann (2017) described seven attributes associated with EM. Our study confirms these qualities, especially regarding the fourth attribute of prior knowledge, including work experience, personal events, and education. We found that prior knowledge gained from association with family member business owners, experience in higher education class projects, and work experience at a startup business aided entrepreneurial development. We suggest that the nascent entrepreneurs in our study are well on their way to developing the three facets of EM, (1) thinking entrepreneurially, (2) behaving entrepreneurially, and (3) feeling like an entrepreneur (Kuratko et al., 2021).

Although we found support for the positive effect of family member business owners concerning EI, we did not find support for the impact of role models and mentors on EI. We suggest that although the respondents reported having role models, they may not have had a personal relationship with them (Vultos, 2010). Or the role models may not have been closely tied to business and entrepreneurial activities (Cheprasov, 2022). In other words, role models may affect whether respondents had EI. In addition, in the case of mentors, because the respondents did not have extensive working experience, they may not have had time to develop a close relationship with a senior manager (Kram, 1983).

Finally, the Covid-19 pandemic brought terrible destruction to the US economy (Belitski et al., 2021), disproportionately affecting small businesses. However, the respondents were still in college during the worst of the pandemic. Therefore, we suggest that the nascent student entrepreneurs may have perceived that possible new business avenues were opening up to them rather than focusing on the destruction of existing small businesses (Derderian, 2022). Alternatively, since many small businesses were closed, employment opportunities may have declined, making self-employment more desirable.

### Implications for Business Practitioners

A significant factor motivating this study is to increase awareness among business practitioners of the importance of entrepreneurship as a desirable career for nascent student entrepreneurs and to encourage this process. After graduating from college, nascent student entrepreneurs will soon benefit business practitioners within the US economy. Although business colleges are well known for preparing students to enter the workforce as employees of existing businesses, large and small, another critical element driving the US economy and global business is the creation of new products and services by startup businesses. Therefore, it is crucial for business colleges to produce students with an entrepreneurial mindset (Kuratko et al., 2021) and for business practitioners to embrace a new wave of entrepreneurial activity.

Small businesses with 500 employees or less compose about 44% of the US economy (Rowinski, 2022). Moreover, new ventures and other small businesses complement large businesses by creating jobs, sparking

innovation, and providing opportunities for women and minorities to attain financial freedom and success (U.S. Small Business Administration, 2011). Therefore, both large and small business practitioners will benefit from the introduction of nascent student entrepreneurs into the economy.

### **Limitations and Future Research**

We performed this study at a southwestern US regional state university with an enrollment of approximately 10,000 students. We acknowledge that the participants' views may or may not reflect business students' attitudes and opinions in other areas of the US or worldwide. There may be variances of opinion at larger or smaller universities. Additionally, the survey responses were self-reported, relying on the respondents' integrity. Although we noted some effects of the Covid-19 pandemic contextually, the ramifications of the pandemic will continue to be felt for many years.

In this study, we used the TRA and TPB as theoretical bases, but researchers may also choose other foundations, such as Shapero's (1984) entrepreneurial event model. We invite future studies to examine the relationship between EI and EM using qualitative methods to provide richer data sets or with larger sample sizes quantitatively. Further fine-grained studies of the determinants and outcomes of EI are still very relevant.

Additionally, questions arise from this research project. For instance, future research may focus on the roles of entrepreneurial advisors, such as family members, role models, and mentors who work specifically within entrepreneurship activities. These individuals may more specifically impact the development of nascent entrepreneurs with their entrepreneurial knowledge rather than more generalized counsel from other advisors. Further, researchers may examine the link between EI and starting a business as nascent entrepreneurs acquire greater business knowledge and become more aware of the difficulties involved.

### **CONCLUSION**

We surveyed 400 US business college students, comparing those with EI (n=228) and those without EI (n=178). We found a strong positive relationship between respondents with EI and EM. Further, we found that respondents with EI were likelier to have family members who owned a business, be ethnic minorities, lead group projects as students, and have previously worked in a startup business. Also, the contextual factor of the Covid-19 pandemic positively affected respondents who possessed EI. Our results confirm previous studies regarding the significance of EI and the application of the TRA and TPB. Finally, we seek to apprise business practitioners of the benefits they will accrue because of entrepreneurial activity among nascent student entrepreneurs.

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