

# An investigation of the antecedents of entrepreneurial mindset and intention among university students: An emerging market study

Hajar Chetioui<sup>1</sup>, Hind Lebdaoui<sup>2</sup>, Imane Laajil<sup>2</sup>

<sup>1</sup>FSJES, Sidi Mohamed Ben Abdellah University, Fez, Morocco. <sup>2</sup>School of Business Administration, Al Akhawayn University in Ifrane, Ifrane, Morocco.

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## Abstract

*The present research aims to investigate the key antecedents of entrepreneurial intention among university students in an emerging market (i.e., Morocco). To do so, we propose and test an integrated framework combining the theory of planned behavior (TPB) with other constructs from prior literature. The proposed conceptual model was assessed using a sample of 408 Moroccan university students and data is analysed using the partial least squares (PLS) estimation. Our findings convey that students' attitudes toward entrepreneurship is a key driver of their entrepreneurial intention. We also demonstrate that attitude toward entrepreneurship is mainly influenced by entrepreneurial education and students' personality traits. Finally, risk-taking propensity and entrepreneurial motivation were found to moderate the relationship between students' attitudes towards entrepreneurship and their intention to become entrepreneurs. Our findings suggest valuable insights to universities, policymakers, and instructors.*

**Keywords:** Moroccan University students, Attitudes toward entrepreneurship, entrepreneurial education, personality traits, entrepreneurial motivation, risk-taking propensity.

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## 1. Introduction

Nowadays, one of the most crucial objectives of governments is identifying the factors of economic growth remains. One of the factors is entrepreneurship which is acknowledged as a key driver of a country's economic growth as it boosts employment opportunities, reduces poverty, and enhances individual autonomy (Aljarodi et al., 2022; Y. H. Al-Mamary & Alshallaqi, 2022; Elnadi & Gheith, 2021). Since entrepreneurship is an essential aspect of any nation's economic and social development, there are calls for greater practical and empirical

research into the variables that affect entrepreneurial intent (Barnir et al., 2011; Kraus et al., 2020). Morocco as well is aware of the critical part that entrepreneurship plays in its economic and social growth. The Moroccan government has put in place several policies and initiatives to encourage entrepreneurship and foster an environment that is favorable to it (Zeinab HMAMA, 2022). Despite these efforts, the level of entrepreneurship in Morocco is still very low, so it is important to identify the variables that affect students' intentions to start their own businesses (Lormeus, 2019). The current research aims to explore the factors influencing entrepreneurial intentions among university students in Morocco. Since it has become essential to understand the underlying drivers of entrepreneurial mindset, the study seeks to provide valuable insights for policymakers, educators, and stakeholders in designing effective strategies to foster entrepreneurship expected support system. Based on the above discussion, we developed the following research questions:

**RQ1.** What are the key antecedents of attitude towards entrepreneurship among Moroccan university students?

**RQ2.** Does attitude towards entrepreneurship positively affect the entrepreneurial intention among Moroccan university students?

**RQ3.** Do risk-taking propensity & entrepreneurial motivation moderate the linkage between students' attitude & intention to become entrepreneurs?

The findings of this study can provide policymakers with a better understanding of the factors that influence students' entrepreneurial intention, hence, promote entrepreneurship in Morocco. By identifying the major influencing variables that are most strongly associated with entrepreneurial education, personality traits, entrepreneurial attitude, entrepreneurial motivation, and risk-taking propensity they can focus their efforts on enhancing these variables to promote students' entrepreneurial intention. The study highlights the importance of entrepreneurial motivation and risk-taking propensity as moderators in the relationship between students' attitudes toward entrepreneurship and their entrepreneurial intention. The insights gained from this research can prove highly beneficial for government officials seeking to promote entrepreneurship development which will help the government achieve its economic expansion goal. These outcomes may guide the creation of policies tailored to stimulate students' entrepreneurial attitude thus their intention to launch their own business. The findings collected in this investigation could guide educators and lecturers to identify these impactful variables to contribute to building students' entrepreneurial attitude. Adopting such measures can increase the significance of university involvement and contribution to help these students become the entrepreneur they want, while also instilling a high-quality educational program.

## **2. Theoretical background**

### **2.1. Theoretical foundations**

Entrepreneurship researchers have long researched people's intentions to start their own businesses (Gieure et al., 2020). To investigate the relationship between attitude, intention and behavior, this study uses the (TPB) model put forth by (Ajzen, 1985, 1991). According to the (TPB) Ajzen (1991), behavior's primary predecessor is the intention, wherein intention refers to how much work a person intends to put into engaging in that at behavior (Entrialgo & Iglesias, 2016). (TPB) has demonstrated reliability in predicting entrepreneurial intent Kautonen et al. (2015), and many researchers have confirmed it (Almobaireek & Manolova, 2012; Renata et al., 2018). Wenzel & Kerber (2016) carried out an experimental study to look at how social norms influence business decisions and discovered that (TPB) factors played a role in the connection between social norms and entrepreneurial intentions and conduct. Liñán & Chen (2009) created and approved a unique tool to assess entrepreneurial intentions across cultural boundaries. They discovered that the most reliable predictors of entrepreneurial intents were the Theory of planned behaviour factors (subjective norms, perceived control of behaviour, and attitude).

### **2.2. Hypotheses**

According to Fayolle (2006), entrepreneurship education refers to any educational program that teaches entrepreneurial concepts. Entrepreneurship education focuses on increasing entrepreneurial-related information, skills, and personal characteristics (Cui et al., 2019; Yuan & Wu, 2020). Many countries have recently developed policies to support entrepreneurship by providing curricula for all levels of education from primary to tertiary level (Głodowska et al., 2019). Most universities aim at increasing the number of young entrepreneurs and raise awareness of the importance of entrepreneurial skills (Bergfeld & Weber, 2011; Garavan & O' Cinneide, 1994). Handayati et al. (2020) argued that the entrepreneurial attitude is created through entrepreneurship education. According to earlier research, attitude toward entrepreneurship and entrepreneurial education are positively related (Jiatong et al., 2021; Pfeifer et al., 2016; Saptono et al., 2020). Building on the above, you can hypothesize that:

*H1: Entrepreneurial education positively affects students' attitudes toward entrepreneurship.*

Since entrepreneurship education and service learning have similar goals, it is not unexpected that service learning is among the most popular teaching strategies used in these courses. Application of the course material in service-learning assists students in understanding the information because it connects concepts with their observations and experiences (Litzky et al., 2010; Wessel & Godshalk, 2004). Moreover, Den Hartog et al. (2014) discovered a positive relationship between attitudes toward entrepreneurship and service learning in their study

because service learning can support the development of an entrepreneurial attitude by giving students the chance to work with entrepreneurs and SMEs. Based on the above discussion, we developed the following hypothesis:

*H2: Service Learning positively affects students' attitudes toward entrepreneurship.*

Entrepreneurial parents persuade their progeny that an entrepreneurial profession is desirable by fostering an atmosphere that has a significant impact on the personal traits of their kids (Mathews & Moser, 1995; Zapkau et al., 2015). Discussions and conversations with parents give people knowledge about job options and, as a result, have a substantial impact on what their kids want to do with their careers (van Auken et al., 2006). Thus, Children learn informal techniques and ability from their entrepreneurial parents. This human capital increases the descendants' confidence in their ability to carry out the duties necessary to launch a firm (Chlosta et al., 2012). As a result, growing up with entrepreneurial parents influences their kids' attitudes towards entrepreneurship (Carr & Sequeira, 2007). Hence, having enterprising parents who serve as role models is likely to promote an attitude toward entrepreneurship (Lančarič et al., 2017). Therefore, based on the above, we hypothesize that:

*H3: Parental norms positively affect students' attitudes towards entrepreneurship.*

Personality traits refer to permanent patterns of ideas, emotions, and behaviors that define people through time and in various contexts (Löckenhoff & De Fruyt, 2015). Also, personality traits are described by (American Psychological Association., 2019) as "persistent patterns of thought, mood, motivation, and action that are displayed in various contexts and over time." A popular system for classifying personal traits is the "Big Five" (Antoncic et al., 2015). According to Zhao & Seibert (2006), Entrepreneurs are shown to be more open to new experiences, sociably average, have more conscientiousness, be more disagreeable, and be less anxious (or in the Big-5 jargon, O+, C+, E, A -, N -). So, based on the above we can hypothesize that:

*H4: Personality traits positively affect students' attitudes toward entrepreneurship.*

Financial literacy is the set of necessary knowledge to make smart financial decisions (Zhang & Yang, 2021). Financial literacy has received a lot of attention from society, professionals, and policymakers since it promotes social values and economic expansion (Goyal & Kumar, 2021; Huston, 2010). The functions of entrepreneurs can be well-nourished through sound financial management (Joyce & Gomathi, 2010; Wise, 2013). According to Brown et al. (2006), a fundamental aspect of being a successful entrepreneur is those who mastered financial literacy. On the other hand, Abubakar (2015) stated that poor financial literacy may cause losses and firm closures. As a result, having a solid foundation in financial literacy is an important factor in increasing attitude towards entrepreneurship (Abubakar, 2015; Huseyin Y., 2011). Afriyie & Osei-Fosu (2020); Arinaitwe & Kajumba (2021) and Kim & Lyons (2011) found that financial

literacy is positively related to entrepreneurial attitude. Accordingly, we propose the following hypothesis:

*H5: Financial literacy positively impacts students' attitudes towards entrepreneurship.*

The theory of planned behavior (TPB) is a frequently used expectancy-value theory of attitude-behavior interactions that has had some effectiveness in forecasting a range of behaviors (Armitage & Conner, 2001; Cheng & Chu, 2014). According to (TPB), a person's intention to engage in behavior increases as he or she feels good about it (Chetioui et al., 2021). Within the framework of the present study, attitude is defined as the extent to which entrepreneurial practices and outcomes are perceived as meaningful, useful, and positive (Jena, 2020). Several studies supported the connection between attitude towards entrepreneurship and entrepreneurial intention (Duong et al., 2022; Nowiński et al., 2020). Furthermore, most empirical studies identified it as the best predictor of entrepreneurial intention (Fayolle & Gailly, 2015). Building on the above, we can hypothesize that:

*H6: Students' attitude toward entrepreneurship positively affects their entrepreneurial intention.*

Entrepreneurial motivation is strategies and approaches that are used to motivate entrepreneurs to pursue their objectives and make accomplishments in their companies (Rueda-De-León, 2020). Entrepreneurial motivation is also the internal forces that drive behavior and external forces that can serve as an encouragement to behavior (Locke & Latham, 2004). Entrepreneurs' impressions of their surroundings and their own skills impact their level of entrepreneurial motivation (Estay et al., 2013). Several researchers have demonstrated that entrepreneurial motivation moderates the relationship between attitude toward entrepreneurship and intention to become an entrepreneur (Barba-Sánchez & Atienza-Sahuquillo, 2017; Hassan et al., 2021; Lang & Liu, 2019). Hence, we made the following hypothesis:

*H7: Entrepreneurial motivation positively moderates the relationship between students' attitudes toward entrepreneurship and their entrepreneurial intention.*

As described by Ibrahim & Salleh (2011), the predisposition of a person to accept a specific degree of risk associated with one's business enterprise, particularly while making a business decision is a risk-taking propensity. When faced with precarious situations, a person's propensity to take risks relates to how probable it is that they will be risk-taking or risk-averse (Gurel et al., 2021). According to Gurel et al. (2021), some personality qualities serve to define and inspire entrepreneurial intention. In this regard, the desire to start a business is impacted by personality qualities including a propensity for taking risks. Studies specifically looking at student selection reveal that students with attitude towards entrepreneurship much higher on risk-taking than students without an entrepreneurial attitude (Ertuna & Gurel, 2011; Gurel et al., 2021). As a result, we speculate that:

H8: Risk-taking propensity positively moderates the relationship between students' attitudes towards entrepreneurship and their intentions.

Building on the above, the following conceptual model was developed:

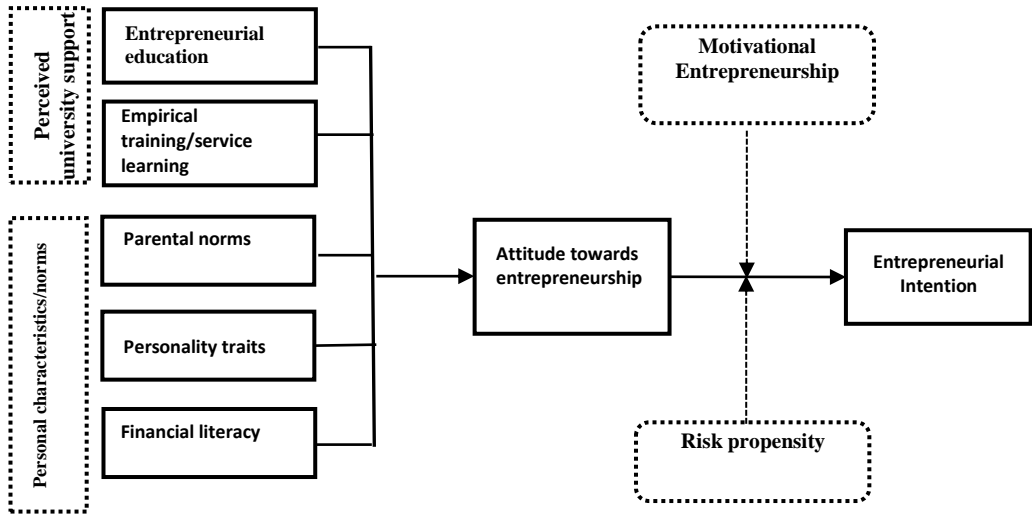


Figure 1. Conceptual model.

### 3. Methods

#### 3.1. Procedures

The survey for this study was administered to individuals in Instagram and Facebook groups, allowing users to voluntarily complete it. Snow-ball sampling was used as participants in our study were requested to complete the survey and forward it to others via email or social media platforms. Our sample consisted of university students from Morocco, which is why a filtering question was added to the beginning of the survey to weed out respondents who didn't meet our criteria. A total of 435 respondents successfully filled out the survey over the course of two months (from January to Mars 2023), 27 answers were rejected because they did not fit the criteria for our sample, leaving 408 valid responses to be kept (93.79%). To evaluate reliability, validity, and suitability for testing hypotheses, valid responses were examined.

#### 3.2. Measures

All items were borrowed from prior literature and barely adjusted. Each item was rated on a Likert scale with 1 being the strongest disagreement and 5 being the strongest agreement. At the end of the survey, 5 demographic questions regarding gender, city, education, university,

and concentration were included. The shared survey was in French because Moroccans regularly use it (Chetioui et al., 2021). The items and variables were translated using the back translation technique (Brislin, 1986). The survey was posted online so that it may be distributed through social media and emails. Prior to the structural model test, the measured model was examined for internal consistency, convergent, and discriminant validity.

## **4. Results**

Our sample is made up of 408, with 247 females (60.54%) and 161 men (39.46%). We notice that female responses have outnumbered the males', because women may be more likely than males to share their opinions and experiences, which could be explained by societal or cultural factors such as gender norms that encourage women's enhanced communication and empathy (Dillman et al., 2014). Regarding the city of origin, Casablanca comes in first place with 39.22%, this is understandable given the fact that Casablanca is home to numerous universities and business schools. Rabat came in second with 16.67%, Fes came in third with 6.37%, Tangier came in at 6.13%, Meknes came in at 5.39%, Marrakech came in at 4.90%, Agadir came in at 2.45%, and other cities came in at 16.91%. In terms of education, undergraduates make up the majority of respondents (65%), followed by graduates (31%) and people with further degrees in teaching (4%). Al Akhawayn University students account for 45% of the respondents, with the remaining 25% coming from public universities, 10% from private universities, 8% from business schools, 3% from private institutions of higher learning, 2% from public engineering schools, and 1% from private engineering schools. Regarding the respondents' areas of concentration, 22% are majoring in finance, 17% have a background in marketing, 9% are majoring in management, 5% are majoring in international business, 3% are majoring in economy and logistics, and 41% are majoring in other concentrations than business.

### **4.1. Assessment of the measurement model**

Our findings demonstrate that all constructs have Cronbach's alphas (CA) and composite reliabilities (CR) that are more than or equal to 0.7, indicating that the constructs are reliable (Henseler et al., 2009). Loadings should exceed 0.7 in order to evaluate the indicator's reliability (Chin, 1998; Hair et al., 2010; Henseler et al., 2009). Our results suggest that every item loading exceeds 0.7, demonstrating the indicator's reliability. Our data also show that all constructs have average extracted variances (AVEs) greater than 0.5, which ensures convergent validity. For the discriminant validity, only one criterion has been used as recommended by (Hair et al., 2021). The Hetrotrait-Monotrait ratio of correlations (HTMT) criterion was the only factor to evaluate the discriminant validity of the model. Prior literature has extensively utilized the HTMT as a more logical method of evaluating discriminant validity (Lebdaoui & Chetioui, 2020). All values were discovered to be below the cutoff of 0.9, confirming the discriminant validity. Construct reliability, convergent validity, indicator reliability, and discriminant validity

evaluations conveyed satisfactory results, indicating that testing the theoretical model using constructs is possible (the tables are available upon request).

#### **4.2. Assessment of the structural model**

To test and evaluate the statistical significance of the path coefficients, this study used the bootstrapping technique, and it involved the generation of 5000 samples from the original data. The determination coefficient ( $R^2$ ) of the latent variables that are endogenous, according to Chin (1998), is a key factor in evaluating the structural model. To be considered moderate, the coefficient of determination ( $R$ -square) should be above 0.33 (Chin, 1998). The  $R$ -square was 43.7% for Attitude toward Entrepreneurship and 45.97% for the variation in entrepreneurial intention in the conceptual model. In other words, the conceptual model can explain 43.7% of the variance in attitude towards entrepreneurship and 45.97% of the variation in entrepreneurial intention, showing a medium level of explanation for the model.

Table 1 illustrates the main direct effects. First, H1 is supported by the finding that entrepreneurial education significantly improved students' attitudes toward entrepreneurship ( $b = 0.247$ ;  $p < 0.05$ ). Students who have taken entrepreneurship classes at their universities are more likely to adopt positive attitudes toward the field. Moreover, personality traits show the strongest positive impact on Attitude towards entrepreneurship ( $b = 0.465$ ;  $p < 0.05$ ) indicating that they can significantly influence an individual's attitude toward entrepreneurship, this way hypothesis 4 is supported. On the other hand, the impact of service learning on students' attitudes toward entrepreneurship was the most insignificant ( $b = 0.010$ ;  $p = 0.862$ ). The statistical analysis's  $p$ -value, above the 0.05 pre-set level of significance, suggests that hypothesis H2 is not supported. Student attitudes toward entrepreneurship were not significantly impacted by parental norms ( $b = 0.063$ ;  $p = 0.241$ ). The absence of support for hypothesis H3 is confirmed because the  $p$ -value is greater than 0.05. The same is true for financial literacy, which has no significant impact on attitude towards entrepreneurship ( $b = 0.047$ ;  $p = 0.268$ ). As a result of the  $p$ -value being higher than 0.05, H5 is not approved. Finally, and as anticipated, students' entrepreneurial intention was positively and significantly impacted by their attitude toward entrepreneurship ( $b = 0.379$ ;  $p < 0.05$ ), supporting H6 (see Table 1). Students who perceived entrepreneurship more favorably demonstrated higher levels of entrepreneurial intention. Our results also suggest that personality traits the most impactful variable on attitude toward entrepreneurship, followed by entrepreneurial education. Moreover, attitude toward entrepreneurship has the strongest effect on entrepreneurial intention, followed by risk-taking propensity and then entrepreneurial motivation.

Our findings demonstrate that there entrepreneurial motivation positively moderates the relationship between attitude toward entrepreneurship and students' entrepreneurial intention ( $b = 0.301$ ;  $p < 0.05$ ). In other words, the positive association between attitude toward entrepreneurship and entrepreneurial intention is moderated by entrepreneurial motivation,



supporting H7 and confirming earlier findings (Barba-Sánchez & Atienza-Sahuquillo, 2017; Hassan et al., 2021; Lang & Liu, 2019). Likewise, the results confirm the moderating effect of hypothesis H8 by indicating that Risk-taking propensity moderates the connection between attitude toward entrepreneurship and entrepreneurial intention among university students ( $b = 0.116$ ;  $p < 0.05$ ). Based on the positive coefficient, H8 is supported by the likelihood that university students with higher risk-taking propensities will also have a substantially higher entrepreneurial intention.

**Table 1. Direct and indirect effects**

Hypotheses	Relationships	Beta	STDEV	T-statistics	P-values
<b>Direct effects</b>					
H1	Entrepreneurial education -> Attitude towards entrepreneurship	0.247	0.058	4.287	0.000
H2	Service learning -> Attitude towards entrepreneurship	0.010	0.057	0.173	0.862
H3	Parental norms -> Attitude towards entrepreneurship	0.063	0.054	1.174	0.241
H4	Personality traits -> Attitude towards entrepreneurship	0.465	0.045	10.386	0.000
H5	Financial literacy -> Attitude towards entrepreneurship	0.047	0.042	1.109	0.268
H6	Attitude towards entrepreneurship -> Entrepreneurial intention	0.379	0.059	6.462	0.000
<b>Moderating effect</b>					
H7	Attitude towards entrepreneurship * Entrepreneurial motivation -> Entrepreneurial intention	0.301	0.046	3.591	0.002
H8	Attitude towards entrepreneurship * Risk-taking propensity -> Entrepreneurial intention	0.116	0.042	2.785	0.006

## 5. Discussion and conclusions

### 5.1. Theoretical implications

The findings of the study lend credence to several theories about entrepreneurship-related attitudes, education, personality traits, motivation, and risk-taking tendency. The Self-Determination Theory, which focuses on how internal motivation influences how people behave (Liñán & Chen, 2009; Nabi et al., 2017) is supported by the findings presented here. Considering this, students who have strong intrinsic motivation are considerably more likely to have strong entrepreneurial intentions. Also, the human capital theory which confirms that education and training can boost the student's abilities and skills (Becker, 1975; Heckman, 2015), is supported by our findings. Especially, when we found that entrepreneurial education positively affects students' attitude towards entrepreneurship. Moreover, our findings also support the Theory of Planned Behavior (TPB), which holds that a person's intention to engage in a particular behavior is a reliable indicator of that behavior in practice. Thus, students' genuine attitude toward entrepreneurship predicts their entrepreneurial intentions (Krueger & Carsrud, 1993; Liñán & Chen, 2009). Additionally, risk-taking influences a student's intention to start their own business

since we found it as a moderator in our study. Risk-takers consider entrepreneurship as an exciting opportunity for financial prosperity and personal fulfillment and are so more likely to view it favorably (Foss et al., 2013). Finally, our findings also support the social cognitive theory emphasizes teaching, self-efficacy, and individual observational learning (Beauchamp et al., 2019). According to this theory, students are more likely to pursue their entrepreneurial goals if they believe their knowledge and skills may help them achieve the desired results (Lim et al., 2020; Wu et al., 2020).

## **5.2. Practical implications**

First, the research findings validate the importance of entrepreneurial education, which encourages government officials to provide additional funding to universities and colleges in order to guarantee that entrepreneurial education is available to all students. In order to better prepare more university students for their future academic, professional, and personal life, entrepreneurial education should be incorporated into the coherent system of general education in universities. This is because entrepreneurial education helps students improve their attitude toward entrepreneurship. The policymakers will be greatly aided by this study in creating an education system that supports entrepreneurship and promotes development. The chances of launching a business for students who have a great level of entrepreneurial intention are high if the government and non-government organizations give them access to funding, business knowledge, infrastructure, and political and economic assistance. This assistance may inspire more students to build and launch new ventures. Moreover, the study has shown that students with higher entrepreneurial motivation have higher entrepreneurial intentions. Hence, universities should motivate their students through workshops, entrepreneurship competitions, and start-up exhibitions where successful entrepreneurs can guide students at the early stage of their businesses (Barba-Sánchez & Atienza-Sahuquillo, 2018). Furthermore, personality traits have been linked to attitudes toward entrepreneurship, and students' entrepreneurial intentions can be significantly influenced by their personalities. Lecturers can take advantage of the fact that students who are eager to learn are proactive and participate more in entrepreneurship by including those students in entrepreneurial activities. Academicians can also design courses for universities that help students progress their personality qualities.

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