

## Entrepreneurship Intentions of Sfax University Students

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**Abstract:** In Tunisia, the job that thousands of university graduates aim to do is their first choice, not to initiate their own business. This research aims to examine the entrepreneurial mentality of Sfax University students and their objectives of starting a new business by studying the disadvantages preventing them from becoming independent. First, collecting key data through self-prepared questionnaires is done for the evaluation of the explanatory factor's role, such as attitudes, senses of control, social norms, and students' perceptions of entrepreneurship, and how each dimension affects entrepreneurs' intentions. Then, the use of a multiple regression model based on Ajzen's (1991) Theory of Planned Behavior (TPB) is effective to analyze the data. After receiving entrepreneurship training at the University of Sfax, this theoretical framework was verified by 320 students from different disciplines. The results show that personal attitudes and perceived behavioral control are the explanation of entrepreneurial intentions.

**Keywords:** entrepreneurial intention; theory of planned behavior; student; Sfax University

**Abstrak:** Di Tunisia, pekerjaan yang diinginkan oleh ribuan lulusan universitas merupakan pilihan pertama mereka, bukan untuk memulai bisnis mereka sendiri. Penelitian ini bertujuan untuk mengkaji mentalitas kewirausahaan mahasiswa Sfax University dan tujuan mereka memulai bisnis baru dengan mempelajari kesulitan yang menghalangi mereka untuk mandiri. Pertama, pengumpulan data melalui kuesioner dilakukan untuk evaluasi peran faktor eksplanatori, seperti sikap, pengendalian diri, norma sosial dan persepsi siswa tentang kewirausahaan, dan bagaimana setiap dimensi mempengaruhi niat pengusaha. Kemudian, penggunaan model regresi berganda berdasarkan Theory of Planned Behavior (TPB) dari Ajzen (1991) yang efektif untuk menganalisis data. Setelah menerima pelatihan kewirausahaan di University of Sfax, kerangka teori ini diverifikasi oleh 320 mahasiswa dari berbagai disiplin ilmu. Hasil penelitian menunjukkan bahwa sikap pribadi dan kontrol perilaku yang dirasakan adalah paparan dari niat kewirausahaan.

**Kata Kunci:** niat kewirausahaan; theory of planned behavior; mahasiswa; Sfax University

### INTRODUCTION

Whether in industrialized countries or developing countries, entrepreneurship plays an increasingly important role in the national economy, and it seems to be a catalyst for growth and national competitiveness (Filser et al., 2019). However, in both developed and developing countries, unemployment is considered a common concern. Unemployment rates have been rising around the world, especially during the recent global economic crisis (Taha et al., 2017). Seeking for unemployment reduction, various policies and strategies have been adopted worldwide. Entrepreneurship is the most frequently chosen alternative solution to face the unemployment problem (Nazri et al., 2016). It is increasingly seen as a key source of economic growth, innovation, and job creation (Badulescu et al., 2014). However, the development of entrepreneurial spirit and people's entrepreneurial spirit transformation is a challenge to almost all countries. For the sake of

entrepreneurship promotion, many strategies and techniques are adopted by policymakers. One of these strategies is to provide people with entrepreneurial education to improve entrepreneurship (Liu et al., 2019). Entrepreneurship education provides motivation, knowledge, and skills necessary for students to lead successful entrepreneurship (Lee et al., 2011). The purpose of entrepreneurship education is to train students to acquire skills, thinking, management abilities, and start their businesses, rather than being hired (Owoseni & Akambi, 2010). Another goal is to help students develop a positive attitude towards entrepreneurship (Fayolle, 2008) and see business as a career.

Entrepreneurship education is determined as an overall education and a training activity (whether it is an educational system or a non-educational system) that attempts to foster participants' entrepreneurial purposes or some aspects that impress that intention, such as knowledge, desirability, and feasibility of the activities of the entrepreneurship (Liñán, 2004). In 1945, when the Harvard Business School opened its first educational program, the expansion of entrepreneurship education was at a fairly fast pace, mainly in the past few decades (Liñán, 2004), attracting a wide range of research interests from entrepreneurial scholars. Researchers found that entrepreneurship education is linked to career choices and personal skills. For example, research has found that entrepreneurship education is positively correlated with entrepreneurial attitudes and skills (Bae et al., 2014).

It is emphasized that entrepreneurship is a basic factor in economic development (Audia et al., 2000). Hindle and Rushworth (2002) believe that the engine of economic growth and national prosperity is entrepreneurship. It relies on market innovation to support economic growth and development. On the one hand, there is a two-way relationship between entrepreneurship and economic growth and development. The value of entrepreneurship education has been performed by Sfax University, which has tried to boost the personal development of students through a program of entrepreneurship education. Applying for jobs and creating new ones are the most important purposes of entrepreneurship education.

In Tunisia, there is very little research on the students' purposes to become entrepreneurs. From a theoretical point of view, most studies on entrepreneurial intentions are built on Ajzen's (1991) Theory of Planned Behavior and Shapero and Sokol's (1982) entrepreneurial event model. In the behavioral theory of Ajzen (1991), our goal is to determine the predecessor of intention, namely a personal attitude, perceived social standards, and perceived behavior control. To this end, a hypothetical deductive method based on correlation analysis and multiple regressions is applied. The data come from 320 Tunisian students from Sfax University who have perceived entrepreneurial training.

This article consists of three parts. The first introduces the literature based on the theory of planned behavior, the second introduces the deployed method, and finally, the last part analyzes the results obtained.

## LITERATURE REVIEW

The intention is regarded as the best indicator of behavior because it is considered a deliberate planned behavior. However, most behaviors are under voluntary control, according to Ajzen and Fishbein (1980). Bird (1988) determines intention as a mental state that directs one's attention to a specific goal to achieve the goal. On the other hand, Ajzen (1991) regards intention as the best predictor of voluntary behavior. At the beginning of the behavioral process, intention occupies a central position and attracts several researchers' interests from multiple disciplines and fields of study.

The idea that can be emerged is that any behavior is predictable. Therefore, according to this theory, it is possible to claim that entrepreneurial intention predicts entrepreneurial behavior. Therefore, the entrepreneurial intention model is a natural choice to understand entrepreneurial behavior and thus explain entrepreneurial behavior.

The proponent method (Krueger & Carsrud, 1993; Kovereid, 1996; Fayolle & Gally, 2009; Thomson, 2009, Boissin et al., 2009) proved the effectiveness of the intention model in contextual business creation. Therefore, the intention method seems to represent an appropriate theoretical framework for studying entrepreneurial behavior. Several intent models have been developed. The most important of these is Guerrero et al. (2008), cited the basic intention model of Krueger and Carsrud (1993), the potential entrepreneurial model of Krueger and Brazeal (1994), and finally, the convection model of Davidsson (1995). Most researchers drew inspiration from Ajzen's (1991) Theory of Planned

Behavior and Shapero and Sokol's (1982) entrepreneurial event formation model. We use Ajzen's (1991) model developed below.

Ajzen (1991) described his intention prediction model from three dimensions: perceived behavior and attitude, perceived social norms, and perceived behavior control. These three structures are regarded as the direct antecedents of behavioral intentions. The first two concepts—perceived behavioral attitudes and perceived social norms—refer to the desirability concept of Shapero and Sokol (1982) and the individual's attractiveness to behavior. The third conception—perceived behavioral control is similar to the feasibility concept adopted by Shapero and Sokol (1982) and the self-efficacy proposed by Bandura (1977, 1982). This most recent dimension reflects a person's confidence in having the ability to perform a certain behavior.

The entrepreneurial intention research is abundant (Kolvereid, 1996; Fayolle et al., 2009; Guerrero et al., 2008; Linan & Chen, 2006; Miller et al., 2009; Arminda et al., 2011). Especially, many of them are built upon student group development models. According to the sociocultural background, these models have different interests in one or the other dimension of Ajzen's theory or Shapero and Sokol's models. For Card and Krueger (2000), perceived feasibility has a greater impact on American students' entrepreneurial intentions than behavioral attitudes. However, social norms are unrelated to students' entrepreneurial intentions. In their study, Boissin et al. (2007) compared French students at the French University of Pierre Mendes in Grenoble with American students at Kennesaw State University in Georgia. They believed that only attractiveness and perception could explain the intention of creation. Thus, social norms are not important in predicting entrepreneurship (Arminda et al., 2011). However, social norms strike students' entrepreneurial intentions indirectly.

In a Norwegian students study, Kolvereid (1996) found that perceived behavior and attitudes, social norms, and perceived control represent the essence of entrepreneurial intentions. At the same time, the first two variables have a greater impact on entrepreneurial intentions than the latter two variables. They showed that the model of Ajzen (1991) is ideally suitable for this. Perceived behavior and attitude, social norms, and perceived feasibility show 53% of the changes in students' entrepreneurial intentions and positively impact social norms. This is in contrast with the findings of Shook and Bratianu (2010). For the latter, social norms have a negative impact on Romanian students' entrepreneurial intentions.

When comparing French students with students from Arab countries (e.g., Algeria, Tunisia, Lebanon), Boissin et al. (2009) emphasized obvious differences in entrepreneurial intentions due to France's economic and cultural background in Arab countries. The study of Hajer and Habib (2013) on factors that encourage civil servants to start their businesses shows that political background, social norms, and feasibility will affect civil servants' willingness to hire, rather than expectations and entrepreneurship. Boudabbous (2011) surveyed 49 young graduates from The Sfax Business School showed that only behaviors and attitudes affect entrepreneurial intentions. Social norms and students' sense of control do not determine their intentions to become self-employed. The work of Aliouat and Benchikh (2009) in the Moroccan case validated the model of Ajzen (1991). It proved that attitudes towards business creation, social pressure, and behavior control could predict entrepreneurial intentions.

## RESEARCH METHODOLOGY

In the theory of planned behavior, the central concept in the Ajzen's (1991) model is attitudes toward behavior. It reveals whether a person's evaluation of the desired behavior is good or bad. Therefore, we state the following assumption:

*Hypothesis 1:* Attitudes towards entrepreneurship will have a positive impact on students' entrepreneurial intentions.

Social norms have a reference to the social pressures that individuals perceive in society and the surrounding environment, and these pressures affect their decisions. However, researchers are still ambivalent about the position of social models in deliberate models. According to the research of Kolvereid (1996), Kolvereid and Isakse (2006), and Shook and Bratianu (2010), these norms directly affect entrepreneurs' intentions. However, other studies have shown that social norms indirectly predict intentions (Arminda et al., 2011). Based on the behavioral theory of this work and plan, we will assume:

*Hypothesis 2:* Social pressure has a positive impact on students' entrepreneurial willingness.

Finally, perceptual behavior control represents the degree of difficulty an individual feels from the performance of the behavior in question. This notion is a reference to Bandura's (1977; 1982) sense of self-efficacy. For McGee et al. (2009), self-efficacy is a mainly important prerequisite for intention. Therefore, based on the discussion, the assumption is:

*Hypothesis 3:* Perceived control will have a positive impact on students' entrepreneurial intentions.

Although Ajzen's (1991) theoretical model assumes a positive correlation between the explanatory factors of entrepreneurial intentions, few works consider these assumptions. However, Arminda et al. (2011) confirmed the presence of these relationships, indicating that social norms have a direct influence on personal attitudes and an indirect influence on behavior control. Personal attitude is significantly related to behavior control.

The study showed that subjective norms are positively correlated with entrepreneurial intentions, which contradicts the findings of other researchers (Autio et al., 2001; Linan & Chen, 2009; Maes et al., 2014). This reports an insignificant relationship. Hiatt et al. (2009) determine the social norms that inspire supervision, and which can strongly influence the formation and failure of organizations. However, this study extends Ferreira et al. (2012) Research on the impact of subjective norms; they determined that social norms have a significant relationship. Most importantly, Tuan et al. (2019), when researching the factors that affect Vietnamese youth entrepreneurial intentions, no connection between social norms and entrepreneurial intentions was found. According to Moriano et al. (2012), only two have significant correlations between subjective norms and intentions of the six countries they studied. We propose the following:

*Hypothesis 4:* Social norms will positively affect individuals' attitudes towards entrepreneurship.

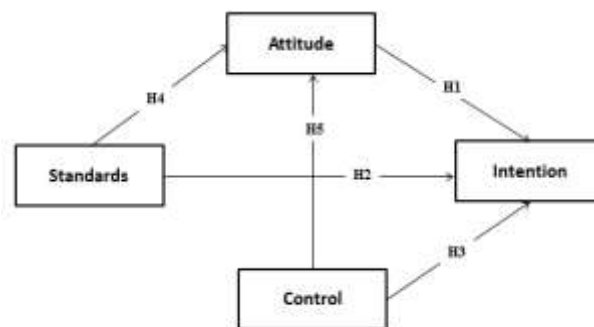


Figure 1. Conceptual Framework

The locus of control is another important personality trait. It is described as an individual's ability to perceive events that affect their life (Hisrich & Peters, 2003). There are two forms of control points: internal and external. The former focuses on the personal self-efficacy that affects the results, and the latter discusses the influence of external determinants of results. Studies have shown that internal control points play a vital role in the decision to start a new business (Mazzarol et al., 1999; Entrialgo et al., 2000). Risk-taking is another important personality trait used in this study. It is described as the tendency of individuals to participate in risky events, and entrepreneurship is one of these risky events. The empirical results show that individuals with high risk-taking propensity are more willing to participate in entrepreneurship (Hmieleski & Corbett, 2006).

There are two types of control perception in locus theory (Ng et al., 2006; Zigarmi et al., 2018); either internal or external, each has a different effect on entrepreneurial intentions. Bönthe and Jarosch (2011) explored that optimistic individual have a high internal locus control, which enables them to pursue self-employment as they strongly believe that their destiny is in their own hands. However, their lives depend on external circumstances, such as opportunity, luck, or fate due to external control points. Khan et al. (2011) showed through their study in 2011 that students with an internal locus of control have a positive tendency toward entrepreneurial intentions. However, early statements produced inconsistent and conflicting results dealing with an internal locus of control and entrepreneurial intentions (Ferreira et al., 2012; Gurol & Atsan, 2006). Previous research has shown that students with

a higher internal locus of control have higher entrepreneurial behavior and willingness to start a business (Vodă & Nelu, 2019). However, Ferreira et al. (2012) and Dinis et al. (2013) did not find any significant correlation with entrepreneurial intention. Jain and Chaudhary (2017) observed in a study of university students in India that, compared with ordinary people, successful entrepreneurs have an internal locus of control. In summary, after these contradictions, we expect people with internal control points to have a positive tendency towards entrepreneurial careers (Ajzen, 1991; Esfandiar et al., 2019). Therefore, this research proposes:

*Hypothesis 5. A sense of control will positively affect personal attitudes.*

## RESULTS AND DISCUSSION

The research design is exploratory research. Researchers focus on researching and testing the factors that affect students' willingness to start a business. We use quantitative research methods to measure structure and model the relationships between variables. The data collection technique is the use of questionnaire surveys. Respondents completed a set of four projects that influenced entrepreneurial intentions. Except for demographics, the entire response format is a 5-point Likert scale. Items include attitudes, sense of control, social norms, and students' perceptions of entrepreneurship. These four items are independent variables, whereas entrepreneurial willingness is the dependent variable. The data is then analyzed using a multiple regression model based on Ajzen's (1991) Theory of Planned Behavior (TPB). Three hundred twenty students from different disciplines verified this theoretical framework after receiving entrepreneurship training at the University of Sfax.

**Table 1. Measurement Items (Reliability, Convergent Validity, Discriminant Validity)**

Construct	Items	Loading Factor	Multiple Correlation	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
<b>Entrepreneurial Intention</b> Kolvereid (1996); Thompson (2009); Ajzen (1991); Zhu et al. (2011); Cardon et al. (2013)	EI1	0.824	0.709	0.943	0.959	0.644
	EI2	0.769	0.701			
	EI3	0.829	0.663			
	EI4	0.795	0.687			
	EI5	0.829	0.632			
	EI6	0.798	0.591			
<b>Personal Attitude</b> Emin (2006); Karimi et al. (2012); Kiviluoto et al. (2011)	PA1	0.822	0.676	0.812	0.933	0.700
	PA2	0.794	0.630			
	PA3	0.771	0.594			
<b>Social Norms</b> Card & Krueger (2000); Arminda et al. (2011); Shook & Bratianu (2010); Bird (2015); Linan & Chen (2009); Maes et al. (2014)	SN1	0.721	6.221	0.861	0.921	0.654
	SN2	0.784	6.034			
	SN3	0.754	5.86			
<b>Perceived Behavioral Control</b> Card & Krueger (2000); Arminda et al. (2011); Zigarmi et al. (2018)	PBC1	0.852	0.726	0.876	0.917	0.734
	PBC2	0.850	0.723			
	PBC3	0.837	0.701			
	PBC4	0.834	0.696			

Inconvenience with both Kolvereid (1996) and Thompson (2009), Hair et al. (2014) theory, six items are used to implement the model-dependent variable, Entrepreneurial Intention (Appendix 1). The assessment of reliability showed Cronbach Alpha ( $\alpha = 0.94$ ), which is satisfactory. The structure that measures individuals' attitudes towards business creation is an adaptation from the study of Emin (2006), Fayolle et al. (2014), and Krueger (2017), which mobilized three projects. According to Krueger et al. (2000), the social norms are divided into two stages: the students' entourage's views on their own entrepreneurial choices and the students' emphasis on the entourage's career choice. The reliability analysis of the structure shows a satisfactory Cronbach  $\alpha$  ( $\alpha = 0.812$ ). The perceived behavioral control is measured by relying on four items. Finally, the internal consistency estimate shows a coefficient ( $\alpha = 0.861$ ) considered to be excellent.

**Table 2. Breakdown of the Sample by Sex and Institution of the Students**

	Sfax University Establishments								Total	%
	FSEGS	ESCS	ISAAS	IHECS	ISGI	ENIS	FSS	FLSHS		
<b>Boys</b>	50	43	27	34	9	16	9	14	202	63.12
<b>Girls</b>	30	7	13	26	11	19	6	6	118	36.88
<b>Total (N)</b>	80	50	40	60	20	35	15	20	320	100
<b>%</b>	25	15.62	12.5	18.75	6.25	10.94	4.69	6.25	100	100

The questionnaire has been operated face-to-face for students receiving entrepreneurial training. Table 2 shows the distribution of the samples. In the case of Sfax University, students are divided into School of Economics and Management (FSEGS), Advanced Business School (ESCS), Advanced Business School (ISAAS), Advanced School of Economics and Business (IHECS), Advanced Industrial Management School (ISGI), The School of Science (FSS), the National Institute of Engineering (ENIS) and the Sfax School of Letters and Humanities (FLSHS). Finally, 320 questionnaires were used. The boy/girl distribution shows us that 63% of the respondents are students (boys), while only 37% of girls (girls). From a gender perspective, the number of students of this type is usually higher than the number of students.

**Table 3. Correlation Analysis**

	Intention	Attitude	Perceived Control	Social Norms	Student ID	Student Gender
<b>Intention</b>	1.000					
<b>Attitude</b>	0.621	1.000				
<b>Perceived Control</b>	0.542	0.482	1.000			
<b>Social Norms</b>	0.310	0.338	0.354	1.000		
<b>Student ID</b>	-0.024	-0.253	-0.067	-0.321	1.000	
<b>Student Gender</b>	0.118	-0.167	0.123	0.256	0.07	1.000

\*Corrélation de Pearson

### Regression and Correlation Results

To test the previously proposed hypotheses, we chose the multiple regression techniques used by many authors to analyze models of entrepreneurial intention (Autio et al., 2001; Davidsson, 1995; Kolvereid & Isaksen, 2006; Card & Krueger, 2000; Shook & Bratianu, 2010). Beforehand, we made a correlation matrix for all variables. Table 3 reveals that the correlation between attitude and entrepreneurial intention is greater than 0.621. To this end, we have a supplementary test to study multicollinearity through observing the VIF value. Table 4 lists values less than 10, hence the rejection of the possible influence of collinearity.

**Table 4. Multiple Linear Regressions**

	VIF	Beta (t)	R <sup>2</sup>	R <sup>2</sup> Adjusted	F
<b>Entrepreneurial Intention</b>					
<b>Attitude</b>	1.421	0.492***			
<b>Perceived Control</b>	1.392	0.259**			
<b>Social Norms</b>	1.332	0.127 (ns)	0.852	0.820	29.82***
<b>Student ID</b>	1.822	0.000			
<b>Student Gender</b>	1.153	0.169			
<b>Personal Attitude</b>					
<b>Perceived Control</b>	1.218	0.402***			
<b>Social Norms</b>	1.192	0.102(ns)	0.662	0.60	25.66
<b>Student ID</b>	1.064	-0.124			
<b>Student Gender</b>	1.122	-0.062			

Note: Significance threshold: \*\*\* p < 0.001, \*\* p < 0.05, (ns) = not significant

Table 4 summarizes the multiple regression results of the “entrepreneur intention” variable. These results demonstrate that our explanatory variables explain 82% and 85.5% of the differences in entrepreneurial intentions. The beta (β) coefficient test shows that only the control of personal attitude and perception can show students’ entrepreneurial intentions, and the perceived social norms are not

important. They do not affect students' entrepreneurial willingness. Therefore, it is assumed that H1 and H3 are verified. On the other hand, suppose H2 is refuted. In addition, the variable "student gender" has a negative correlation with entrepreneurial intention, which indicates that Tunisian women have higher entrepreneurial intentions than men ( $p < 0.3$ ).

In testing hypotheses 4 and 5, a multiple regression was performed on the latent variable "personal attitude." The results in Table 4 demonstrate that 60% of the difference in personal attitudes can be explained. Reading the results enables us to conclude that only perceptual control can positively impact personal attitudes with a relatively high coefficient of 0.402. The stronger the student's perception of control, the stronger the individual's attitude towards business creation. Therefore, perceptual control will positively impact entrepreneurial intentions, direct and indirect, through personal attitudes. The variable "social standards" have no significant impact on entrepreneurial attitudes. Therefore, we verified hypothesis 5 but rejected hypothesis 4. Finally, we illustrate an explanatory model for the intent of doing business among Tunisian students in Figure 2.

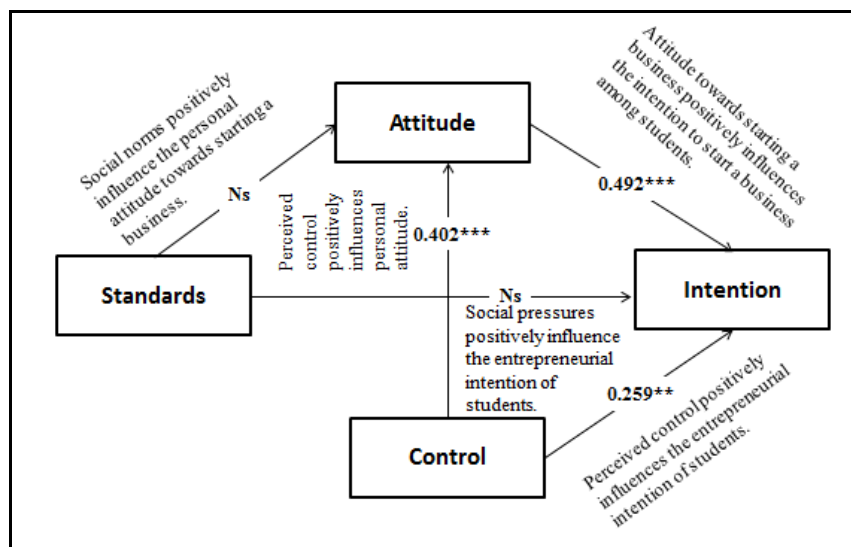


Figure 2. Research Model after Hypotheses Testing

### Discussion of results

The analysis of the model confirms that individuals' attitudes towards corporate creation and perceived control are explanatory variables for Tunisian students' entrepreneurial intentions. This result shows its consistency with the result obtained by Boissin et al. (2009) in France, Aliouat and Bencheikh (2009) in Morocco, and Shook and Bratianu (2010) in Romania. Additionally, the important result is underlined, that is, the importance of determining personal attitudes. The latter composes the most important explanatory factor explaining the entrepreneur's intentions. This result confirms Boudabbous (2011) obtained among young Tunisian graduates. However, this result and the study of Hajer and Habib (2013) have not been confirmed. Analyzing the entrepreneurial intentions of Tunisian officials, this is more affected by their ability to carry out business creation projects than their attitude towards entrepreneurship.

Perceived social norms will not considerably affect students' entrepreneurial intentions. In other words, the student's social environment does not influence entrepreneurial intentions. This result is inconsistent with Kolvereid and Isaksen's (2006) study. Indeed, according to cultural background, the weight of social norms in predicting entrepreneurial intentions is uneven.

Certain hypothetical relationships (H4 and H5) emphasized in this study are rarely examined in the literature (Arminda et al., 2011). More particularly, it shows the positive influence of behavior control on personal entrepreneurial attitudes. Added to the perceived behavioral control that will positively affect students' entrepreneurial intentions, this factor also greatly affects personal attitudes, which confirms the findings of Arminda et al. (2011). The stronger the behavior control, the stronger the personal attitude. However, personal attitudes are not affected by social norms.

## CONCLUSION

In a theoretical sense, our research validates the interest in entrepreneurial intention in the Tunisian context. Ajzen's (1991) theory of planned behavior developed a model (explained in Figure 2 for this intention) to determine the intention of creating a Tunisian student enterprise.

At the management level, some researchers are interested in fostering attitudes towards creating entrepreneurship and entrepreneurial intentions (Fayolle & Gailly, 2009; Arminda et al., 2011; Veciana et al., 2005). This study paves the way to make recommendations to decision-makers who wish to boost entrepreneurship in Tunisian management science higher education. The results indicate that enterprise creation and entrepreneurship training should be introduced with attractive professional aspirations. One should develop students' desire for behavior. For organizations that support and accompany business creation, one has to undertake awareness-raising actions that are beneficial to the student public before attempting to identify the project leader.

An attitude that is beneficial to entrepreneurship alone is not enough to cultivate entrepreneurial intentions. It is not enough to start an ideal business, and it is feasible. Therefore, the purpose of entrepreneurship education must go beyond the attractiveness of entrepreneurship. It is about the provision of skills and competencies needed to build entrepreneurial projects. Moreover, the institutions responsible for promoting entrepreneurship and structural support for the creation of enterprises have become obstacles to the creation of enterprises by providing the advice and logistical resources needed to realize corporate behavior.

Despite regional differences that the sample contains and that limit the scope of our research, they also herald the expansion of entrepreneurship education issues and their impact on the different components of the process leading to business development. Taking in consideration the cultural characteristics of Tunisia, what kind of pedagogy should be encouraged to cultivate entrepreneurs' attitudes and behavioral control capabilities, thereby helping to enhance entrepreneurs' intentions?

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