Revue des Réformes Economiques et Intégration En Economie Mondiale

Vol 14 N° 1 bis 2020
EISSN 2600- 6502

DETERMINANTS OF ENTREPRENEURIAL INTENTIONS: THE CASE OF BUSINESS SCHOOLS IN ALGERIA

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Date of Reception : 06/02/2020 ; Date of revision : : 14/04/2020 ; Date of acceptation : : 19/05/2020

Abstract

This research identifies the determinants of entrepreneurial intentions among Algerian business schools students. In the present paper, we seek to analyze the relationship between entrepreneurial intentions and students' attitudes towards entrepreneurship, subjective norms, perceived behavioral control and entrepreneurship education.

This paper aims to understand, describe, and explain the entrepreneurial intentions of students following an entrepreneurship education at Algerian business schools. A survey was conducted among **123** students on their final-year of an entrepreneurship education program at three major Algerian business schools.

The results of this research show that attitudes towards entrepreneurship, subjective norms, perceived behavioral control and entrepreneurship education influence positively and significantly the students' entrepreneurial intentions.

Key words: Entrepreneurial intentions, Attitudes towards entrepreneurship, Subjective norms, Perceived behavioral control, Entrepreneurship education

JEL Classification : L26, M21, M19.

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Determinants of entrepreneurial intentions: The case of business schools in Algeria (PP. 18-30)——

INTRODUCTION

Following the transition of the Algerian economy towards a market economy, entrepreneurship has been an important part of Algeria's economic orientations and has been considered as a lever for economic growth and social progress. Therefore, the public authorities have been forced not only to introduce entrepreneurship education programs in Algerian universities, but also to create support and business creation organizations to promote the growth and development of the Algerian economy.

These actions aim to encourage Algerian students to consider entrepreneurship as a viable career option. It is in this perspective that the development of entrepreneurship lies today at the heart of many Algerian economic issues.

Therefore, through this article, our research intends to focus on entrepreneurial intentions to specifically examine the effect of entrepreneurship education and socio-psychological variables (attitudes towards entrepreneurship, subjective norms, and perceived behavioral control) on the entrepreneurial intentions of students.

1. THEORETICAL BACKGROUND

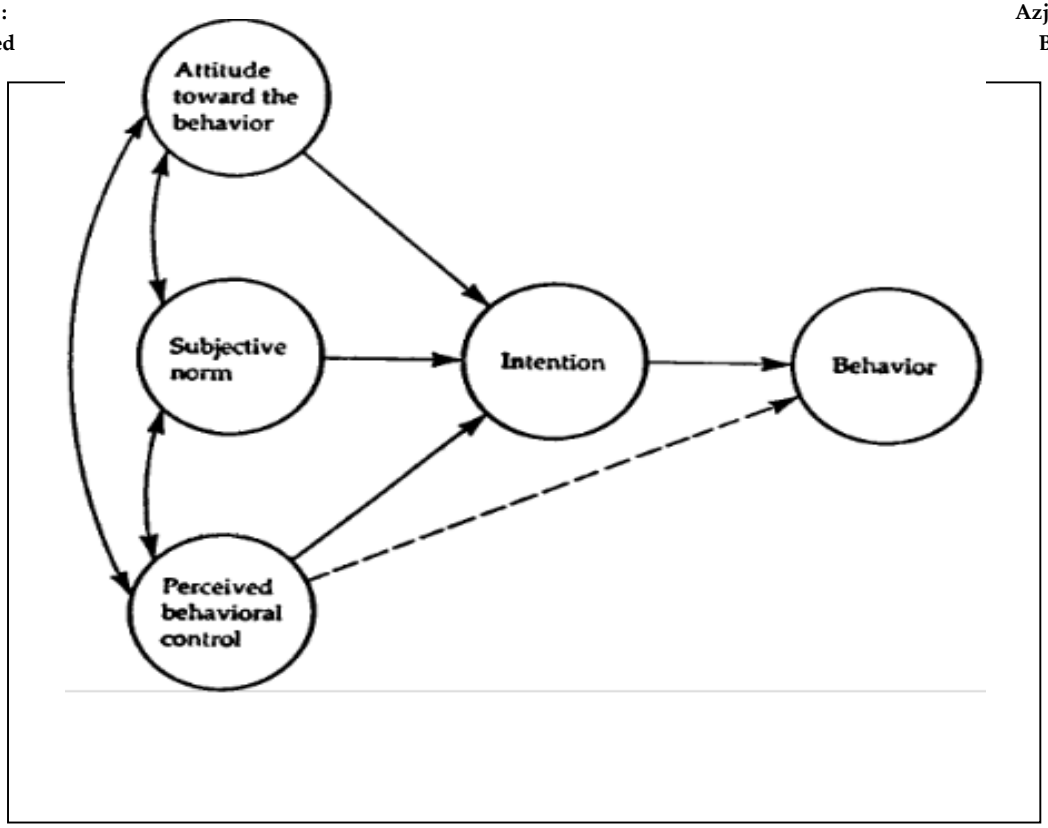
1.1. ENTREPRENEURIAL INTENTION

Intention has been given a central position to understand and predict a given human behavior (Ajzen, 1991). The concept of *"behavioral intention"* has been widely used to explain, understand and predict a wild range of behaviors. Over the lasts decades, several intentional models have been proposed to predict behaviors such as the act of new venture creation. Some of them were initially used in social psychology to predict a variety of behaviors including the entrepreneurial act (Ajzen, 1991). Oher models were developed to only explain and predict the entrepreneurial act (Bird, 1988; Davidsson, 1995; Lüthje & Franke, 2003)

Ajzen's theory of planned behavior remains one of the predominant social-psychological model used in entrepreneurship researches to understand and explain the entrepreneurial intentions and thus predict the entrepreneurial behavior. This model have been used in deferent cultural context (in several countries) and have gained a robust empirical evidence that demonstrate the positive impact of intentions' antecedents on the behavioral intention.

In Ajzen's (1991, p. 181) opinion, "*Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior*". According to Ajzen's TPB model, three key attitudinal antecedents determine intentions: attitudes towards entrepreneurship, subjective norms and perceived behavioral control.

Figure 1 : Azjen's Theory of Planned Behaviour



Source*:* Ajzen, I. (1991). The theory of planned behavior. ***Organizational behavior and human decision processes*****, *50*(2), p. 182.**

As can be seen in the figure above, the intention of an individual is determined by three antecedents:

- Attitudes towards the behavior **(ATB):** Attitude towards the behavior shows the degree to which an individual evaluates, favorably or unfavorably, the behavior (Ajzen, 1991). It is determined by the behavioral beliefs that link the behavior to various action's consequences (Ajzen, 1991, 2005). In other words, attitude towards a behavior depends on a person's assessment of the expected results and consequences that encourage or discourage him to perform the behavior in question.
- Subjective norms **(SN):** subjective norms are the social pressure perceived by an individual to perform or not to perform a given behavior (Ajzen, 1991). These norms are linked to the individual's motivation to behave in accordance with the opinion of others. In fact, an individual is likely to adopt a behavior if people whose opinions matter to him agree with the said behavior (Ajzen, 1991, 2005).
- Perceived behavioral control **(PBC):** Perceived behavioral control reflects the ease or difficulty perceived by an individual to perform a given behavior (Ajzen, 1991). It is the degree of feasibility perceived by the individual to perform the behavior (Ajzen, 1991, 2002, 2005). It takes, among others, the form of an assessment of the individual's level of knowledge and control, as well as the resources he or she needs to perform the desired behavior. As may be seen in figure 1, perceived behavioral control influences directly the given behavior.

As we can also see, these three explanatory variables of intention are interrelated. Consequently, the combination of the effects of these three variables leads to the emergence of a form of intention that will in turn be the determinant of behavior. In sum, an individual is therefore more likely to perform a given behavior if his or her behavioral intention and its determinants are stronger and more positive (Ajzen, 1991).

1.2. ENTREPRENEURSHIP EDUCATION

Myles Mace presented the first course of Entrepreneurship over seven decades ago in the Harvard Business School (USA) on February **1947** (Katz, 2003). Several academic institutions in the word have included ever since this course in their college curriculum. Indeed, given the importance of entrepreneurship in the economic development and social progress, entrepreneurship education have gained more popularity among college students. Nowadays, entrepreneurship education is not exclusively proposed for business students. Indeed, many college students majoring in several fields can take an entrepreneurship course.

Isaacs and al. (2007, p.614) define entrepreneurship education as *"the purposeful intervention by an educator in the life of the learner to impart entrepreneurial qualities and skills to enable the learner to survive in the world of business."* An entrepreneurship education is hence the best way for students to acquire the knowledge and develop the skills that they need to create a new venture and manage it.

Like other academic institutions around the world, several universities and business schools offer nowadays an entrepreneurship education program in Algeria. Although entrepreneurship education is still relatively new in Algeria, the Minister of Higher Education and Scientific Research have manage to introduce at least an "Entrepreneurship course" that offers the students a robust introduction to the field of entrepreneurship.

In the last decade, the Minister of Higher Education and Scientific Research has also introduce a Master degree program specialized in Entrepreneurship. This Master degree aim to provide students with theoretical knowledge and practical skills on establishing small entrepreneurial companies and maintaining their sustainable development in the challenging markets.

Additionally, academic institutions concluded a partnership agreement with the ANSEJ (Agence nationale de soutien à l'emploi des jeunes**)** in order to develop the entrepreneurial culture within Algerian universities and business schools. Those partnerships resulted in the establishment of "Maison d'entreprneuriat" in many Algerian universities and business schools. The main goals of the "Maison d'entrepreneuriat" is to raise awareness of entrepreneurship among universities' students, train them in business creation and provide informations, guidance and support to start their own business.[1]

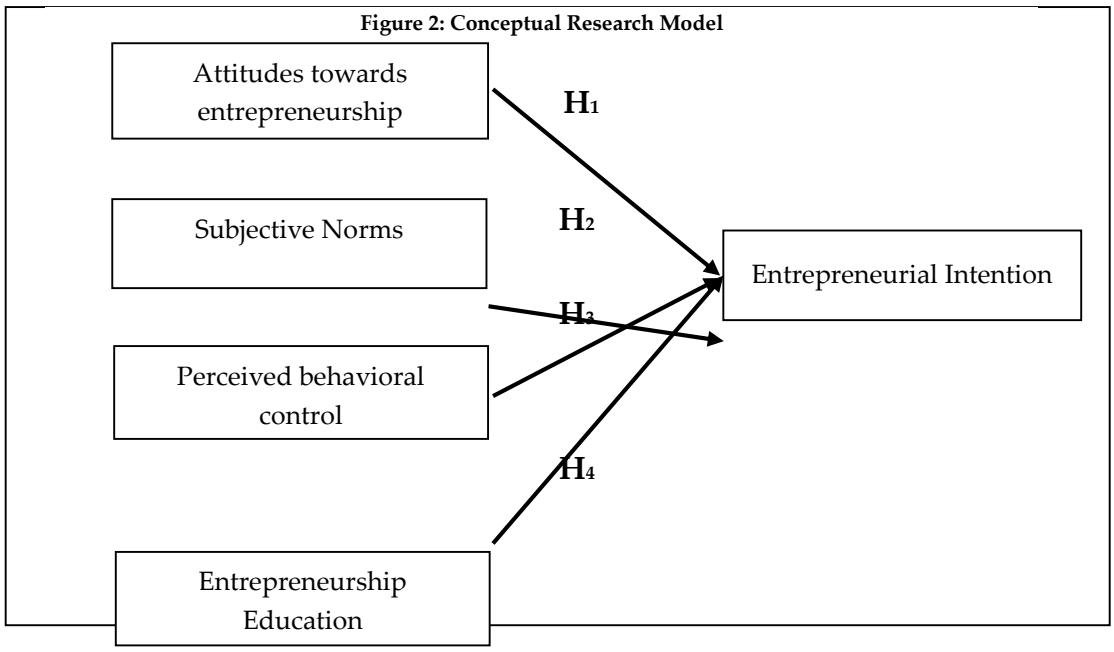
Within the framework of this article, we refer to entrepreneurial education as a Master degree program specialized in Entrepreneurship and Management that aims to develop attitudes, beliefs, entrepreneurial competences and skills of students.

[1] https://ansej.dz/index.php/fr/la-maison-de-l-entrepreneuriat

2. HYPOTHESIS DEVELOPMENT

The research works summary mentioned below allows us to introduce four research hypotheses [Figure 2]. We will subsequently try to specify and argue the resulting relationships.

Figure 2: Conceptual Research Model



Source: Literature review

The Theory of Planned Behavior is the theoretical foundation of this research. As such, we will test in this study the applicability of its model to our sample. This theory states that all human behavior that require planning is determined by a behavioral intention. All human behavior is hence predicted by the intention to adopt the given behavior. Intention is itself determined by three antecedents: attitudes towards the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991).

Subsequently, several researches conducted in universities – with students used as the main sample – have used the TPB model to examine entrepreneurial intentions of students. Their empirical results have demonstrated and confirmed the positive and significant effect of students' attitudes towards entrepreneurship, subjective norms and perceived behavioral control on entrepreneurial intentions (Kolvereid, 1996; Schlaegel, and Koenig, 2014; Sabah, 2016; Utami, 2017; Potishuk & Kratzer, 2017; Al-Jubari & al., 2019).

In accordance with the TPB model, we pose the following hypotheses:

H_1 - 1st Hypothesis: Attitudes towards entrepreneurship have a positive and significant impact on students' entrepreneurial intentions.

H_2- 2nd Hypothesis: Subjective norms have a positive and significant impact on students' entrepreneurial intentions.

H_3- 3rd Hypothesis: Perceived behavioral control has a positive and significant impact on students' entrepreneurial intentions.

Ajzen (1991. p. 199) stipulates that: *"The theory of planned behavior is, in principle, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account."*

Subsequently, several researches have demonstrated the positive impact of entrepreneurship education program on students' entrepreneurial intentions. Indeed, many researches pointed out that entrepreneurship education programs can have a positive impact on entrepreneurial intentions and the antecedents identified in the model of the Theory of Planned Behavior.

Fayolle, Gailly and Lassas-Clerc (2006), have shown that while entrepreneurship education has a positive influence on students' entrepreneurial intentions, it also has a positive -albeit not very significant - impact on their perceived behavioral control.

The research results obtained by Souitaris, Zerbinati and Al-Laham (2007) showed that students' participation in entrepreneurship education increased their entrepreneurial intentions and subjective norms.

Yaqub & al. (2015) showed on their study that entrepreneurship education was positively correlated with students' entrepreneurial intention through attitude towards entrepreneurship and perceived behavior control.

Feder and Antonie (2017) have established that entrepreneurial higher education training is a significant and direct predictor of entrepreneurial intentions of students.

We can thus formulate the following hypothesis:

H_4 - 4th Hypothesis: Entrepreneurial education has a positive and significant impact on students' entrepreneurial intentions.

3. RESEARCH METHODOLOGY

3.1. SAMPLE AND DATA COLLECTION

Our research was conducted through a survey of students from three Algerian business schools located in the Koléa University Center, namely:

- École des Hautes Études Commerciales [EHEC] ;
- École Supérieure de Commerce [ESC] ;
- École Nationale Supérieure de Management [ENSM].

The sample to be studied was constituted of final year master's students from all this three business schools. More specifically, from the following specialties, "Management and Entrepreneurship" program at the École des Hautes Etudes Commerciales [EHEC], "Companies' Organization and Management" program at the École Supérieure de Commerce [ESC], and "Management of Organizations" program at the École Nationale Supérieure de Management [ENSM].

Sample choice was mainly influenced by two factors: first, students in their final year of masters' degree are considered to have participated to the entire entrepreneurship education program. Second, upon graduation, they are supposed to either look for a job within an established company or create their own job by creating a new venture. At this stage, entrepreneurial intentions are likely to have been formed.

The basic population consists of 157 students in their final masters' year. Data collection was conducted from January 24th to February 28th, 2016. We collected 123 surveys.

Table 1: Description of the sample

Business school	Frequency	%
EHEC	73	59,35 %
ESC	24	19,51 %
ENSM	26	21,14 %
TOTAL	**123**	**100 %**

Source: Research's results

3.2. MEASURES

Entrepreneurial intention was measured with one item. Participants were asked on a four point Likert scale ranging from "totally disagree" to "totally agree " to respond to this question *"Upon graduation, do you intend on day to start a business? ".*

Attitudes towards entrepreneurship was measured according to one item, which was inspired from Emin (2004) work. Respondents were asked on a four point Likert scale ranging from "Not at all favorable" to "totally favorable" to answer the following question: *"Do you feel that you are in favor of engaging in a business creation? "*

Subjective norms was assessed using two items measuring the opinion of the people belonging to the social environment of the respondents (i.e., family environment, close friends). Participants were asked to assess on a four point Likert scale ranging from "Not at all favorable" to "totally favorable" the opinion of their family environment and their close friends about their engagement in a business creation.

Perceived behavioral control was measured using one item, which was inspired from Emin (2004) work. Participants were asked to answer on a four point Likert scale ranging from "not at all capable" to "totally capable " to the following question : *"Do you feel that you are capable of setting up a business creation project and ensuring its success? "*

Entrepreneurship education was measured using two items. Participants were asked to assess, on a four point Likert scale ranging from "totally disagree" to "totally agree", the contribution of entrepreneurship education to the development of, first, the attractiveness for business creation and, second, of the necessary knowledge and skills to business creation. (Cronbach's alpha value is **0,719**)

Participants were also asked to answer some demographic questions such as indicating their age, gender and the business school attended. The questionnaire was originally elaborated and administered in French.

4. EMPIRICAL RESULTS AND DISCUSSION

In order to verify our hypotheses, principal component factor analysis (PCF) with varimax rotation was applied on "Subjective norms" and "Entrepreneurship Education" variables. Then we used linear regression as statistical analysis methods. Linear regression allows us to confirm and test the existence of dependency relationships between two or more variables by specifying the rate of variation of the dependent variables explained. Moreover, it allows us to test the impact of one or several independent variables on a dependent variable.

We have - within the framework of our research - used simple linear regression to test the validity of all four researches' hypothesis.

4.1. DESCRIPTIVE ANALYSIS

Table 2: Distribution of the respondents by gender and age

Description	Frequency	Percentage	Cumulative (%)
Gender :			
Male	37	30,1 %	31,1%
Female	86	69,9 %	100%
Age :			
[20-25[	103	83,7 %	83,7%
[25-30[	15	12,2 %	95,9%
≥ 30	5	4,1 %	100%

Source: Research's results

As may be seen in Table 2, of **123** respondents, **86** were females representing **69,9 %** of the sample. This results indicate that the majority of the students are females leaving only **30,1 %** of respondents to be males.

In terms of age, a small number **(4,1%)** are over the age of 30 years. **83,7%** fall between 20 and 25 years, meaning a large number of the participants is considered to be in their youthful years, followed by those who are 25-30 years old representing **12,2%** of the participants.

4.2. PRINCIPAL COMPONENT FACTOR ANALYSIS RESULTS

The Kaiser-Mayer-Oklin (KMO) coefficient value of "Subjective norms" is **0,5** and the Bartlett spherical inspection P was less than **0,05**, which indicate that factor analysis is reasonable. The results of the factor analysis indicate that the two items loaded on the expected factor [Subjective Norms] with factor loadings higher than **0,5**. Cumulative variable variance explained was **59,976%.**

The Kaiser-Mayer-Oklin (KMO) coefficient value of "Entrepreneurship education" is **0,5** and the Bartlett spherical inspection P was less than **0,05**, which indicate that factor analysis is reasonable. The results of the factor analysis indicate that the two items loaded on the expected factor [Entrepreneurship Education] with factor loadings higher than **0,5**. Cumulative variable variance explained was **78,202%.**

4.3. TESTING THE HYPOTHESES

4.3.1. IMPACT OF ATTITUDES TOWARDS ENTREPRENEURSHIP ON THE ENTREPRENEURIAL INTENTION OF STUDENTS

Table 3: Model summary

Model	R	R Square	Adjusted R square	F	Sig
1	0,341[a]	0,116	0,109	15,887	,000[b]

	β	Std. Error	t	Sig.
Constant	1.750	0,335	5,223	,000
Attitudes towards entrepreneurship	0,447	0,112	3,986	,000

a. Predictors : Attitudes towards entrepreneurship

b. Dependent Variable : Entrepreneurial intention

Source: Research's results

Entrepreneurial intention is explained in the order of **11,6%** by students' attitudes towards entrepreneurship **(R^2 = 0,116)** with a Fisher test **(F)** value of **15,887** and a probability **(P)** of **0,000 (<5%).** We can confirm that attitudes towards entrepreneurship have a positive and significant influence on the students' entrepreneurial intention using the following equation:

$$EI = 1{,}750 + 0{,}447\ ATE + \varepsilon$$

EI : Entrepreneurial Intention

ATE : Attitudes Towards Entrepreneurship

4.3.2. IMPACT OF SUBJECTIVE NORMS ON THE ENTREPRENEURIAL INTENTION OF STUDENTS

Table 4: Model summary

Model	R	R Square	Adjusted R square	F	Sig
1	0,237[a]	0,056	0,048	7,196	,008[b]

	β	Std. Error	t	Sig.
Constant	3,065	0,061	49,905	,000
Subjective norms	0,165	0,062	2,683	,008

a. Predictors : Subjective norms

b. Dependent Variable : Entrepreneurial intention

Source: Research's results

Entrepreneurial intention is explained in the order of **5,6%** by subjective norms **(R^2 = 0,056)** with a Fisher test **(F)** value of **7,196** and a probability **(P)** of **0,008 (<5%).** We can confirm that subjective norms have a positive and significant influence on the students' entrepreneurial intention using the following equation:

$$EI = 3{,}065 + 0{,}165\ SN + \varepsilon$$

EI : Entrepreneurial Intention

SN : Subjective Norms

4.3.3. IMPACT OF PERCEIVED BEHAVIORAL CONTROL ON STUDENTS' ENTREPRENEURIAL INTENTIONS

Table 5: Model summary

Model	R	R Square	Adjusted R square	F	Sig
1	0,263[a]	0,069	0,062	9,001	,003[b]

	β	Std. Error	t	Sig.
Constant	2,202	0,294	7,485	,000
Perceived behavioral control	0,290	0,097	3,000	,003

a. Predictors : Perceived behavioral control

b. Dependent Variable : Entrepreneurial intention

Source: Research's results

Entrepreneurial intention is explained at **6,9%** by the perceived behavioral control **(R^2 = 0,069)** with a Fisher test value **(F)** of 9**,001** and a probability **(P)** of **0,003 (< 5 %) .**In view of that, we consider that perceived behavioral control has a positive and significant impact on students' entrepreneurial intention according to the following equation:

$$EI = 2{,}202 + 0{,}290\ PBC + \varepsilon$$

EI : Entrepreneurial Intention

PBC : Perceived Behavioral Control

4.3.4. IMPACT OF ENTREPRENEURSHIP EDUCATION ON STUDENTS' ENTREPRENEURIAL INTENTIONS

Table 6: Model summary

Model	R	R Square	Adjusted R square	F	Sig
1	0,391[a]	0,153	0,146	21,774	,000[b]

	β	Std. Error	t	Sig.
Constant	3,065	0,058	52,666	,000
Entrepreneurship education	0,273	0,058	4,666	,000

a. Predictors : Entrepreneurship Education

b. Dependent Variable : Entrepreneurial intention

Source: Research's results

Entrepreneurial intention is explained in the order of **15,3%** by entrepreneurship education **(R^2 = 0,153),** and a fisher test value **(F)** of **21,774** and a probability **(P)** of **0.000 (< 5 %).** We confirm that entrepreneurship education has a positive and significant impact on students' entrepreneurial intention following the next equation:

$$EI = 3{,}065 + 0{,}273\ EE + \varepsilon$$

EI : Entrepreneurial Intention

EE : Entrepreneurship Education

CONCLUSION

The research results allow us to understand the formation of entrepreneurial intentions of Algerian business schools students. The empirical research's results confirm all the three hypotheses related to Ajzen's theory of planned behavior.

The conclusions reached by our research parallel those formulated in Ajzen's work (1991), as far as the immediate antecedents of students' intentions to create a business are concerned. We found that students' attitudes towards entrepreneurship, subjective norms, and perceived behavioral control influence positively and significantly students' entrepreneurial intentions. The results of this research complement the findings of other researches in different cultural contexts. They allow us to confirm the basic hypotheses of the Theory of Planned Behavior and demonstrate the legitimacy and applicability of this theory in predicting entrepreneurial behavior.

Furthermore, the results showed that entrepreneurship education influences positively and significantly students' entrepreneurial intentions. This result confirms the hypothesis, which stipulates that the participation of students in an entrepreneurship education program would contribute to the development of their entrepreneurial intentions, thus allowing them to consider entrepreneurship as a viable career option. Indeed, entrepreneurship education has been found in our research to be the most influential antecedent of students' entrepreneurial intentions **(R^2 = 15,3%)**, followed by student's attitudes towards entrepreneurship **(R^2 = 11,6%)**, perceived behavioral control **(R^2 = 6,9%)** and finally subjective norms **(R^2 = 5,6%).**

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