Perceived behavioral traits as key determinants of entrepreneurial intention in higher education institutions

Rasgos conductuales percibidos como determinantes clave de las intenciones emprendedoras en instituciones de educación superior

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"Perception is reality"
Lee Atwater

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Abstract: This article examines how a business school's environment encourages the formation of entrepreneurial intentions among its students. Building on insights from the theory of planned behaviour and the business event model, a structural equation model was applied on a sample of 283 Costa Rican university students. The main results of the study suggest that the entrepreneurial training provided by the business school contributes to improve students' entrepreneurial intentions. However, this effect develops through an indirect mechanism: that is, entrepreneurial training positively influences students' attitudes toward entrepreneurship which, in turn, impact students' perception on entrepreneurial self-efficacy. The proposed model rooted in cognitive frameworks allows business schools, and higher education institutions in general, to measure and evaluate the effectiveness of their entrepreneurial training programs in promoting entrepreneurial intentions.

Keywords: Entrepreneurship, business school, perceptions, educational support, structural equation model.

Resumen: Este artículo examina cómo una escuela de negocios fomenta la formación de intenciones emprendedoras entre sus estudiantes. Sobre la base de los conocimientos de la teoría del comportamiento planificado y el modelo de eventos de negocios, se aplicó un modelo de ecuaciones estructurales en una muestra de 283 estudiantes universitarios costarricenses. Los principales resultados del estudio sugieren que la formación emprendedora que imparte la escuela de negocios contribuye a mejorar las intenciones emprendedoras de los estudiantes. Sin embargo, este efecto se desarrolla a través de un mecanismo indirecto: es decir, la formación emprendedora influye positivamente en las actitudes de los estudiantes hacia el emprendimiento que, a su vez, impactan en las percepciones de los estudiantes sobre la autoeficacia emprendedora. El modelo propuesto basado en marcos cognitivos permite a las escuelas de negocios, y las instituciones de educación superior en general, medir y evaluar la eficacia de sus programas de formación empresarial en configurar intenciones empresariales.

Palabras clave: Emprendimiento, escuelas de administración de empresas, percepciones, apoyo educativo, modelación de ecuaciones estructurales.

1. Introduction

In recent years, promoting entrepreneurship has become a priority public policy issue in most nations. It is considered a vehicle of prosperity (Kimmitt et al., 2020), economic growth (Ribeiro-Soriano, 2017; Stoica et al., 2020), and innovation (Naranjo-Valencia et al., 2018). Changes in the global socioeconomic environment have led to fewer opportunities for continued employment and this is particularly true for young people and students who lack professional work experience (Dhakal et al., 2018). In this context, entrepreneurship acquires great relevance since it offers people the opportunity to achieve economic independence and avoid unemployment (Basu & Virick, 2008; Nikolova, 2019). Entrepreneurship implies having the vision to recognize an opportunity where others only see chaos and confusion (Sandoval & Rank, 2022).

Recent studies have focused on investigating why and how the intentions to start a business arise, especially in young university students, showing some factors that positively impact their entrepreneurial intentions (i.e., Bergmann et al., 2018; Bergmann et al., 2016; Edelman, et al., 2016; Purwana, 2018). There is a widespread belief that educational support on entrepreneurial training offered by a business school tends to boost entrepreneurship (e.g., Ahmed, et al., 2020; Brüne & Lutz, 2020) and encourage entrepreneurial intentions (e.g., Do Paço, et al., 2015; Zhang et al., 2019).

Entrepreneurial training is understood as any pedagogical program or educational process aimed at creating entrepreneurial attitudes (Fayolle, et al., 2006), and fostering the skills and knowledge required to generate new businesses and bring them successfully into practice (Do Paço et al., 2015). Although there are several meanings of the term "entrepreneurial education" (for a compilation of definitions on entrepreneurial educational training see Calzado-Barbero et al., 2019), they all have a common central axis: The development of the entrepreneurial spirit and character for entrepreneurship (Calzado-Barbero, et al., 2019).

One aspect that generates controversy in the academic community is determining whether the entrepreneurial training offered by a business school, through their academic entrepreneurial courses or programs, truly contributes to the formation of the entrepreneurial spirit. In this vein, findings from diverse recent studies support the positive effect of a business school's entrepreneurial education on their students' entrepreneurial intentions (e.g., Tiwari et al., 2017; Torniainen, 2018; Shi et al., 2020; Boubker et al., 2021). Other research has yielded negative or mixed results (e.g., Bae et al., 2014; Nabi et al., 2017; Longva & Foss, 2018) or has concluded that extant studies could overestimate the impact of such training on the entrepreneurial intentions of students (Martínez-Gregorio et al., 2021).

Longva and Foss (2018) conducted a literature review of 145 empirical impact studies from 2000 to 2017, with a sample size of 3,442 cases on the influence of entrepreneurial training on entrepreneurial intention. They found a significant impact in 32% of cases, a non-significant impact in 13% of the cases, and a negative impact in 55% of the cases. Based on this evidence these authors concluded that "the actual impact of EE [Entrepreneurial Education] on entrepreneurial intention remains highly inconclusive" p.(15). Empirical studies on entrepreneurial training and its impact on entrepreneurial intention should be subjected to more empirical tests (Zhang et al., 2019). According to Martínez-Gregorio et al., (2021) there a major concern in literature reviews regarding the impact of entrepreneurial education on entrepreneurial intention lies in the fact that empirical studies on the true impact of entrepreneurial education are mixed and contradictory.

Scholars have used different approaches to investigate plausible antecedents for the entrepreneurial intention in students. In the Latin American context, some researchers have strived to shed light on the university-related factors that seem to foster entrepreneurial intentions among university students. For instance: the university environment (Lopez & Alvarez, 2019); program learning, and entrepreneurial education (Guerrero et al., 2014; Leiva et al., 2021). Others prefer to examine the effect of individual-related factors (such as risk propensity, internal locus of control, and leadership skills (Torres et al., 2017), human "flourishing" or human potential (Silveyra et al., 2021), socio-demographics factors (Chafloque-

Cespedes et al., 2021), among others. However, it was also noted there is a relative dearth of research on entrepreneurial intention and education in contexts other than those of more developed nations, where most of the research comes from these nations (Nabi et al., 2017), and comparatively speaking limited research is conducted in Latin America contexts (Araya-Pizarro, 2021).

In the Costa Rican context, reports provided by the GUESSS project (global research project on student entrepreneurship) provide very valuable information about the levels of the entrepreneurial intention of students, the family, social and university context. However, these reports provide aggregated data based on responses from students of varied and different university careers and from different universities. Besides, such reports are descriptive in nature and do not investigate possible relationships or interrelationships between the factors that may boost entrepreneurial intention in students and the cause-effect mechanism by which it may occur.

There is still little understanding of the factors that affect the entrepreneurial intentions of students (Nabi et al., 2017). The business school of the University of Costa Rica has assumed entrepreneurship as one of its strategic values and a transversal axis in its study plans and teaching management according to the School of Business Administration [EAN], Strategic Framework, (EAN, 2018). Albeit the objective of this initiative is to encourage the entrepreneurial spirit in the students, its impact on business intentions has not yet been scrutinized. This study aims to determine to what extent the educational support for entrepreneurial training offered by a business school, specifically, the business school of the University of Costa Rica, contributes to the formation of entrepreneurial intentions in students. The specific questions we intend to answer are the following:

Does the educational training provided by the business school at this university influence or not the entrepreneurial intentions of its students? And if so, under what mechanism? To answer the aforementioned research questions, we created a hypothetical explanatory model based on theories about intention, in the entrepreneurship education literature, and that can be tested by quantitative methods.

For this study, we also adopted the definition of "entrepreneurship" proposed by Schoon and Duckworth (2012), which is limited to the fact of "being autonomous and owning your own company" p. (1719). Although we recognize that there may be various external factors that can favor (or prevent from) entrepreneurial intentions (for example, the ease of financing, and the socioeconomic environment), we start from the premise that entrepreneurship is, in essence, an intentional act (e.g., Ahmed et al., 2020). So, we limit the meaning of "entrepreneurial intention" to an individual's disposition to establish their own business or own a business in the future. The rest of this article is organized as follows: the following section explains the research model developed. Then the hypotheses are developed, the methodology used is presented and the results are presented. Finally, the findings, implications, and limitations of this study are discussed.

2. Research model and literature review

Inquiries on intentions exhibited by individuals seem to have a great explanatory and predictive capacity for the future behavior of people (Ajzen, 2012). Meta-analytic evidence from other research domains supports the predictive power of intentions on a person's subsequent behavior (Kautonen et al., 2015). To carry out our research, we developed a hypothetical model, capable of being empirically tested, and based on cognitive theoretical frameworks. Cognitive theoretical frameworks seek an explanation of entrepreneurial intentions as a result of attitudes and perceptions toward entrepreneurship (Ahmed et al., 2020; Vamvaka et al., 2020). Empirically, it has been observed that research models that study the determinants of entrepreneurship based on demographic characteristics and personality traits have been found to have few explanatory and lower predictive validity and are criticized for being futile in predicting an individual's decision-making in creating business

start-ups (Yildirim et al., 2016). Likewise, studies based on cognitive aspects, (which focus on mindset, thoughts, attitudes, and perceptions), are more fruitful research avenues for understanding how individuals engage in business opportunities, evaluate them, and make sense of venture creation (Kuratko et al., 2021).

We base our model on the precepts of two cognitive theoretical frameworks: Planned Behavior Theory proposed by Ajzen, and the Shapero and Sokol's Business Event Model (henceforth TPB and EEM respectively), they are the two most renowned theoretical frameworks in studies on intentions (Iakovleva & Kolvereid, 2009). According to the EEM, the entrepreneurial intention of an individual arises from the degree of perception of desirability and feasibility towards a venture in question (Grari & Benachenhou, 2019). That is, to cognitive factors. As for the TPB, (a more generic theoretical framework on human intention), the intention precedes the behavior. The stronger the intention to perform a particular action or behavior, the more likely it is to happen (Ajzen, 1991). In addition, the intention depends on three elements: the favorable or unfavorable attitudes or perceptions towards a task in question, the perception of the perceived control towards the task in question (these factors being cognitive elements) and finally, the influence of significant people or "others relevant" (technically called "subjective social norms").

It should be noted that for Ajzen (1991) himself, the concept of perceived control is not new, and refers to the concept of perception of self-efficacy of Bandura (1997), that is, the perception of confidence in our own abilities to organize and execute the courses of action necessary to produce certain achievements.

Although some authors consider TPB and EEM as competitive theoretical frameworks (e.g., Krueger et al., 2000; Schlaegel & Koenig, 2014), we share the view of Kuehn (2008), which argues that both frameworks are overlap to a great extent, especially with regard to elements of a cognitive nature. For Kuehn (2008), the perception of feasibility of the EEM alludes to self-efficacy (i.e., perceived behavioral of the Ajzen model), since both factors, in essence, refer to a personal evaluation of our ability to successfully control and manage an action or conduct (in our particular case an enterprise). Similarly, the perception of desirability (of the EEM) about an object or performing a specific behavior, and the attitude of the individual toward exhibiting a specific behavior or object, (of the TPB), are closely related, since both refer to a personal appraisal which measures how attractive it is to exhibit the behavior in question, or an object in question (Ajzen & Fishbein, 1977; Kuehn, 2008). Finally, our model is controlled by variables that, according to the existing literature, can influence our model, which will be addressed later. Next, based on an exhaustive literature review of EEM, TPB and on entrepreneurship training, the theoretical support for each hypothesis is presented.

2.1 Research Hypothesis

Entrepreneurial business training and attitude towards entrepreneurship

Attitude is understood as the inclination of a person to judge the performance of an action or behavior as favorable or unfavorable (Ajzen, 1991). It is a mental evaluation that, by its nature, adopts a negative or positive value (Fishbein & Ajzen, 2015). Attitudes arise from the expectations that a person has about the possible results that they would obtain if they carried out a particular behavior (Fishbein & Ajzen, 2015) and from personal beliefs about the possible consequences that derive from performing, or not, a behavior in question (Ajzen, 2012). According to Ajzen (2006), attitudes follow a principle of agreement, that is, the stronger the belief that exercising a particular behavior would produce certain results (whether positive or negative), the greater the impact of that behavior, such beliefs in attitudes. Consequently, people automatically obtain a stance towards something, according to the value of the perceived result (Ajzen, 1991). According to Ayuo et al., (2017), exposure to entrepreneurial training positively influences their attitudes towards entrepreneurship. Similarly, Veciana et al., (2005) carried out research on university students in Spain and Puerto Rico and found that those students

with an entrepreneurial educational background exhibit a high degree of desirability and a more positive perception of the advisability of creating a business.

Although it cannot be stated categorically that every entrepreneurial training program fosters the entrepreneurial spirit, it is to be expected (or at least assumed) that it has a favorable impact on their attitudes toward entrepreneurship. According to Zhang et al., (2019), the results of previous research show a significant impact on attitudes towards entrepreneurship among students who participate in entrepreneurial training programs. Consequently, we postulate that:

Hypothesis 1. The educational support on entrepreneurial training offered by the business management career is positively associated with favorable attitudes towards entrepreneurship.

Entrepreneurial training and entrepreneurial self-efficacy

Educational programs that promote the entrepreneurial spirit seek to train competent entrepreneurs, with the ability to create new companies or ventures with growth potential (Brüne & Lutz, 2020). A successful entrepreneurial education implies the improvement of skills to detect and select business opportunities, organize resources, and manage risk situations. Entrepreneurial training should improve entrepreneurial self-efficacy because it is associated with vicarious experience and verbal persuasion, both determinants of an individual's self-efficacy (Mauer et al., 2017; Shi et al., 2020). Starting a business idea is not an easy task. However, the perception of self-efficacy on a particular task positively influences the degree of perseverance and the performance of highly difficult actions (Ajzen, 1991). Several years ago, the management school of the University of Costa Rica embraced "entrepreneurship" as one of its transversal axes for the business management career. We assume that its curriculum and pedagogical strategies provide students not only with the skills and knowledge necessary to develop entrepreneurship, but also with the conviction in their own abilities to plan, organize, execute, and launch what is necessary to grow their own business. Consequently, we assume the following:

Hypothesis 2. The educational support on entrepreneurial training offered by the business school positively influences the perception of entrepreneurial self-efficacy of its students.

Attitude towards entrepreneurship and entrepreneurial intention

Intention is a person's willingness to perform a particular behavior (Ajzen, 2012). It reflects the persistence that a person is willing to exert to perform a particular behavior (Ajzen, 1991). The intention precedes the execution of a behavior (Ajzen, 2012). Regarding entrepreneurial intentions, these represent the inclination of a person to start or own a business (Bae et al., 2014; Do Paço et al., 2015). According to Apasieva et al., (2020) positive attitudes toward entrepreneurship constitute relevant antecedents of the self-employment ambitions of an individual. Peng et al. (2013), cite the work of Ajzen (1991) and point out that the attitudes of the individual are crucial factors that influence their business intentions.

The formation of intentions depends, to a large extent, on attitudes towards behaviors or an object, which, in turn, reflect their beliefs and perceptions (Ajzen 1991). In this sense, favorable attitudes toward a particular behavior are considered strong predictors of intentions (Vamvaka et al., 2020). That being said, it is to be expected that individuals who

have developed more favorable attitudes towards ventures have a greater predisposition towards them since they consider that ventures entail more advantages or desirable results than disadvantages or undesirable results. On the contrary, if individuals form unfavorable attitudes towards entrepreneurship, it is expected that they will be less willing to start their own entrepreneurial activity. The perception of greater disadvantages (or the lack of advantages) represses the sense of desirability towards entrepreneurial activity. Consequently, we postulate the following:

Hypothesis 3. Favorable attitudes towards entrepreneurship are positively associated with the levels of entrepreneurial intention exhibited by students.

Self-efficacy and entrepreneurial intention

Perceived behavioral control reflects an individual's self-perception of her own ability to achieve and control a given behavior (Ajzen, 2012). For Ajzen himself, this concept is homologous to that of perceived self-efficacy created by Bandura (Fishbein & Ajzen, 2015), which is defined as "the belief in one's own abilities to organize and execute the courses of action necessary to produce certain achievements" (Bandura, 1997). The degree of self-efficacy affects the levels of effort a person puts into their tasks (Bandura, 1997) as well as the length of time a person is willing to persevere in the face of obstacles and challenges (Bandura, 1994). Farhat (2016), points out that "The stimulus to act grows when entrepreneurs think that their actions will have attainable results; self-efficacy becomes a predominant factor in entrepreneurial behaviors that have been successful" p. (45).

Prior studies show that people with higher perceived self-efficacy exhibit higher intentions to become entrepreneurs (Galleguillos-Cortés et al., 2019; Shi, et al., 2020; Osorio-Tinoco et al., 2022). Confidence in one's abilities to start a business career does not ensure business success, but it encourages people to try (Kickul et al., 2009). We argue that individuals who present high levels of entrepreneurial self-efficacy have a greater conviction in their abilities to make a business idea a reality. In turn, the greater the perception of entrepreneurial self-efficacy, the greater the degree of control perceived over the tasks and challenges involved in implementing a business idea. Therefore, we assume that:

Hypothesis 4. The perception of entrepreneurial self-efficacy is positively associated with the levels of entrepreneurial intention exhibited by students.

Entrepreneurial training and self-efficacy

Entrepreneurial education seeks the development of multiple abilities and capacities in individuals. Training programs designed to promote entrepreneurship offer courses on the development of new business ideas, business planning, and new business models, among others (Ahmed et al., 2020; Calzado-Barbero et al., 2019). Effective entrepreneurial training enables the individual to develop the skills and access the knowledge necessary to start and grow a new business; among them: the ability to generate new business ideas the ability to recognize and pursue opportunities, the ability to lead work teams, and gather the necessary resources to achieve their objectives, among others (Ayuo et al., 2017; Calzado-Barbero et al., 2019). Some empirical research carried out in Latin America context has shown that some business training programs have a favorable effect on entrepreneurial intention (e.g., Leiva et al., 2021; Lopez & Alvarez, 2019). In this sense, it has

been seen that graduates with a business specialization have a greater tendency to start new businesses and have stronger entrepreneurial intentions than other graduates without such training (Mamun et al., 2017). Accordingly, we postulate that:

Hypothesis 5. The educational support on entrepreneurial training offered by the business school positively influences the levels of entrepreneurial intention exhibited by students.

Mediating role of attitudes and perception of self-efficacy

As previously discussed, entrepreneurial self-efficacy seems to play an essential role when it comes to entrepreneurial endeavors, because it reinforces an individual's ability to detect and exploit business opportunities, which is of utmost relevance when intending to establish a business undertaking (Bachmann et al., 2021). The entrepreneurial literature highlights the prominent role of an individual's entrepreneurial self-efficacy as motivation in choosing to run or start a business venture (Burnette et al., 2020). In general, it was shown that the perception of self-efficacy can be developed by learning, experience, verbal persuasion, or vicarious learning, that is, by indirect listening and observing from more experienced individuals. According to Mauer et al. (2017), some antecedents of the development of an individual's entrepreneurial self-efficacy could be examined in terms of relevant tools received and capacities developed in their entrepreneurial education and training.

Wu et al., (2022) have suggested that entrepreneurship education is likely to boost individuals' entrepreneurial intentions by enhancing an individual's entrepreneurial self-efficacy, which denotes a mediating role of self-efficacy in the relationship between entrepreneurial education acquired by individuals and their entrepreneurial intentions.

Similarly, having favorable attitudes toward entrepreneurship is also viewed as an aspect that might elicit the emergence of entrepreneurial intention and subsequent actions (Anwar et al., 2021). It was noted that entrepreneurial training not only provides the knowledge needed for running new business undertakings, but also strengthens the mindset, attitudes, and personal character related to entrepreneurship (Wardana et al., 2020). Positive attitudes towards entrepreneurship, in turn, are key reliable predictors of entrepreneurial intentions (Vamvaka et al., 2020)

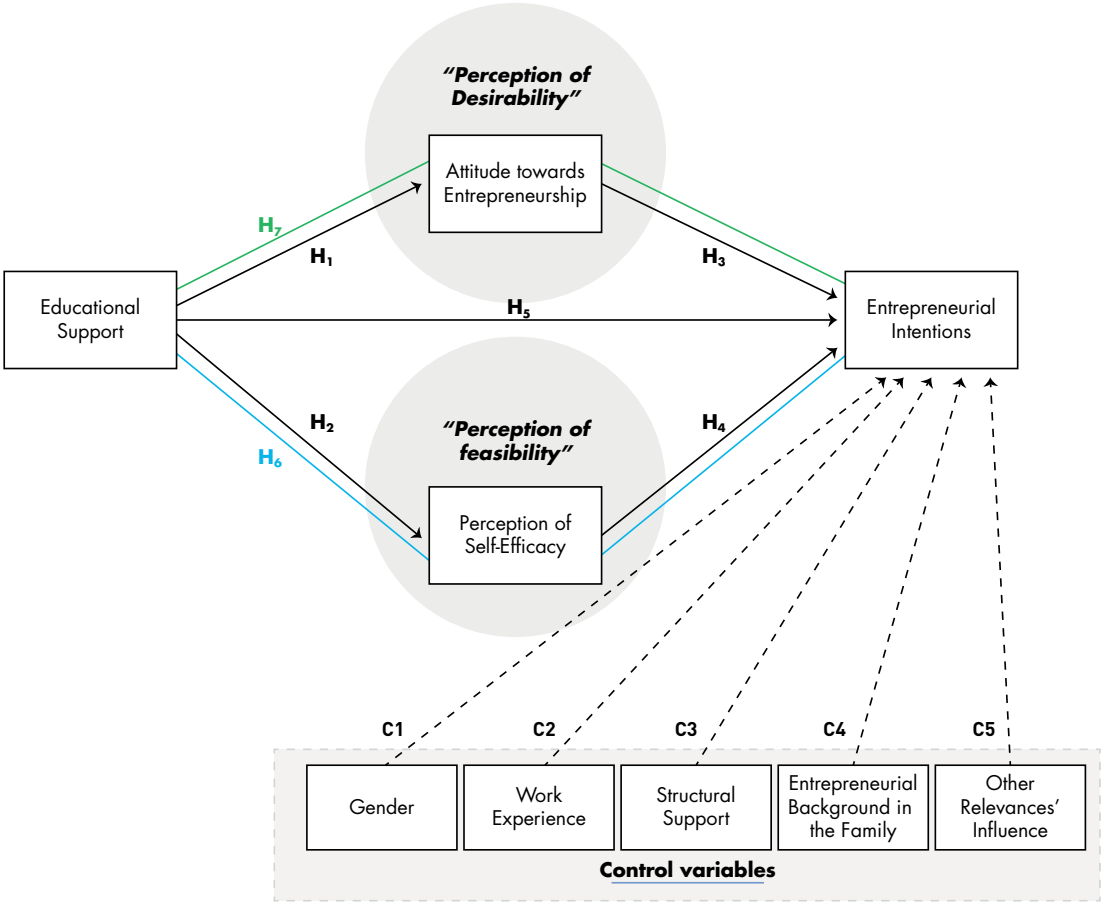
Some prior inquiries have considered both factors, self-efficacy and attitudes towards entrepreneurship, as intervening variables in their efforts to explain how entrepreneurial education exerts an impact on entrepreneurial behavior and the intention to start ones' own ventures (e.g., Miranda et al., 2017; Adelekan et al., 2019; Liguori et al., 2020; Cui, et al., 2021; Anjum et al., 2022). Building on these arguments, we contend that:

Hypothesis 6. The perception of entrepreneurial self-efficacy mediates the relationship between the educational support on entrepreneurial training offered by the business school and the entrepreneurial intentions exhibited by students.

Hypothesis 7. Favorable attitudes towards entrepreneurship mediate the relationship between the educational support on entrepreneurial training offered by the business school and the entrepreneurial intentions exhibited by students.

Figure 1 presents the theoretical model applied.

Figure 1: Hypothesized research model



Note: Research model underpinned in cognitive theoretical frameworks and controlled by non-cognitive variables that might exert an influence on entrepreneurial intentions.
Source: Author's own.

3. Methodology

3.1. Data collection and sample

The sample frame was all business administration students from the University of Costa Rica in the 5th year of studies, that is advanced students. The participation was limited to only these students because they (as opposed to first year and intermediate students) are the ones who have completed most of the educational training program or are about to complete it. The data collection period extended from October to November 2019. In order to collect data to test our model, we first developed a questionnaire and distributed it by means of a web survey platform. Electronic questionnaires were sent together with brief introductory words pointing out the anonymous nature of their participation. The questionnaire included a single heading that emphasized the importance of answering it naturally and frankly. The confidential nature of the responses was emphasized. All of the above was done in order to reduce possible response biases (Chung & Monroe, 2003). Second, we opted for a random sampling process, which is considered the best method that allows establishing a formal rationale for the validity and the generalization of the results (Cook, 2015). In this vein, from the nineteen courses of advanced students encompassing different business subjects, twelve courses were randomly chosen. All students enrolled in these twelve courses were surveyed, which made a total of 315 individuals randomly chosen.

It is worth noting that we did not send questionnaires to the entire student population enrolled in the 5th year of business administration to avoid self-selection bias (known also as volunteer bias). Relying on samples of those who see the survey online and volunteer to participate does not constitute a representative sample of the population; merely is representative of those who have chosen to volunteer (Boughner, 2010). In this respect, Bethlehem (2010) points out that volunteer bias is detrimental for validity and quality of survey results because we cannot apply probability sampling theory and the estimates obtained will be biased.

A total of 315 anonymous responds were received, 32 of which were discarded (17 returned questionnaires presented a considerable number of unanswered questions, which made further analysis impossible, and 15 turned out to be outliers, that is, cases in which the scores deviate markedly from all the others in a given data set (Byrne, 2016). At the end of the purification process, 283 cases were obtained, which account for nearly 48% of all advanced student population enrolled in the business administration career.

Regarding demographic characteristics, the sample is made up of 154 women and 129 men; Their ages range from 21 to 32 years, with an average age of 23.6 years and a statistical mode of 22 years. 38.2% of the participants work and study at the same time. 47.7% of the students come from families where the father or mother has (or has had) their own business.

3.2 Variables and reliability of its measures

As part of our methodology, we decide to use variables with multi-item scales that were validated in previous research. The entrepreneurial intention was measured using the six-item scale implemented by Liñán and Chen (2009). This variable seeks to determine to what extent an individual is determined to create a company in the future, how seriously they have thought about starting a company, The Cronbach's alpha value of this variable is 0.96, which reflects a high reliability and internal consistency of the construct. To measure the educational support of a business school on entrepreneurial training, we used the scale validated by Yurtkoru et al., (2014). This construct consists of a personal perception about how favorable (or unfavorable) the educational training received has been for: generating creative business ideas, developing skills, and abilities the necessary disposition to undertake, and if it has contributed Sufficient knowledge to devise, and organize your own business. Cronbach's alpha coefficient was 0.90, showing high reliability and internal consistency.

The variable attitude towards entrepreneurship was evaluated using the scale proposed by Liñán and Chen (2009). The four-item scale yielded a Cronbach's alpha value of 0.85, which shows good reliability and internal consistency of this construct. Finally, to measure entrepreneurial self-efficacy, we used the ten-item scale of Kickul et al., (2009). Cronbach's alpha coefficient for this construct was 0.87. A seven-point Likert scale was used for all variables.

With regard to control variables, we controlled for recognized factors that according to the literature, might influence entrepreneurial intentions, perceptions, and attitudes towards entrepreneurship. For instance, inquiries have shown that the existence of an entrepreneurial business background in the family exerts a positive influence on youngsters' intention and their desire to pursue a career as entrepreneurs (Fellnhofer & Mueller, 2018; Lindquist et al., 2015), and can generate more favorable attitudes and perceptions towards entrepreneurship (e.g., Nowinski & Haddoud, 2019, Laviolette et al., 2012). We controlled also for gender, since the male construction of entrepreneurship may inhibit female entrepreneurial intention and behavior (Brüne & Lutz, 2020; Kong & Kim, 2022). Entrepreneurship seems to be still more associated with "male-oriented traits" (e.g., Haus et al., 2013).

We controlled for previous work experience. Prior research has also suggested that advanced students with previous work experience have a higher level of intention than those without such experience (e.g., Fatoki, 2014; Miralles et al., 2016). Besides, according to Ajzen (1991) the social pressures exerted by people relevant to the individual can influence their impetus to meet their expectations. To measure the possible influence of "relevant others" we used the three-item scale developed by Iakovleva and Kolvereid (2009). This scale examines whether close or significant people influence an individual's entrepreneurial intentions. Cronbach's alpha coefficient of 0.96 shows reliability and acceptable internal consistency of this variable. Finally, structural support,

that is, the perception of the degree of goodness (or threat) of the social, economic, political context of a country, can promote (or inhibit) entrepreneurial intentions (Yurtkoru, et al., 2014). To measure perceived structural support, we used the construct developed by Yurtkoru et al., (2014). A Cronbach's alpha coefficient of 0.86 shows reliability and internal consistency.

4. Model results

4.1. Validity of the model's constructs

We looked for evidence of convergent validity, that is, the degree to which the items of a specific variable correlate with each other (Hair et al., 2010; Byrne, 2016). We verified whether the item loadings are significant in their respective variable, defined a priori, using structural equation modeling (cf. Bagozzi et al., 1991; Hair et al., 2010). All item loadings of our variables were statistically significant ($p < 0.001$) within the corresponding variable, suggesting a high proportion of common variance between items, thus demonstrating the presence of convergent validity. We further examine discriminant validity, that is, the degree to which a model variable is actually different from other variables (Hair et al., 2010). To do this, we follow the suggestions of Henseler et al., (2015) and use the computation of HTMT (Heterotrait-Monotrait Ratio of Correlation Matrix) correlation coefficients as a criterion, which represent the mean of the correlations between the indicators of different constructs. in relation to the mean of the correlations of the indicators that belong to the same construct. According to Henseler et al., (2015) there is evidence of discriminant validity between a set of constructs when the HTMT coefficients are below the 0.85 threshold for each pair of constructs examined. All our calculations of the HTMT coefficients were less than the respective threshold (coefficients: 0.12, 0.30 0.70, 0.39, 0.35, and 0.36), which demonstrates the existence of discriminant validity between the variables of the model. Details of convergent and discriminant validity analysis are present in the annex section.

4.2. Evaluation of model fit and parameter estimates

We compute the minimum discrepancy (χ^2/ d.f= 2.03), which is less than the threshold of 3, suggesting an acceptable level of model fit (Weiber & Mühlhaus, 2014). We recognize that Chi-square values, (χ^2) are susceptible to changes in sample size and model complexity, so it seems advisable to examine other measures to make more reasonable goodness-of-fit judgments of the research model (Weiber & Mühlhaus, 2014). For this reason, we also assessed a set of indices recommended by Weiber and Mühlhaus (2014), which are: RMSEA, SRMR, TLI, CFI, IFI, and whose values obtained were compared with the corresponding and allowed thresholds for each index. Table 1 shows the scores and respective thresholds. In short, the indices reflect the existence of a well-specified model with good goodness of fit.

We used covaried based structural equation modeling (SEM-CB) to test or model. This is a rigorous and reliable methodology, but its use requires that the sample data necessarily comply with the principle of multivariate normality in the data (Byrne, 2016). Although it is known that the larger the sample the greater the probability that the data comply with this principle, there is no guarantee that sample size complies with the principle. So, in order to really determine whether or not there is a violation of the principle of multivariate normality in the data we should compute and compare the Mardia coefficient d^2 with the value of the factor $p(p+2)$, where p is equal to the number of variables observed in the model in SEM-CB. If the Mardia coefficient is less than the factor value, the data are considered multivariate normal and vice versa (Khine, 2013). The d^2 value was 19.8 points, while the factor $p(p+2)$ was 99.0. Given the results, we have evidence to suggest that there is no violation of the principle of multivariate normality. In addition, Rodríguez and Ruíz (2008) provide results and empirical evidence suggesting that, in research models that are correctly specified, the maximum likelihood estimation provides the best results even under conditions of multivariate non-normality in the data, as long as the coefficient value of Mardia does not exceed 70 points. Therefore, the sample size does not represent a limitation for its analysis in SEM-CB.

4.3. Testing for hypotheses

Entrepreneurial intention is a complex subject of study. Its drivers can be multifactorial. Covaried-based structural equation modeling techniques were applied because they allow us to estimate the strength of all the relationships represented in the model simultaneously, making evident the relative importance of each while emulating reality, where various factors affect entrepreneurial intentions at the same time.

It is also advisable to perform bootstrapping procedures, which allow robust and more precise evaluations of the significance levels of the standard errors and parameter estimates. We perform a bootstrapping procedure to estimate the parameters and check the stability of the p-values. According to Nevitt and Hancock (2001), at least 1,000 interactions are required to obtain high precision for the parameter estimates, p-values, and confidence intervals. We carry out this procedure with 2,000 interactions. Table 2 summarizes all results after bootstrapping. Hypotheses H1 to H4 were supported, but not hypothesis H5. Regarding the control variables, our results suggest a positive and statistically significant relationship between the influence of "relevant others" and entrepreneurial intention. Our model explains 65% of the entrepreneurial intention. Statistically supported relationships are depicted in figure 2.

Table 1: Evaluation of goodness-of-fit statistics.

Indices	Threshold	Score
Tucker- Lewis Index (TLI)	≥ 0.900	0.928
Incremental Index of Fit (IFI)	≥ 0.900	0.939
Comparative Fit Index (CFI)	≥ 0.900	0.938
Root Mean Square Error of Approximation (RMSEA)	≤ 0.080	0.061
Standardized Root Mean Residual (SRMR)	≤ 0.100	0.101

Note: Mix of indices and thresholds evaluated and recommend by Hair et al., (2010) and Weiber & Mühlhaus (2014).

Table 2: Loadings of Standardized β-estimates and Confidence Intervals.

Hypothesized Relationships		ß- value	Intervals of confidence		p-value
			lower	*upper*	
H1. Educational support	→ Attitude toward entrepreneurship	0.314	0.176	0.474	0.001**
H2. Educational support	→ Perception of entrep. self-efficacy	0.410	0.260	0.558	0.001**
H3. Attitude toward entrepreneurship	→ Entrepreneurial intention	0.677	0.568	0.782	0.001**
H4. Perception of entrep. self-efficacy	→ Entrepreneurial intention	0.272	0.151	0.394	0.001**
H5. Educational support	→ Entrepreneurial intention	- 0.022	-0.131	0.084	0.640 +
C1. Gender	→ Entrepreneurial intention	- 0.033	-0.117	0.046	0.399
C2. Previous working experience	→ Entrepreneurial intention	- 0.017	-0.098	0.069	0.702
C3. Structural support	→ Entrepreneurial intention	- 0.028	-0.127	0.073	0.605
C4. Entrep. background in the family	→ Entrepreneurial intention	0.064	-0.015	0.142	0.109
C5. Influence of other relevants	→ Entrepreneurial intention	0.210	0.108	0.320	0.001*

*Notes: Standardized estimations based on 2,000 bootstrap samples. **: Hypothesis statistically significant, +: Hypothesis non-statistically significant. * Relationship statistically significant. Source: Author's own*

4.4. Testing for mediating effects

A mediating effect occurs when a change in the strength of the relationship between the model's direct path is markedly reduced when including an indirect path, that is by introducing an intervening variable in the model. (Field, 2013). Testing hypotheses H6 and H7 requires checking first if the direct path (that is, the relationship between educational support on entrepreneurial training and the entrepreneurial intention exhibited by students. Hereafter "model 1") is significant after constraining to zero the effects of the model indirect paths.

A bootstrap procedure with 2,000 re-samples was run to check the significance of the coefficient in model 1. We also tested the stability of the path coefficients by computing the BCa intervals of confidence as recommended by Hair et al., (2010). Model 1 proved to be significant (β= 0.176 p <0.003).

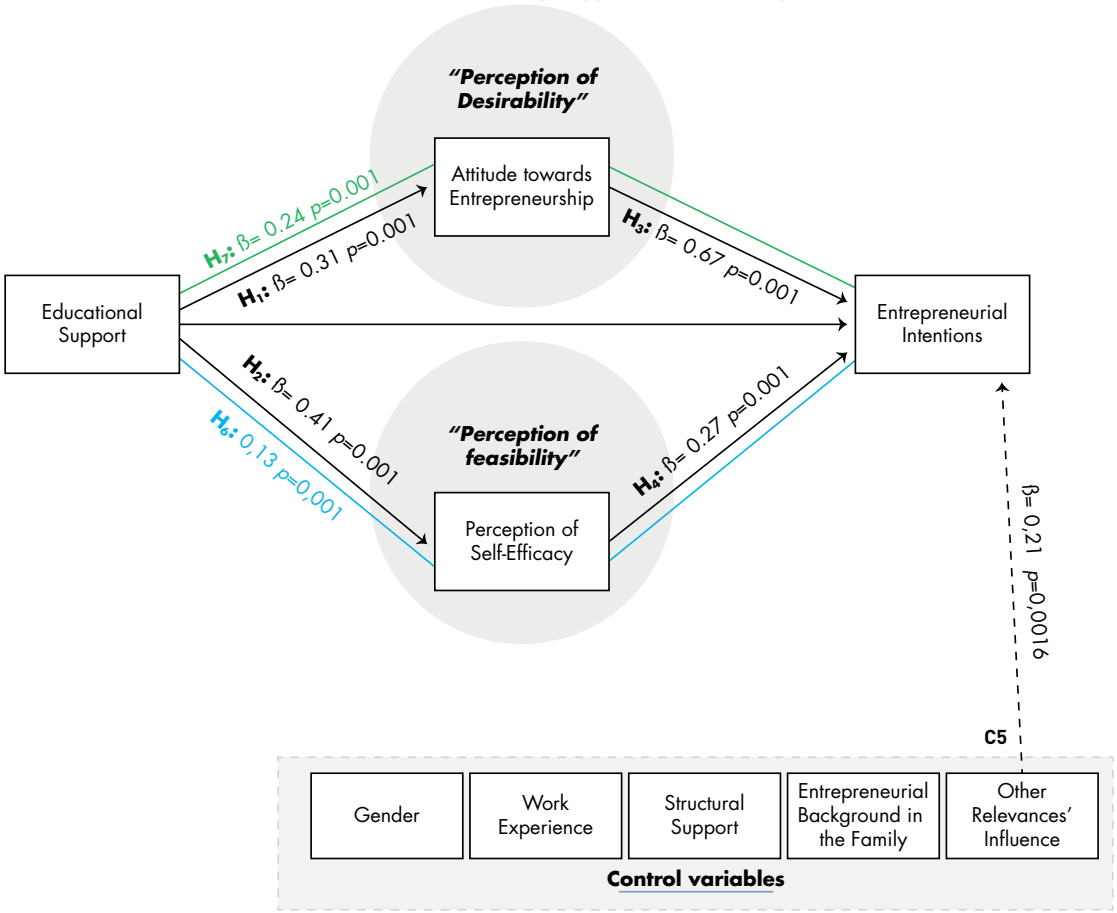
Second, the same bootstrap procedure was applied to our model, but this time without constraining to zero the effect of the indirect paths (that is, the indirect relationships between educational support on entrepreneurial training and the entrepreneurial intention through attitudes towards entrepreneurship and perception of entrepreneurial self-efficacy. Hereafter "model 2"). The results of testing model 2 indicated that both indirect paths remain significant (β= 0.243 p <0.001 / β=0.243 .176 p < 0.001) while the strength of the direct path is reduced to non-significance (β= -0.025 p <0.753) once the indirect relationships are considered in the model. These tests provided evidence of mediation effects, thus supporting hypotheses H6 and H7. Lastly, we computed the variance accounted for value (VAF) to determine the extent to which the mediation compound indirect effects account for the variance of the entrepreneurial intention (dependent variable in our model). The VAF value yielded 1.07. Based on the rule of thumbs suggested by Hair et al., (2010), these VAFs indicate a full mediation effect. The results of testing model 1 and model 2 are summarized in table 3.

Table 3: Results of the test for mediation effect

Effects	β-estimates	Confidence intervals		p-values	Stat. significance
		Lower bound	Upper bound		
Model 1:					
a) DE	0.176	0.012	0.366	0.036	Supported
Model 2:					
b) TE	0.346	0.172	0.535	0.001	Supported
c) DE	-0.025	-0.139	0.110	0.753	Not supported
d) IE-1	0.243	0.130	0.427	0.001	Supported
e) IE- 2	0.128	0.069	0.230	0.001	Supported

Notes:
Model 1: Direct path evaluation after constraining the indirect paths: a) DE=Direct effect of educational support on entrepreneurial intentions.
Model 2: Direct and indirect path evaluations without constraining the indirect paths: b)TE=Total effect, c) DE= Direct effect, d) IE-1= indirect effect through Attitudes towards entrepreneurship, and e) indirect effect through the perception of self-efficacy.

Figure 2: Statistically supported relationships



Note: Hypothesized research model after performing bootstrapping procedures. Only supported relationships are represented. A direct relationship between educational support and entrepreneurial intentions could not be verified.
Source: Author's own.

5. Concluding remarks, discussion, and future research avenues

5.1. Concluding remarks

We can conclude that educational support on entrepreneurial training offered by the business school can contribute to the promotion of entrepreneurial spirit by positively impacting entrepreneurial intentions. This impact develops through an indirect mechanism, that is, educational support on entrepreneurial training at the business school of the University of Costa Rica favorably influences their attitudes toward entrepreneurship and their perceptions of entrepreneurial self-efficacy. Our study also offers an innovative model underpinned in cognitive frameworks that allows any business school to measure, and even compare, the effectiveness of their entrepreneurial training programs in shaping entrepreneurial intentions, based on the degree to which such training positively impacts an individual's perceptions and attitudes.

5.2. Discussion

The training on entrepreneurships that students receive along their career exert a positive influence on the attitudes they exhibit towards entrepreneurship and on their perceptions of self-efficacy to cope with entrepreneurial new ventures, which, in turn, influence the intention of students to pursue a career as entrepreneurs. A favorable perception of the students about their abilities to devise, organize and manage a business gives them a sense of control over the key activities for the emergence of their own enterprise. This sense of control over tasks reduces the feeling of risk and fosters a favorable perception of the viability of the business. The foregoing, together with favorable attitudes towards entrepreneurship, foster in the individual the intention of starting a business, or failing that, of truly considering a career as an entrepreneur. Our results support the assertion of Mauer et al., (2017) who emphasize that entrepreneurial self-efficacy is a salient prerequisite for entrepreneurship intentions and entrepreneurial training is one of the key antecedents of entrepreneurial self-efficacy. Besides, our results empirically support the recent studies in educational contexts conducted by Wardana et al., (2020); and Martínez-Gregorio (2021) who conclude that exposure to entrepreneurial training can foster entrepreneurial self-efficacy in individuals, and students.

On the other hand, our findings contrast with the results obtained by Bateman and Crant (1993), who showed evidence of a direct effect of entrepreneurial training on entrepreneurial intention in a sample of 181 business administration students. A plausible explanation for this discrepancy may be due, in part, to the fact that the author examined the influence of entrepreneurial training on entrepreneurial intentions without relying on any conceptual or explanatory theoretical framework on intentions, nor did he use cognitive factors as intervening variables.

This inquiry provides other findings that, although they were not hypothesized, we believe it is necessary to refer to them briefly. With respect to our control variables, we found empirical evidence suggesting that the influence of people relevant to students, that is, friends, family and, in general, significant people for them, affects their entrepreneurial intentions (ß = 0.21). This result supports Ajzen's theory, in that the influence exerted by "relevant people" for the individual can be a determinant of her intentions. Our study did not find any evidence to suggest that gender differences, specifically being a woman, negatively affect attitudes or intentions toward entrepreneurship as other authors point out: gender stereotypes in society and a masculine vision associated with Entrepreneurship can discourage or inhibit women's aspirations for entrepreneurship (Haus et al., 2013). Likewise, having an entrepreneurial background in family or work experience do not influence the entrepreneurial intentions of business administration students, despite the existing literature that provides evidence of such influences (e.g., Fatoki, 2014; Fellnhofer & Mueller, 2018; Haus et al., 2013; Kong & Kim, 2022; Miralles et al., 2016; Nowinski & Haddoud, 2019). Based on our model results, non-cognitive variables appear not to be associated with entrepreneurial intention.

The study also provides practical implications for business schools. For instance, it contributes to the large discourse around how business schools best instill entrepreneurial intentions in students, which ultimately encourages entrepreneurial actions. Beyond providing the technical knowledge necessary to run companies, business schools must consider the importance of building an entrepreneurial mindset, which, ultimately, makes them more prone to entrepreneurial intentions. Based on the findings, entrepreneurship education is pivotal in forming an individual's entrepreneurial mindset, by shaping favorable perceptions and attitudes toward entrepreneurship.

5.3. Limitations and future research

This study is not exempt from limitations. It is important to point out some limitations of our study: The data were obtained through self-reports. Although the use of self-reports has been shown to be reliable (e.g., Soininen et al., 2013), we must recognize that it could carry the risk of response and common methods bias, (see common methods bias, cf. Donaldson & Grant-Vallone, 2002; Podsakoff et al., 2003). We took the necessary measures to reduce the possible effect of these biases (e.g., voluntary participation confidentiality, anonymous participation). Nevertheless, it seems necessary to point out this

limitation of the study. Second, our study is context-specific, since we used a sample of business administration students from the University of Costa Rica, so we cannot rule out that our findings could represent unique patterns in the sample of students from the country and university in question. Therefore, recognizing the existence of differences between educational contexts and nations, we cannot generalize our results to other students or universities. Lastly, our inquiry builds its analysis on a cross-sectional study and on students subjected to the same teaching and learning conditions. Future research should consider methodological research that uses treatment and control groups through pre-test and post-test designs to elucidate the interrelationships between educational support, attitudes, self-efficacy, and entrepreneurial intention.

Future lines of research could develop other models with cognitive variables (i.e., states of affect, perception, and passion) that could influence attitudes and perceptions toward entrepreneurship or replicate our research in other contexts. Besides, there's a research void in the knowledge of factors that presumably could moderate the relationship between entrepreneurial and entrepreneurial intentions. In this sense, analyzing moderating effects of cognitive bias (for instance: optimism, framing effect, overconfidence, and fear to fail, among others) can be an interesting research line for future inquiries. We hope this study promotes the incorporation of cognitive theoretical frameworks in future research and tends to examine the impact of university programs on entrepreneurial intention in different contexts and latitudes.

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Annexes

Annex 1. Convergent validity test.

Relationships			U.St.	S.E.	C.R.	P
Attitude towards entrepreneurship	<---	Educational_Support	0.247	0.054	4.607	***
Perception of self-efficacy	<---	Educational_Support	0.286	0.047	6.11	***
Entrepreneurial intention	<---	Educational_Support	-0.025	0.067	-0.369	0.712
Entrepreneurial intention	<---	Perception of self-efficacy	0.446	0.083	5.366	***
Entrepreneurial intention	<---	Entrep. backgroud in the family	0.181	0.114	1.592	0.111
Entrepreneurial intention	<---	Others_Relevants	0.039	0.009	4.519	***
Entrepreneurial intention	<---	Structural_Suppport	-0.028	0.056	-0.503	0.615
Entrepreneurial intention	<---	Work_experiecne	-0.049	0.117	-0.421	0.674
Entrepreneurial intention	<---	Gender	-0.094	0.114	-0.821	0.412
Entrepreneurial intention	<---	Attitude towards entrepreneurship	0.986	0.100	9.817	***
INT1	<---	Entrepreneurial intention	1			
INT2	<---	Entrepreneurial intention	1.071	0.045	23.709	***
INT3	<---	Entrepreneurial intention	1.077	0.051	21.254	***
INT4	<---	Entrepreneurial intention	0.918	0.058	15.797	***
INT5	<---	Entrepreneurial intention	1.012	0.05	20.338	***
INT6	<---	Entrepreneurial intention	1.059	0.046	22.942	***
O_R1	<---	Relevant_Others	1			
O_R2	<---	Relevant_Others	0.912	0.025	36.159	***
O_R3	<---	Relevant_Others	0.950	0.027	35.159	***
Educ1	<---	Educ_Support	1			
Educ2	<---	Educ_Support	0.947	0.049	19.222	***
Educ3	<---	Educ_Support	1.134	0.062	18.306	***
SS2	<---	Structural_Suppport	1			
SS1	<---	Structural_Suppport	1.092	0.094	11.573	***
SE10	<---	Perception of self-efficacy	1			
SE9	<---	Entrepreneurial intention	1.232	0.087	14.09	***
SE8	<---	Entrepreneurial intention	0.858	0.075	11.428	***
SE7	<---	Entrepreneurial intention	0.864	0.088	9.872	***
SE6	<---	Entrepreneurial intention	0.799	0.098	8.172	***
SE5	<---	Entrepreneurial intention	0.773	0.09	8.557	***
SE4	<---	Entrepreneurial intention	0.814	0.096	8.494	***
SE3	<---	Entrepreneurial intention	0.616	0.088	7.011	***
SE2	<---	Entrepreneurial intention	0.887	0.095	9.34	***
SE1	<---	Entrepreneurial intention	0.652	0.077	8.52	***
ATT4	<---	Attitude towards entrepreneurship	1			
ATT3	<---	Perception of self-efficacy	0.919	0.073	12.656	***
ATT2	<---	Entrepreneurial intention	1.152	0.093	12.415	***
ATT1	<---	Entrepreneurial intention	1.069	0.09	11.813	***

Notes: U.St.= unstandardized estimates, S.E: standard errors; C.R= composite reliability scores; P= p-values ATT= Attitude towards entrepreneurship, SE= Perception of entrepreneurial self-efficacy, INT= Entrepreneurial Intention, Educ= Educational Support, SS= Structural Support, O_R= Other relevants.

Annex 2. Discrimant validity test.

	Implied correlatons													
	Att1	**Att2**	**Att3**	**Att4**	**SE1**	**SE2**	**SE3**	**SE4**	**SE5**	**SE6**	**SE7**	**SE8**	**SE9**	**SE10**
Att1														
Att2	0,732													
Att3	0,518	0,567												
Att4	0,549	0,600	0,673											
SE1	0,056	0,061	0,043	0,046										
SE2	0,061	0,067	0,047	0,050	0,564									
SE3	0,046	0,051	0,036	0,038	0,232	0,253								
SE4	0,056	0,061	0,043	0,046	0,280	0,305	0,231							
SE5	0,056	0,061	0,043	0,046	0,282	0,308	0,233	0,577						
SE6	0,054	0,059	0,042	0,044	0,270	0,294	0,223	0,596	0,661					
SE7	0,064	0,070	0,050	0,053	0,324	0,353	0,268	0,322	0,487	0,511				
SE8	0,074	0,081	0,057	0,060	0,371	0,405	0,307	0,369	0,372	0,356	0,625			
SE9	0,092	0,101	0,071	0,075	0,463	0,505	0,383	0,461	0,465	0,444	0,534	0,611		
SE10	0,079	0,087	0,061	0,065	0,399	0,435	0,330	0,397	0,400	0,383	0,456	0,527	0,658	
Educ1	0,222	0,242	0,172	0,182	0,187	0,204	0,155	0,187	0,188	0,180	0,216	0,247	0,309	0,266
Educ2	0,230	0,252	0,178	0,189	0,195	0,212	0,161	0,194	0,195	0,187	0,224	0,257	0,321	0,276
Educ3	0,222	0,242	0,171	0,182	0,187	0,204	0,155	0,187	0,188	0,180	0,216	0,274	0,309	0,266
INT1	0,555	0,607	0,429	0,455	0,186	0,203	0,154	0,185	0,186	0,178	0,214	0,245	0,306	0,264
INT2	0,523	0,572	0,405	0,429	0,175	0,191	0,145	0,174	0,176	0,168	0,202	0,231	0,289	0,249
INT3	0,452	0,494	0,349	0,370	0,151	0,165	0,125	0,150	0,152	0,145	0,174	0,200	0,249	0,215
INT4	0,563	0,616	0,436	0,462	0,189	0,206	0,156	0,188	0,189	0,181	0,217	0,249	0,311	0,268
INT5	0,564	0,616	0,436	0,462	0,189	0,206	0,156	0,188	0,189	0,181	0,217	0,249	0,311	0,268
INT6	0,506	0,553	0,392	0,415	0,189	0,185	0,140	0,169	0,170	0,163	0,195	0,224	0,279	0,241

Annex 2. Discrimant validity test (Continued).

Implied correlatons									
	Educ1	**Educ2**	**Educ3**	**INT1**	**INT2**	**INT3**	**INT4**	**INT5**	**INT6**
Att1									
Att2									
Att3									
Att4									
SE1									
SE2									
SE3									
SE4									
SE5									
SE6									
SE7									
SE8									
SE9									
SE10									
Educ1									
Educ2	0,772								
Educ3	0,743	0,771							
INT1	0,290	0,301	0,290						
INT2	0,274	0,248	0,273	0,876					
INT3	0,236	0,245	0,236	0,715	0,812				
INT4	0,295	0,306	0,294	0,892	0,841	0,726			
INT5	0,295	0,306	0,294	0,892	0,841	0,726	0,096		
INT6	0,265	0,275	0,265	0,802	0,756	0,652	0,764	0,814	

Monotrait correlations	**ATT**	**se**	**EDUC**	**INT**
	0,067	0,405	0,762	0,801

Heterotrait Correlations	**ATT-SE**	**ATT-EDU**	**ATT-INT**	**SE-EDU**	**SE-INT**	**EDU-INT**
	0,059	0,207	0,486	0,216	0,202	0,279

HTMT Ratios	**ATT-SE**	**ATT-EDU**	**ATT-INT**	**SE-EDU**	**SE-INT**	**EDU-INT**
	0,12	0,30	0,70	0,93	0,35	0,63