Exploring entrepreneurial intentions in Latin American university students

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Abstract
The aim of this study was to determine if entrepreneurial intention, based on Ajzen's model of planned behavior (1991), can be predicted by risk propensity, internal locus of control and leadership skills. Six standardized and reliable instruments were applied to 1493 undergraduate university business students in Latin American countries, selected through non-random quota sampling in accordance with their formation level in each of the five participating universities. Using structural equation techniques, the research model was validated and intention estimated and analyzed in relation to a set of socio-demographic variables. According to the results, entrepreneurial intention can be significantly predicted by the psychological variables under consideration and, contrary to what has been reported in other research, no gender differences were found in the intention of entrepreneurship. These findings are discussed.

Keywords
Entrepreneurial intention; leadership skills; locus of control; risk propensity; Latin American students.

1. Introduction
Entrepreneurship and leadership are significant research subjects due to their impact on the development and economic well-being of a country. The creation of sustainable enterprises which offer either goods or services to consumers represents an important source of employment, investment
and economic growth for nations. Understanding how entrepreneurship happens and what fosters leadership skills in university students of business disciplines is a major challenge on the path to their promotion and development in management schools.

In order to propose a conceptual model and submit it for validation, the variables included in this study are those related to entrepreneurial intention, in accordance with Ajzen’s model (1991), and the skills supporting the leadership model put forth by Zula, Yarrish, and Christensen (2010). The study also includes the internal locus of control and risk propensity, as they have been shown to have a degree of correlation with entrepreneurial intention and leadership. Since there is evidence about the impact of culture in these processes, the study includes students from five Latin American countries, namely, Chile, Colombia, Ecuador, Peru and Venezuela.

1.1 Theoretical framework and hypotheses
1.1.1 Entrepreneurship as a concept
Contrary to what one might think, the term entrepreneur is not a recent concept. It is attributed to the French economist Richard Cantillon who in 1735 used it to refer the person with the role of creating or launching a business enterprise through the purchase and combination of means of production to obtain a new product (González, 2004). At that time and until the nineteenth century entrepreneurs were credited with a superior ability to identify business opportunities and the capacity to be innovative, to take risks, to be particularly intelligent and excellent workers (Bygrave & Hofer, 1991; Carree & Thurik, 2003).

Towards the beginnings of the twentieth century one observes a more economic approach that progressively links the entrepreneur with the environment. In that century entrepreneurial activity was viewed as a management function comprising activities beyond routine work which challenge human thought and behavior (Béchard & Grégoire, 2005). In this sense, then, the entrepreneur is a transformer who does not stay in his comfort zone. He is an individual for whom creativity and innovation become features that allow him to identify opportunities in an environment in which the management function rests on the ability to motivate others and thus generate innovative behaviors (Günther & Wagner, 2007; Rodríguez & Jiménez, 2005). At the end of the twentieth and the beginning of the twenty-first century, entrepreneurship became linked to schools of thought which tried to build an explanatory framework for entrepreneurship and viewed the entrepreneur as a person who perceives or grasps opportunities (Bygrave & Hofer, 1991; Chabaud & Ngijol, 2004; Eckhardt & Shane, 2003; Shane, Locke, & Collins, 2003; Shane & S.Venkataraman, 2000; Venkataraman, 1997).

Among these various schools of thought is the psychological school, which provides this study’s framework. It describes locus of control and risk propensity as personal attributes stemming from factors of attributional and cognitive nature (Shaver & Scott, 1991). Additionally, intention is understood as a precursor of entrepreneurship, taking into account the variables suggested by Ajzen (1991): attitude towards entrepreneurship, subjective norms and perceived control of behavior.

1.1.2 Intention as an antecedent of entrepreneurship
Entrepreneurship entails the discovery of opportunities, the search of information, the acquisition of resources and the implementation of business strategies (Madrigal, Arechavala, & Madrigal, 2012). However, before the undertaking itself an intention must be present in the individual who undertakes. Entrepreneurial intention is the key force to understand the entrepreneurial process, i.e., that which motivates people to become entrepreneurs. Entrepreneurs are those people who choose the creation of their own enterprise as a professional career. They are characterized by having initiative and the passion to create a business, making an original use of available resources, and accepting risk and the possibility of failure (Nascimento, Gonçalves, Honório, & Bastos, 2010).

There is evidence regarding intention as an antecedent of undertaking. An important body of research exists which relates intention to personal characteristics such as disposition to achievement, capacity to generate networks, leadership, auto-efficacy and risk propensity. These same characteristics are shown to be precursors of entrepreneurship (Krueger, Reilly, & Carsrud, 2000). In addition another research approach included in several models links variables of individual nature with those of the environment (nán, Santos, & Fernández, 2011). These models include: 1) Shapero and Sokol’s (1982) model of entrepreneurial behavior, which considers perceived feasibility and 2) Ajzen’s theory of Planned Behavior (1991) which has three explanatory variables: attitude towards behavior, social norms and perceived behavior control. This last variable, according to Krueger and Brazeal (1994), corresponds to self-efficacy and is a concept similar to that of viability or perceived feasibility proposed by Shapero and Sokol (1982).

In general terms, entrepreneurial intention models include individual and environmental type variables. In essence, they include the concept of self-efficacy (Krueger & Brazeal, 1994) and locus of internal control (Shapero & Sokol, 1982). Self-efficacy is related to behaviors in situations of high risk and uncertainty and also with behavior flexibility to deal with threats and adverse situations (Diaz, Palido, & Moggollón, 2006). In Ajzen’s model (1991), and within the variable called attitude towards behavior and perceived behavioral control, certain individual characteristics are found that make people feel capable of accomplishing undertaking behaviors. In this way, risk tolerance is related to both attitude towards behavior and perceived behavioral control, which are variables included in the model proposed by Ajzen (1991). Risk tolerance has also been linked to perceived feasibility and propensity to act as included in the models of Shapero and Sokol (1982) and Krueger and Brazeal (1994).

It is worth noting that situational factors include sociodemographic variables such as age, gender, educational level,
family history of entrepreneurship and work experience, among others. In this regard, nán, Santos, and Fernández (2011) consider social valuation as an antecedent of the intention to undertake, relating it to culture and suggesting the prioritization of developing comparative studies to understand the role of culture in entrepreneurial intention. In this regard, nán, Nabi, and Krueger (2013) indicate that the development of multicultural studies to understand entrepreneurial intention is surprisingly scarce. At the Latin American level, the study of Soria-Barreto, niga Jara, and Ruiz-Campo (2016a), carried out on Chilean students, showed that the degree of students' risk aversion significantly affects, in a positive and direct way, their intention to undertake. On the contrary, although linked to entrepreneurial intention in a positive way, self-efficacy and internal self-control do so in an indirect manner and through risk aversion.

Studies that incorporate culture have shown a differential effect of self-efficacy on entrepreneurial intention. In this regard, nán, Urbano, and Guerrero (2011) found self-efficacy to be the best predictor of entrepreneurial intention in students from Great Britain, but not so in those from Spain. On the contrary, Moriano, Gorgievski, Laguna, Stephan, and Zarafi shani (2012) found that self-efficacy was highly predictive of entrepreneurial intention in Spain and other countries such as Germany, India, Iran, the Netherlands and Poland. There is some initial evidence of this in Latin America. In the case of Chilean students who took a course on entrepreneurship, a greater change in the willingness to undertake occurred among those who reported having a higher degree of self-control over their behavior and a greater problem-solving capacity, and among those who reported a lower level of family income (Soria-Barreto, niga Jara, & Ruiz-Campo, 2016b).

Soria, Honores, and Gutiérrez (2016) applied Ajzen's model to Colombian and Chilean students. The results show that the model explains entrepreneurial intention in Chile, but in the case of Colombia only two of the variables fit the model, with subjective norms being excluded as an explanatory factor. This fact suggests the possible effect of underlying cultural variables.

1.1.3 Entrepreneurship and leadership

The study of the link between leadership and entrepreneurship suggests the recognition of factors that are inherent to individual qualities. In fact, the existence of that an entrepreneurial personality with various dimensions has been asserted. Among the most prominent dimensions are the motivation to achievement, self-efficacy, innovation, optimism, autonomy, stress tolerance, locus of internal control and risk propensity (Suárez-Álvarez & Pedrosa, 2016). The last two are included in this study. As for the study’s perspective, the academic literature on entrepreneurship and leadership has been focused mainly on three aspects: 1) similarities of and differences between the two research fields, 2) leadership as a facilitator of entrepreneurial processes within organizations, and 3) development of leadership skills in the processes of entrepreneur formation.

In the first case of similarities and differences, it should be noted that leadership and entrepreneurship are relatively close fields of study insofar as they encompass common topics such as vision, influence, creativity and planning (Cogliser & Brigham, 2004). Although each field has its own specificities, vision is important in order to lead others to a particular objective, but also to start a new business. Influence in leadership is a central theme, and although it is less typical in entrepreneurship, influence might refer to the ability to get others involved in the formation and development of the company. With regard to leadership, creativity has to do with the forms of interaction with followers, and in entrepreneurship its central position derives from the fact that it becomes a success factor for new businesses.

Planning helps guide both the entrepreneurial and leadership actions, and as a consequence it is a fundamental factor in both fields.

Common to both leadership and entrepreneurship are motivational factors. In this regard, Marulanda, Montoya, and Vélez (2014) point out that Vroom’s motivational theory of expectation/valuation would be an appropriate framework to analyze the performance of collaborators in entrepreneurial processes given that at the undertaking’s beginning people become involved out of expectations for what the entrepreneur will be able to achieve in the future rather than foreseeable compensations at the start of the relationship. This air of uncertainty has led some authors to state that leadership and entrepreneurship also share risk taking, as has been indicated previously by others (Barba-Sánchez & Atienza-Sahuquillo, 2012; Madrigal et al., 2012). In this regard, Kansikas, Laakkonen, Sarpo, and Kontinen (2012) indicate that taking risks is a central dimension of entrepreneurial leadership, which also includes the capacity for innovation, proactivity, identification of opportunities and the development of a broad and shared vision with others.

In summary and based on the studies mentioned above, it can be asserted that leadership and entrepreneurship are closely linked because both involve processes of influence. The entrepreneur must have or develop his leadership ability to get other people involved in the project he is creating.

Morales (2011) maintain that leadership plays an important role in each of the three phases of entrepreneurship: pre-launching, launching, and post-launching. In each phase, the entrepreneur must exert an influence on the various interest groups involved: investors, suppliers, clients, and collaborators. According to these authors, the transformational/transactional and authentic leadership models are the most adequate models for entrepreneurship.

The second case is related to the facilitator role of leadership within organizations. Regarding this topic, the undertaking carried out by organizations, the so-called intra-undertaking, has been linked to leadership and the fostering of innovation processes (Gálvez, 2011). It was found, in particular, that teamwork is the intra-undertaking factor that best fosters process innovation and business management. Mar-
which accepts that people’s behavior is learned first by observation and imitation of others’ actions, and then can be adapted in one direction or another depending on whether events happen as a result of chance, destiny or other factors which they cannot control. This concept has been widely studied in different branches of knowledge, and has become accepted as an important construct in the implementation of inter- and intra-cultural research (Mueller & Thomas, 2001).

It has been found that entrepreneurial motivation is determined by, among other things, the belief of the individual in his ability to exert control in a given social setting. If the interest is sufficiently strong, it is more likely for the person to have the intention of starting a new business (Bandura, 1997; Thurik & Dejardin, 2011). This internal locus of control is one of the psychological aspects most commonly associated with entrepreneurship (Estay, Durrieu, & Akhter, 2013; Mueller & Thomas, 2001) and is one of the socio-psychological factors that best predicts the motivation for enterprise creation (E.Turkina & Thanh, 2015).

In this context, Kirby (2004) considers the internal locus of control to be one of the traits that allow an entrepreneur to control his own emotions. This is related to variables that account for personality, attitude, and behavior in the work environment. Despite this evidence, there are few studies that evaluate the relationship between locus of control and entrepreneurship, whether as intention or action (Schjoedt & Shaver, 2012).

On this basis, the following hypothesis is put forth:

\[ H2: \text{In five Latin American countries, the entrepreneurial intention of business students is positively correlated with the internal locus of control.} \]

1.1.5 Entrepreneurial intention and risk propensity

Risk propensity can be defined as the individual’s tendency and disposition to assume risk (Sánchez, Lanero, & Yurreboso, 2005). It is accepted that entrepreneurs must have a high level of risk propensity, given that they have to face situations of uncertainty and constantly make decisions based on little information and without knowledge of the future (Korunka, Frank, Lueger, & Mugler, 2003; Schwer & Yuclt, 1984). Additionally, Läthje and Franke (2003) found that risk propensity fosters entrepreneurial intention through mediation of a positive behavior towards the undertaking event.

In general, these studies suggest that risk propensity is a fundamental feature of entrepreneurial activity since the latter implies, to a greater or lesser extent, a degree of risk given our ignorance of what will happen in the future.

It has been found that when people perceive a high risk they tend to try to avoid it. We would therefore expect this to have a negative influence on entrepreneurial intention. High risk perception is, normally, a result of the fear of failure and a low tolerance for uncertainty (Arenius & Minniti, 2005). In agreement nán, Santos, and Fernández (2011) found that entrepreneurs have low risk perception and manifest little fear of failure, so their intention to become entrepreneurs is generally higher. Their results show that a large risk perception results in a diminished entrepreneurial intention.

Risk propensity among entrepreneurs has been studied since the ’70s as a factor that may differentiate entrepreneurs from non-entrepreneurs. However, the results of these studies have not been conclusive. Some studies have found that risk propensity among entrepreneurs and non-entrepreneurs is similar (Palich & Bagby, 1995), whereas others have confirmed that risk propensity is a determining variable in entrepreneu-
Entrepreneurial intentions in Latin American students (Research Article) — 50/59

The latter findings have been supported by other studies which have concluded that risk tolerance is positively correlated with entrepreneurial behavior (Douglas & Shephard, 2002) and that this feature plays an important role in entrepreneurial intention (Douglas & Fitzsimmons, 2013; Shane et al., 2003).

In general terms, research results show evidence of a relationship between risk propensity and entrepreneurial intention in university students (Cano, García, & Gea, 2004; Gürol & Atan, 2006; Nishantha, 2009; Olmos, 2011; Uddin & Kanti, 2012). However, this relationship seems to vary according to culture. In a transcultural study Giacomini et al. (2011) compared university students from five countries (USA, China, India, Belgium and Spain) and found that Spanish and Chinese students had a smaller risk perception than those of the USA, India and Belgium. It appears that studies that would allow an examination of the role of culture in the relationship between risk propensity and entrepreneurial intention have not been carried out in Latin America.

Likewise, risk propensity has been linked to self-efficacy, an important component in entrepreneurial intention. (Sánchez et al., 2005), described the effects that risk taking has on the interest of enterprise creation. Their results show that risk directly affects entrepreneurial intention in a chain-like manner. Self-efficacy impacts risk propensity, and this consequently affects entrepreneurial intention through proactive behavior. Zhao, Siebert, and Hills (2005) also found evidence of an association between risk propensity and self-efficacy. However, for them the association is different: risk propensity affects self-efficacy, and this in turn affects entrepreneurial intention. Segal, Borgia, and Schoenfeld (2005) have also tested their model of entrepreneurial intention in which the variables that stand out as determinants of intention are self-efficacy, risk tolerance and perception of desirability. Based on the above, the following hypothesis is put forth:

\[ H_3: \text{In five Latin American countries, the entrepreneurial intention of business students is positively correlated with risk propensity.} \]

1.1.6 Entrepreneurial intention and contextual factors

The Global Entrepreneurship Monitor (GEM) was created in 2014 based on the diversification of research on entrepreneurship during the second decade of the 21st century and the demand for information on entrepreneurial behavior worldwide. This private organization aims to measuring the differences in entrepreneurial activity between participating countries by identifying those factors that in each country influence the activity and generating public policy recommendations oriented towards the promotion of sustainable entrepreneurial activity (GEM, 2014).

The conceptual model of GEM considers the influence that entrepreneurship exerts worldwide and determines the capacity to generate wealth by positing that the emergence of new companies generates innovation, increases competition, satisfies new market niches and contributes to the allocation of resources. GEM’s information is supported by the adult population’s perception of entrepreneurship and their tendency to undertake it, as well as expert opinions on the entrepreneurial environment in each country (GEM, 2014). The link between family and personal history with regards to attitude towards entrepreneurship has been studied empirically. The result of this research is that families with entrepreneurial parents motivate the young to engage in these type of activities as a pattern of development of creative and innovative capacities (López, Montilla, & Briceño, 2007; Medina, Bolívar, & Lemes, 2014). Likewise, the study of families as social systems which foster individual development has led to the understanding that they have a positive effect on the decision to start businesses and to motivate the processes of capital mobilization to promote entrepreneurial continuity in younger generations (Matthews, Schenkel, & Hechavarria, 2009). The Kauffman Foundation (2015) found that 37.8% of the participants in an entrepreneurship study in the United States reported having had family members or close friends as models for entrepreneurship. This finding shows the importance of nearby surroundings on entrepreneurial intention (Wadhwa, Aggarwal, Holly, & Salkever, 2009). Occasionally, the opposite was found in Nigeria, where neither high self-efficacy nor family background have been sufficient support for entrepreneurship (Shittu & Dosunmu, 2014). Again, these results are not conclusive and point to cultural variability in the findings.

On the basis of evidence above, the following hypothesis is put forth:

\[ H_4: \text{In five Latin America countries, the entrepreneurial intention of business students is positively correlated with sociodemographic features such as origin, gender, age, year of formation and family/friends’ entrepreneurial background.} \]

In general terms, the following conceptual model is proposed to explain the entrepreneurial intention of business students in five Latin American countries (Figure 1). It includes the first 3 hypotheses under consideration.

2. Methodology

2.1 Participants

The study saw the voluntary participation of 1527 business students (Table 1) from five Latin America Countries: Chile (229), Colombia (322), Ecuador (257), Perú (443) and Venezuela (276). The participants were students from one highly-ranked university in each country, and the sample size was determined taking into account the population of active students at the time of the study.

2.2 Instruments

The battery of instruments employed in this investigation comprises:

2.2.1 Student Perceptions of Leadership Instrument [SPLII]

Designed by Zula et al. (2010). The scale measures the perception that students have of their own leadership abilities. The questionnaire contains 20 items to be answered in a Likert-like scale of four options, ranging from “strongly agree” to
“strongly disagree” according to the extent to which the subject agrees with each statement. The general scale has shown to be highly reliable (Cronbach’s alpha of 0.82).

2.2.2 Entrepreneurial intention
This variable was measured using three scales: personal attitude, subjective norms and perceived control, which in Ajzen’s model would indicate entrepreneurial intention. With this aim the following instruments were applied:

a) Individual Entrepreneurship Intent Scale [IEIS]: this scale, developed by (Thompson, 2009), was used to measure personal attitude towards entrepreneurship (first variable in the model). The questionnaire comprises 10 items which are answered in a Lickert-like scale of six options ranging from “somewhat true” to “very true”. The instrument has shown a high degree of internal reliability (Cronbach’s alpha of 0.89) and validity (convergent and criterion). The instrument was translated and backward translated, with language adaptations for application in each of the Latin American countries in the study, getting an acceptable Cronbach’s alpha of 0.71.

b) Social Attitude to Entrepreneurship [SAE]: this instrument, developed by Henley, Cock, Latreille, Dawson, and Humphreys (2008) was used to measure subjective norms towards entrepreneurship (second variable in the model). The instrument contains 9 items to be answered in a Lickert-like scale of four options, ranging from “strongly disagree” to “strongly agree”. The scale was translated and backward translated into Spanish, with language adaptations for application in each of the Latin American countries. The scale showed an acceptable degree of reliability (Cronbach’s alpha of 0.67)

c) New General Self-Efficacy Scale: this instrument, developed by Chen, Gully, and Eden (2001) is used to evaluate perceived control (third variable in the model), which is comparable to self-efficacy given their conceptual similarity (nán et al., 2013). The questionnaire contains 8 items in a Likert-like scale ranging from “strongly disagree” to “strongly agree”. The scale has shown a high degree of reliability (Cronbach’s alpha of 0.91). The scale was translated and backward-translated into Spanish, with language adaptations for application in each of the Latin American countries involved.

2.2.3 Attitude to risk
The questionnaire Attitude to Risk was employed. It is used to evaluate the participants’ reaction toward seven hypothetical situations, each with its own answer options. The first 5 questions provide information about financial self-efficacy, that is, the confidence level that the individual has in his ability to manage personal finances. Questions 3, 4 and 7 ask about risk attitude in employees and in financial scenarios (Dawson & Henley, 2015). The scale was translated and backward-translated into Spanish, with language adaptations for its application in different Latin American countries.

2.2.4 Locus of control
In order to estimate the perception of control, we used the Locus of Control Scale, developed by ?. It contains 29 items, of which 23 are used to identify the tendency towards an internal
or external control; the remaining 6 are control items. Previous psychometric analyses by Brenlla and Vázquez (2010) report an acceptable degree of reliability (Cronbach’s alpha of 0.65). Ordinarily a higher score would represent a greater degree of external control.

However, in this study we inverted the scale so that a greater score means internal control.

2.2.5 Questionnaire on sociodemographic variables and family and social entrepreneurial background

A questionnaire was designed to ascertain the participants’ demographic characteristics, including country of origin, gender, age, and completed years of education. Information was also gathered on whether family members or close friends had had entrepreneurial experience.

With the exception of Rotter’s scale, the remaining instruments were doubly translated and had language adaptation for the five countries. Estimations of internal consistency (Cronbach’s alpha) are presented in Table 2. It can be seen that the majority are close to or above 0.70, with the exception of Rotter’s scale and risk propensity. In the first case, the results may be a result of the item format in this instrument, which often affects Cronbach’s alpha estimation. According to Aiken (2003), items of forced selection often show a smaller index. In the second case, the diversity of formats in the attitude toward risk scale could also be responsible for the moderate alpha value, although we cannot rule out a Latin American cultural trait of risk avoidance. This would explain the moderate values in this variable, as shown below.

2.3 Procedure

The study involved five samples of university business students, stratified by year of study, from first to fourth, coming from Chile, Colombia, Ecuador, Perú and Venezuela, during the second semester of 2014. In each case, the battery of instruments was applied in a collective, voluntary and anonymous manner. They were not given any type of payment for completing the questionnaire. The sole condition for participation in the study was to be an undergraduate student and the willingness to participate, with the ability to withdraw at any time of their choosing. The analysis of the data was carried out using the statistical package SPSS 22 together with the AMOS module for the treatment of structural equations.

3. Results

A total of 1527 business students from five Latin American countries, with a mean age of 20.58 years (SD 3.05 years) took part in the study. The questionnaires were completely filled out by 1493 students. The size of each sample was proportional to the representation of each of the management schools in which the research took place. The final distribution was as follows: Chile 223 (14.9%), Colombia 315 (21.1%), Ecuador 254 (17%), Perú 425 (28.5%) and Venezuela 276 (18.5%).

Greater levels of female participation were noted. In total, there were 893 females (60%) and 600 males (40%). This 60% female participation reaches a maximum of 70% in the Venezuelan sample, and decreases to a minimum of 54% in the Peruvian sample. As for Chile and Ecuador, the female participation was 62% while the Colombian simple had 56%. Figure 2 shows the distribution by gender in each of the samples.

As can be seen in Figure 3, students from each of the four years of formation took part in the study. There is similarity in the distribution by year of formation in each of the participating schools. It is worth noting that the overall sample includes balanced participation by formation level.

After an examination of the entrepreneurial background in the family and social network of the participants, it was found that the father and relatives are the main sources of entrepreneurship that were reported. They are followed, in order, by whether both parents are entrepreneurs and, with a lower mark, if only the mother or siblings are entrepreneurs. Only a small percentage indicated not knowing any entrepreneurs in their family or social network. It is interesting to note that there is an important difference in the percentages of entrepreneurial mothers and fathers, the proportion of the latter being three times higher. When examining the results by country, there is a considerable presence of entrepreneurs in the family or social network of the participants from Colombia and Ecuador, and much less so in the Chilean sample (Table 3).

3.1 Hypotheses testing

After the descriptive phase, the proposed hypotheses were tested on the basis of a structural equations model. Due to the nature of the data, the best model for analysis was found to be free asymptotic distribution (Browne, 1984). The results from the model fitting are slightly outside of the generally accepted criteria ($GFI = 0.83; RMSEA = 0.13$), which must be above 0.95 for the former and below 0.08 for the latter (Byrne, 2009).

As regarding the hypotheses, we found significant standardized regression weights ($p <= .000$) between entrepreneurial intention and leadership abilities (0.50), the locus of internal control (0.20) and risk propensity (0.38). These results force us to reject the null hypotheses of the absence of association between the variable criteria and entrepreneurial intention in business students in five Latin American countries. Specifically, it can be affirmed that in the samples under consideration, leadership, locus of control and risk propensity are correlated with entrepreneurial intention despite cultural differences that might exist between the countries under study. That is, hypotheses 1, 2 and 3 put forth in this study are accepted, given the evidence. As a whole, leadership abilities, locus of control and risk propensity explain 44% of the variance in the entrepreneurial intention (Figure 4).

Additionally, since though it is not a goal of this study, there is evidence in favor of the leadership model proposed by Zula et al. (2010) and of the model of entrepreneurial intention on the basis of Ajzen (1991) Theory of Reasoned Action. In both cases there are significant regression weights, as shown in Figure 4.
Table 2. Reliability of the questionnaires used.

| Variable                             | Questionnaire                          | Cronbach’s alpha | Number of Items |
|--------------------------------------|----------------------------------------|------------------|-----------------|
| Entrepreneurial Intentions           | Individual Entrepreneurial Intent Scale| .762             | 10              |
|                                       | Social Attitude Towards Entrepreneurship| .621             | 9               |
| Subjective Norms                     | New General Self-Efficacy Scale        | .936             | 8               |
| Perceived Behavioral Control         | Student Perceptions of Leadership Instrument| .842             | 20              |
| Leadership Skills                    | Risk Propensity Scale                  | .524             | 7               |
| Internal Locus of Control            | Rotter’s Locus of Control Scale        | .569             | 23              |

Figure 2. Distribution of participants in each country by sex.

On another note, on the basis of the standardized regression weights presented in Figure 4, a variable of entrepreneurial intention was derived. This derived variable was used in the analysis of variance with the goal of identifying variables with some influence in such an intention. It was found that the sample origin (\(F = 17.39, \text{sig.} 0.000\)) and the academic year (\(F = 3.08, \text{sig.} 0.027\)) are variables with which entrepreneurial intention is associated both independently and in combination (\(F = 4.36, \text{sig.} 0.000\)). As shown in Table 4, with regard to origin, Colombian and Venezuelan samples show the greatest means, followed by those from Ecuador and Chile. The Peruvian sample has the smallest mean in terms of entrepreneurial intention.

For their part, juniors and seniors show greater entrepreneurial intention than freshmen and sophomores without any significant differences by gender. (Figure 5).

This tendency is consistent across different samples, even though each one has its own interesting features (Table 4). In the Chilean case, one can observe that students in their second and third year of study report greater intention in comparison with their colleagues in the first and last year. It must be noted that in that sample seniors have the lowest entrepreneurial intention. In the case of Colombia, the fluctuations as a function of the class year are less apparent, even though the general tendency to show greater intention in the final academic years is maintained. In the case of the samples from Ecuador and Venezuela, the entrepreneurial intention has a clear tendency to increase with academic year albeit with a difference in the last year: in Ecuador, seniors have the greatest entrepreneurial intention, whereas the Venezuelan sample shows a decrease in the last academic year. Additionally, the Peruvian sample differs significantly from the rest: freshmen show greater intention than sophomores and juniors, but are overcome by seniors. Intention manifests a bathtub behavior in that in the middle academic years entrepreneurial intention is lower than at the beginning and the end of the academic years.

Lastly, we raised the issue of whether the presence of entrepreneurs in the family or social network of the participants was positively associated with entrepreneurial intention (Figure 6). This effect was observed when both parents and
sibling were entrepreneurs, and was present even when the entrepreneur was not a core family member or a close friend. Understandably, those participants without entrepreneurs in their family or social network show a weaker entrepreneurial intention. It is interesting to note that the effect of having parents as entrepreneurs on entrepreneurial intention is stronger when both are entrepreneurs. In the latter case, the difference in entrepreneurial intention with those who reported that neither parent was an entrepreneur was not significant.

On the basis of the findings above, hypothesis H4 can be accepted, insofar as entrepreneurial intention is positively correlated with demographic characteristics such as origin, formation level and family and social background in entrepreneurship.

### 4. Discussion

In Latin American business students, leadership turned out to be the variable most strongly associated with entrepreneurial intention. This fact acquires special relevance when one considers that the leadership model used in this study was focused on abilities, which by definition are amenable to development. Based on this understanding, business schools and management departments in general have a great responsibility in the formation of new entrepreneurs. In particular, when it comes to boosting entrepreneurship, the formation in intra- and interpersonal relations as well task-related, cognitive and communication abilities must be a central part of formation processes in these management areas. Bagheri and Lope (2013) point out, entrepreneurship education fosters the development of leadership abilities since it nurtures personal (cognitive and interpersonal abilities) and functional (performance-oriented) competencies, and stimulates proactivity as well innovation and risk-taking capacity.

The results of this study also show a positive correlation between risk propensity and entrepreneurial intention, as has been documented by various authors (Douglas & Fitzsimmons, 2013; Douglas & Shephard, 2002; nán, Urbano, & Guerrero, 2011; Popescu et al., 2016; Shane et al., 2003, to cite a few). That is to say, students with a disposition to take risks are, in turn, those who show a greater entrepreneurial intention. These conclusions are in agreement with those from other studies on university students, e.g., the work of (Cano et al., 2004; Gürol & Atsan, 2006; Nishantha, 2009; Olmos, 2011; Uddin & Kanti, 2012). At the Latin American level, and for the five countries under study, it is confirmed that the young university students with the greatest propensity to start their
own business are those with greater risk tolerance, something usually related to this stage in life. The above, combined with entrepreneurship education, fosters in youth the option to become their own boss rather than searching for employment.

The internal locus of control is a variable which is usually included in models of entrepreneurial intention. In this sense, the Latin American young who report having the inner capacity to execute and take charge of their actions are those who identify themselves as having the greatest motivation to create their own business in the future. The capacity to take charge and assume responsibility for one’s own actions is highly valued in the entrepreneurial process, since it is believed that goals are reached by personal action and not by chance or sheer luck. This finding coincides with those of other studies on the ability to control emotions (Kirby, 2004; Schjoedt & Shaver, 2012).

Within the analysis of sociodemographic variables, it is possible to consider the impact of those networks closest to the students and their effect on entrepreneurial intention. As previously mentioned, the students with greater entrepreneurial intention are those whose parents, sibling(s) or close friends own a business. Accordingly, role theory becomes relevant for Latin American students. Having close experiences associated with entrepreneurship impacts this type of behavior positively. It is interesting to observe that this effect is boosted when both parents manage their own businesses. A potential future research area would be exploring why the entrepreneurial experience of only one parent is not enough of a booster for entrepreneurial intention. Most likely, when only one is a business person, the experience becomes more isolated and difficult, the possibility of failure is more pronounced, and as a result the students perceive the difficulties of running a business with greater clarity. The level of entrepreneurial intention in these students is similar to that of those who have never closely observed start of a new business.

The results show that Venezuelan youth have the greatest entrepreneurial intention, followed by students from Colombia, Ecuador and finally Peru. GEM has collected data on entrepreneurial intention throughout all of Latin America with the exception of Venezuela. According to GEM’s measure of entrepreneurial intention, Colombia ranks first, followed by Chile, Ecuador and Peru. The levels are ten percentage points below the results shown by this study of business students.
It is interesting to note the ranking of Colombia as leader in entrepreneurial intention for both GEM and for the students who participated in this study. Unfortunately, Venezuela has not participated in GEM’s surveys since 2011 and it is therefore impossible to ascertain the current level of entrepreneurial intention of the Venezuelan population. Given the country’s current economic situation and the difficulties of finding a job, there is probably a higher motivation to create new businesses or seek self-employment. This situation, given economic contraction and the reductions in the demand for labor in the private and public sectors, might explain why the Venezuelan youth show interest in being independent and view the creation of their own business as a good career option. This argument is supported by the fact that Venezuelan seniors have the highest entrepreneurial intention in all the countries under study. According to the data, they would be the most enthusiastic and inclined to enter into an enterprise upon completion of their studies.

As regards gender, our results do not match those in the GEM report because the difference in entrepreneurial intention between males and females was not found to be statistically significant. According to their report, out of every three undertakings, only one is led by a woman. There is ample room for further investigation of this topic, since it seems that the difference is in the fact of undertaking rather than in the intention, as this seems to be similar between men and women. In this respect, several studies have concluded that it is men who implement the entrepreneurial intention and start their own businesses (Delmar & Holmquist, 2004; Winn, 2005). Among the reasons given to explain this difference is the fact that women might have less confidence in their management abilities (Wilson, Kickul, & Marlino, 2007). Also, women perceive that the environment does not favor them and that they have less control over their entrepreneurial activity (BarNir, Watson, & Hutchins, 2011).

Various studies have shown that women choose to become entrepreneurs less often because they usually perceive a smaller locus of internal control and smaller self-efficacy (Maes, Leroy, & Sels, 2014). In the same way, some studies have found that women are more prone to attribute their success to the external locus rather than to their own ability or effort (Verheul, Thurik, Grilo, & Zwan, 2012). Nonetheless, more studies are needed to reach conclusive results. This line of research deserves a closer look.

In conclusion, the entrepreneurial intention in young Latin American business students is positively correlated with their leadership skills, their risk propensity and their locus of internal control. In addition, family background turned out to
be one of the most influential sociodemographic variables influencing their intention. This applied equally to men and women, which does not correspond to the results of previous studies that showed a greater entrepreneurial intention in men. This dynamic is worth studying in more depth in Latin America. In order to have a point of comparison, it would also be worthwhile to carry out similar studies in other disciplines and countries.

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