

Exploring entrepreneurial intentions in Latin American university students

Explorando las intenciones emprendedoras en estudiantes universitarios Latinoamericanos

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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.

Resumen

El propósito de este estudio fue determinar si la intención de emprendimiento, basada en el modelo de comportamiento planeado de Ajzen (1991), puede predecirse a partir de la propensión al riesgo, el locus de control interno y las habilidades de liderazgo. Se aplicaron seis instrumentos estandarizados y confiables a 1493 estudiantes latinoamericanos de áreas empresariales, utilizando un muestreo no probabilístico por cuota según año de formación en cada universidad. A través de ecuaciones estructurales se validó el modelo de investigación propuesto y se estimó y analizó la intención en relación con las variables sociodemográficas. De acuerdo con los resultados, la intención de emprendimiento puede predecirse significativamente con las variables psicológicas estudiadas y contrario a lo hallado en otros estudios no se encontraron diferencias por género. Se discuten estos hallazgos.

Keywords

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

Palabras Clave

Intención de emprendimiento; habilidades de liderazgo; locus de control; propensión al riesgo; estudiantes latinoamericanos.

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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 (Bécharde & 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 grabs 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 (Díaz, Pulido, & Mogollón, 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, [Morian, Gorgievski, Laguna, Stephan, and Zarafshani \(2012\)](#) 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-](#)

tos (2007) studied organizational culture in family businesses and found it to be associated with higher degrees of affective compromise, continuity and normative behavior. In his view, such a relationship stems from appropriate transformational leadership and can be explained by organizational learning, which results in an increase in the level of identification, involvement and loyalty towards the organization. As to the role of transformational leadership, Felício, Gonçalves, and da Conceição Gonçalves (2013) found that in the area of social entrepreneurship this type of leadership is a strong mediator. Specifically, they found that organizational performance, measured in service quality, user satisfaction and organizational success, is strongly linked to the type of leadership.

The third aspect is related to the development of leadership skills in the processes of entrepreneur formation. Recent research has found a moderate relationship between entrepreneurship and leadership that is strengthened when perceived auto-efficacy is included (Chan et al., 2012). On the other hand, Bagheri and Lope (2013) maintain that entrepreneurship programs necessarily foster the development of leadership skills insofar as both of them promote competencies both personal (cognitive and interpersonal abilities) and functional (performance oriented). They also serve to stimulate proactivity and the capacity for innovation and risk taking. This relationship between leadership and entrepreneurship has led to the inclusion of leadership skills development in entrepreneurship education in order to stimulate the interactive processes involved in entrepreneurial formation. Due to this relationship, the leadership model included in this study is that of abilities-based leadership.

Based on the above, the following hypothesis is put forth:

H1: Latin American countries, the entrepreneurial intention of business students is positively correlated with their leadership abilities.

1.1.4 Entrepreneurial intention and locus of control

As previously stated, models of entrepreneurial intention, albeit tacitly, involve a locus of internal control. The locus of internal control concept was first introduced by Rotter and Mulry (1965), and arose in the theory of social learning, which accepts that people's behavior is learned first by observation and imitation of others people's actions, and then can be adapted in one direction or another depending on whether they are rewarded or punished for their actions. The locus of control is defined as the degree to which people believe they have control over the outcome of events in their lives and those that have an influence on it. ? describes two types of loci of control: internal and external. When control is internal, people believe that events are the result of their capacity and behavior, and that they can control their own destiny. By contrast, when the locus of control is external, people believe that 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: 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, & Yurrebaso, 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 & Yucelt, 1984). Additionally, Lüthje 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 entrepreneur-

rial intention (Popescu, Bostan, Robu, & Maxim, 2016). 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 & Atsan, 2006; Nishantha, 2009; Olmos, 2011; Uddin & Kanti, 2012). However, this relationship seems to vary according to culture. In a transcultural study Giacomin 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 y 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:

H3: 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 popu-

lation'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, & Hechavarría, 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). 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:

H4: 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 [SPLI]

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

Figure 1. Conceptual model and hypotheses proposed in this study.

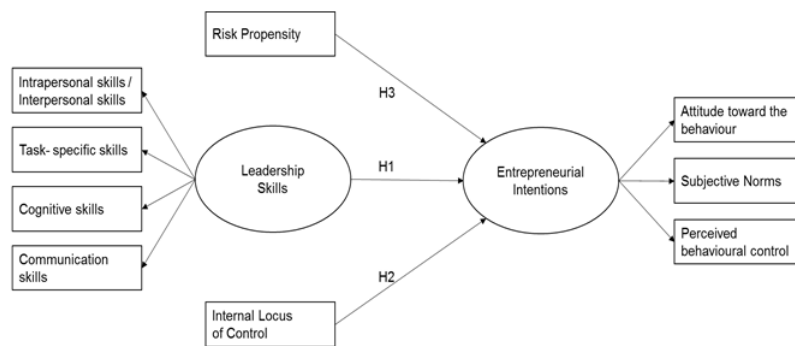


Table 1. Gender frequency and age by country of origin.

	Gender			Age			
	Men	Women	Total	Mean	SD	Min	Max
Chile	88	141	229	20.40	2.01	18	27
Colombia	143	179	322	19.87	1.57	16	27
Ecuador	99	158	257	20.72	2.79	17	37
Peru	200	243	443	19.58	2.22	16	31
Venezuela	83	193	276	22.64	4.61	17	41
Total	613	914	1527	20.56	3.03	16	41

“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 Lickert-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 sample 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).

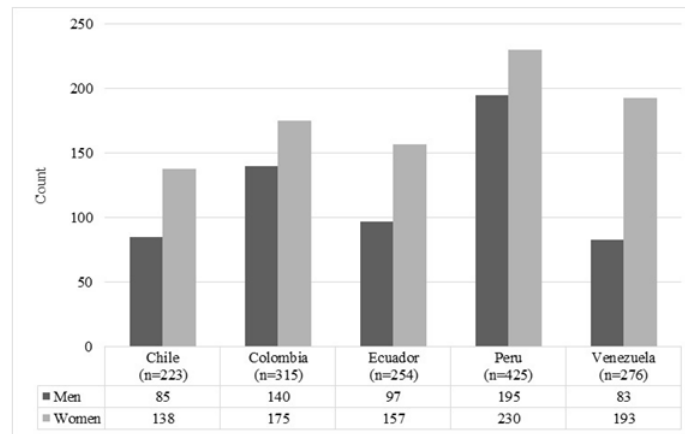
As regarding the hypotheses, we found significant standardized regression weights ($p \leq .000$) between entrepreneurial intention and leadership abilities (0.50), the locus of internal control (0.20) and risk propensity (0.38). These results force us to reject the null hypotheses of the absence of 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	Attitude Toward Behavior	Individual Entrepreneurial Intent Scale	.762	10
	Subjective Norms	Social Attitude Towards Entrepreneurship	.621	9
	Perceived Behavioral Control	New General Self-Efficacy Scale	.936	8
	Leadership Skills	Student Perceptions of Leadership Instrument	.842	20
	Risk Propensity	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 ($F = 17.39, sig. 0.000$) and the academic year ($F = 3.08, sig. 0.027$) are variables with which entrepreneurial intention is associated both independently and in combination ($F = 4.36, sig. 0.000$). 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

Figure 3. Frequency of academic class by country.

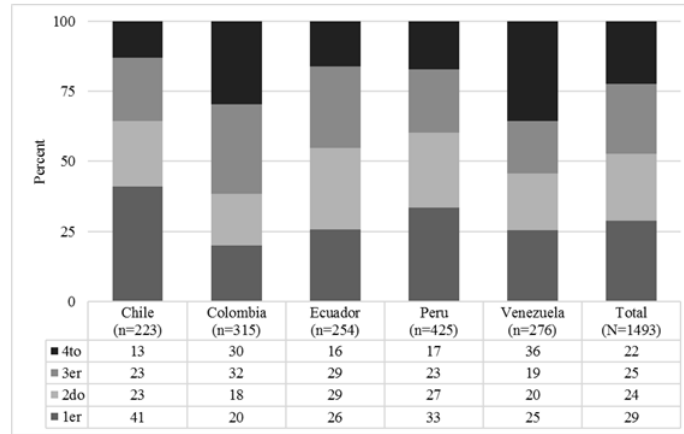
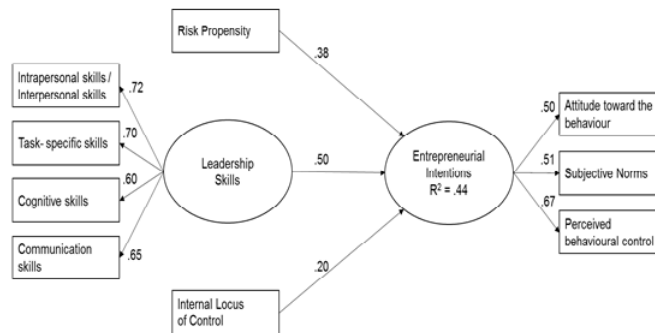


Figure 4. Standardized Regression Weights into the Structural Equation Model with Asymptotically Distribution-free (GFI = .83 RMSEA = .13) in a sample of 1493 business students of five Latin-American countries.



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

Table 3. Percentage of participants per country with a background of entrepreneurship in their family and social network.

<i>Entrepreneurial background</i>	Chile (n = 223)	Colombia (n = 315)	Ecuador (n = 254)	Peru (n = 425)	Venezuela (n = 276)	Total (n = 1493)
Father business owner	17	30	31	24	16	24
Mother business owner	6	10	8	8	5	8
Both parents business owner	6	17	20	20	9	15
Neither parent a business owner	27	12	14	16	16	16
Brother or sister business owner	4	2	6	3	4	4
Relatives business owner	26	33	28	20	21	25
Close friend business owner	9	19	21	11	20	16
None that he/she knows	21	8	5	8	9	9

Table 4. Description of entrepreneurial Intentions by years in the program and country.

Year	Descriptive	Chile	Colombia	Ecuador	Peru	Venezuela	Total
1st	Mean	64.40	68.09	61.04	64.50	69.79	65.35
	SD	13.42	12.60	16.81	13.83	9.72	13.71
2nd	Mean	68.61	69.01	68.93	57.26	70.53	65.39
	SD	8.68	10.34	11.67	17.01	11.71	14.22
3rd	Mean	68.57	68.49	68.53	63.58	72.83	67.85
	SD	10.50	11.84	12.58	16.62	9.63	13.23
4th	Mean	60.78	69.84	69.73	66.73	70.59	68.58
	SD	16.86	11.96	13.25	12.92	9.27	12.39
Total	Mean	65.85	68.91	66.93	62.73	70.80	66.70
	SD	12.61	11.74	14.01	15.59	9.99	13.50

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, Chile and finally Perú. 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 Perú. The levels are ten percentage points below the results shown by this study of business students.

Figure 5. Entrepreneurial Intentions (mean) by academic class and gender.

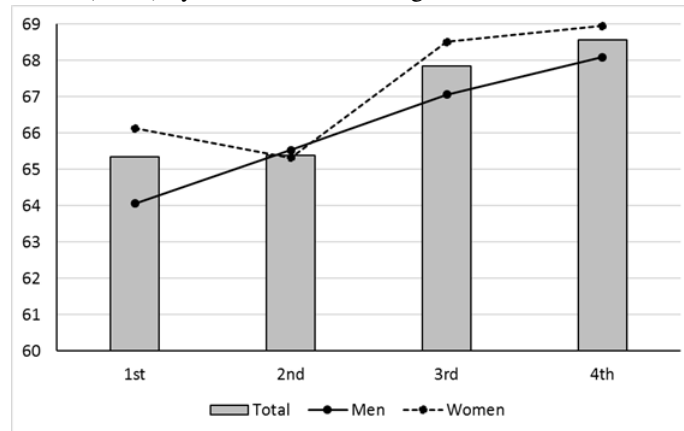
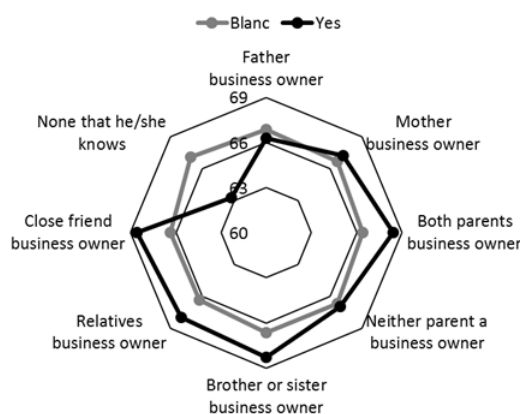


Figure 6. Entrepreneurial Intentions (mean) by entrepreneurial background.



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.

References

- Aiken, L. (2003). *Test psicológicos y evaluación* (L. Gaona, Ed.). México, D.F.: Prentice Hall.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small Business Economics*, 24(3), 233-247.
- Bagheri, A., & Lope, Z. (2013). Role of university entrepreneurship programs in developing students' entrepreneurial leadership competencies: Perspectives from Malaysian undergraduate students. *Journal of Education for Business*, 88(1), 51-61.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2012). Entrepreneurial behavior: Impact of motivation factors on decision to create a new venture. *Investigaciones Europeas de Dirección y Economía de la Empresa*, 18, 132-138.
- BarNir, A., Watson, W., & Hutchins, H. (2011). Mediation and moderated mediation in the relationship among role models, self-efficacy, entrepreneurial career intention and gender. *Journal of Applied Social Psychology*, 41(2), 270-297.
- Béchar, J. P., & Grégoire, D. (2005). Entrepreneurship education research revisited: The case of higher education. *Academy of Management Learning & Education*, 4(1), 22-43.
- Brenlla, M., & Vázquez, N. (2010). *Análisis psicométrico de la adaptación argentina de la escala de locus de control de rotter. universidad católica* (Working Paper). Universidad Católica Argentina. Retrieved from http://www.uca.edu.ar/uca/common/grupo68/files/Documento_de_Trabajo_Locus_de_Control1.pdf
- Browne, M. W. (1984). Asymptotically distribution-free methods for the analysis of covariance structures. *British Journal of Mathematical and Statistical Psychology*, 37, 62-83.
- Bygrave, W., & Hofer, C. (1991). Theorizing about entrepreneurship. *Entrepreneurship Theory and Practice*, 16(2), 13-22.
- Byrne, B. (2009). *Structural equation modeling with amos: Basic concepts, applications, and programming, second edition*. New York, NY: Taylor & Francis.
- Cano, C. J., García, J., & Gea, A. B. (2004). El emprendedor innovador y la creación de empresas de i+d+i. In S. Roig, D. Ribeiro, R. Torcal, A. D. la Torre, & E. Cerver (Eds.), (p. 143-160). Servei de Publicacions Universitat de Valencia.
- Carree, M., & Thurik, A. R. (2003). Handbook of entrepreneurship research. In (pp. 437-471). Springer.
- Chabaud, D., & Ngijol, J. (2004, 12). La reconnaissance des opportunités de marché par l'entrepreneur: faut-il changer de perspective? In *Conférence aims*.
- Chan, K. Y., Ho, M. R., Chernyshenko, O. S., Bedford, O., Uy, M. A., Gomulya, D., & Phan, W. M. J. (2012). Entrepreneurship, professionalism, leadership: A framework and measure for understanding boundaryless careers. *Journal of Vocational Behavior*, 81(73-88).
- Chen, G., Gully, S., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, 4, 62-83.
- Cogliser, C., & Brigham, K. (2004). The intersection of leadership and entrepreneurship: Mutual lessons to be learned. *The Leadership Quarterly*, 15(6), 771-799.
- Dawson, C., & Henley, A. (2015). Gender, risk, and venture creation intentions. *Journal of Small Business Management*, 53(2), 501-515.
- Delmar, F., & Holmquist, C. (2004). *Women entrepreneurship: Issues and policies*. Istanbul, Turkey: OECD.
- Díaz, J., Pulido, D., & Mogollón, R. (2006). Hacia un modelo de creación de empresas. *Boletín de Estudios Económicos*.
- Douglas, E. J., & Fitzsimmons, J. R. (2013). Intrapreneurial intentions versus entrepreneurial intentions: distinct constructs with different antecedents. *Small Business Economics*, 41, 115-132.
- Douglas, E. J., & Shephard, D. A. (2002). Self-employment as a career choice: Attitudes, entrepreneurial intentions and utility maximization. *Entrepreneurial Theory and Practice*, 19, 67-79.
- Eckhardt, J., & Shane, S. (2003). Opportunities and entrepreneurship. *Journal of Management*, 29(3), 333-349.
- Estay, C., Durrieu, F., & Akhter, M. (2013). Entrepreneurship: From motivation to start-up. *Journal of International Entrepreneurship*, 11(3), 243-267.
- E.Turkina, & Thanh, M. (2015). Socio-psychological determinants of opportunity entrepreneurship. international entrepreneurship. *Management Journal*, 11, 213-238.
- Felício, J. A., Gonçalves, H. M., & da Conceição Gonçalves, V. (2013). Social value and organizational performance in non-profit social organizations: Social entrepreneurship, leadership, and socioeconomic context effects. *Journal of Business Research*, 66(10), 2139-2146. doi: 10.1016/j.jbusres.2013.02.040
- Gálvez, E. (2011). Cultura intraempresarial e innovación: un estudio empírico en las mipyme turísticas colombianas.

- bianas. *Cuadernos de Administración*, 27(2), 103-114.
- GEM, G. E. M. (2014). *Informe ejecutivo*. Centro de Emprendedores IESA. Caracas.
- Giacomin, O., Janssen, F., Pruett, M., Shinnar, R., Llopis, F., & Toney, B. (2011). Entrepreneurial intentions, motivations and barriers: Differences among american, asian and european students. *International Entrepreneurial Management*, 7, 219-238.
- González, F. (2004). *Incidencia del marco institucional en la capacidad emprendedora de los jóvenes empresarios de andalucía* (Unpublished doctoral dissertation). Universidad de Sevilla, Sevilla, España.
- Günther, J., & Wagner, K. (2007). Getting out of the ivory tower-new perspectives on the entrepreneurial university. *Discussion Papers on Entrepreneurship and Innovation*, 2(4), 400-417.
- Gürol, Y., & Atsan, N. (2006). Entrepreneurial characteristics amongst university students: some insights for entrepreneurship education and training in turkey. *Education and Training*, 48, 25-38.
- Henley, A., Cock, C. D., Latreille, P., Dawson, C., & Humphreys, I. (2008). *Entrepreneurial aspirations and activity amongst students: A comparative study for wales*. Final Report to the Welsh Assembly Government. Retrieved from WelshAssembly.<http://opus.bath.ac.uk/39328/>
- Kansikas, J., Laakkonen, A., Sarpo, V., & Kontinen, T. (2012). Entrepreneurial leadership and familiness as resources for strategic entrepreneurship. *International Journal of Entrepreneurial Behaviour & Research*, 18(2), 141-158.
- Kirby, D. (2004). Entrepreneurship education: can business schools meet the challenge? *Education + Training*, 46(8/9), 520-519.
- Korunka, C., Frank, H., Lueger, M., & Mugler, J. (2003). The entrepreneurial personality in the context of resources, environment, and the start up process—a configurational approach. *Entrepreneurship Theory and Practice*, 28, 23-42.
- Krueger, N. F., & Brazeal, D. V. (1994). Entrepreneurial potential and potential entrepreneurs. *entrepreneurship. Theory and Practice*, 18, 91-104.
- Krueger, N. F., Reilly, M. D. J., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15, 411-432.
- López, W., Montilla, M., & Briceño, M. (2007). Rasgos determinantes de las aptitudes emprendedores que forman el perfil de los estudiantes de contaduría pública del núcleo universitario rafael rangel. *Actualidad Contable FACES*, 10(14), 80-93.
- Lüthje, C., & Franke, N. (2003). The “making” of an entrepreneur: Testing a model of entrepreneurial intent among engineering students at mit. *R&D Management Review*, 33(2), 135-147.
- Madrigal, B., Arechavala, R., & Madrigal, R. (2012). El emprendedor y su capital social: caso el clúster del software en jalisco. *Revista Internacional Administración & Finanzas*, 5(4), 107-120.
- Maes, J., Leroy, H., & Sels, L. (2014). Gender differences in entrepreneurial intentions: A tpb multi-group analysis at factor and indicator level. *European Management Journal*, 32(5), 784-794. doi: 10.1016/j.emj.2014.01.001
- Martos, V. (2007). El compromiso en la empresa familiar bajo una óptica de liderazgo transformacional y aprendizaje organizacional. *Investigaciones Europeas de Dirección y Economía en la Empresa*, 13(3), 217-234.
- Marulanda, F., Montoya, I., & Vélez, J. (2014). Teorías motivacionales en el estudio del emprendimiento. *Pensamiento y Gestión*, 36, 204-236.
- Matthews, C., Schenkel, M., & Hechavarria, D. (2009). New firm creation in the united states. In R. Curtin & P. Reynolds (Eds.), (p. 51-67). New York, NY: Springer. doi: 10.1007/978-0-387-09523-3_4
- Medina, P., Bolívar, A., & Lemes, A. (2014). Un paso más en la investigación de la intención emprendedora del estudiante universitario guesss. *Revista de Estudios Empresariales*, 2, 63-80.
- Morales, F. M. J. (2011). *Liderazgo: Hecho y ficción*. Madrid, España: Alianza Editorial.
- Moriano, J. A., Gorgievski, M., Laguna, M., Stephan, U., & Zarafshani, K. (2012). A cross-cultural approach to understanding entrepreneurial intention. *Journal of Career Development*, 39(2), 162-185.
- Mueller, S., & Thomas, A. (2001). Culture and entrepreneurial potential: a nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1), 51-75.
- nán, F. L., Nabi, G., & Krueger, N. (2013). British and spanish entrepreneurial intentions: A comparative study. *Revista de Economía Mundial*, 33, 73-103.
- nán, F. L., Santos, F., & Fernández, J. (2011). The influence of perceptions on potencial entrepreneurs. *International Entrepreneurship Management*, 7, 373-390.
- nán, F. L., Urbano, D., & Guerrero, M. (2011). Regional variations in entrepreneurial cognitions: Start-up intentions of university students in spain. *Entrepreneurship and Regional*, 23(3-4), 187-215.
- Nascimento, B., Gonçalves, J., Honório, A., & Bastos, F. (2010). Empreendedorismo e internacionalização: um caso no setor de eventos de gest ao. *Revista Ibero Americana de Estratègia*, 9(1), 4-31.
- Nishantha, B. (2009, December). Influence of personality traits and socio-demographic background of undergraduate students on motivations for entrepreneurial career: the case of sri lanka. In *Euro asia management studies association (eamsa)*. Kyoto, Japan.
- Olmos, R. (2011). Análisis de la intención emprendedora en estudiantes universitarios a través de los rasgos de personalidad. *Multiciencias*, 11(1), 65-75.

- Palich, L., & Bagby, D. (1995). Using cognitive theory to explain entrepreneurial risk-taking: Challenging conventional wisdom. *Journal of Business Venturing*, *10*, 425-438.
- Popescu, C. C., Bostan, I., Robu, I. B., & Maxim, A. (2016). An analysis of the determinants of entrepreneurial intentions among students: A romanian case study. *Sustainability*, *8*(8), 771. doi: 10.3390/su8080771
- Rodríguez, C., & Jiménez, M. (2005). Emprenderismo, acción gubernamental y academia. revisión de la literatura. *Innovar*, *26*, 73-89.
- Rotter, J. B., & Mulry, R. C. (1965). Internal versus external control of reinforcement and decision time. *Journal of personality and social psychology*, *2*(4), 598.
- Sánchez, J. C., Lanero, A., & Yurrebaso, A. (2005). Variables determinantes de la intención emprendedora en el contexto universitario. *Revista de Psicología Aplicada*, *15*(1), 37-60.
- Schjoedt, L., & Shaver, K. (2012). Development and validation of a locus of control scale for the entrepreneurship domain. *Small Business Economics*, *39*, 713-726.
- Schwer, R. K., & Yucelt, U. (1984). A study of risk-taking propensities among small business entrepreneurs and managers: an empirical evaluation. *American Journal of Small Business*, *7*, 33-40.
- Segal, G., Borgia, D., & Schoenfeld, J. (2005). The motivation to become an entrepreneur. *International Journal of Entrepreneurship Behavior and Research*, *11*(1), 42-57.
- Shane, S., Locke, E., & Collins, C. J. (2003). Entrepreneurial motivation. *2003*, *25*(1), 217-226.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, *25*, 217-226.
- Shapiro, A., & Sokol, L. (1982). The encyclopedia of entrepreneurship. In C. Kent, D. Sexton, & K. H. Vesper (Eds.), (p. 72-90). Englewood Cliffs, NJ: Prentice-Hall.
- Shaver, K., & Scott, L. (1991). Person, process, choice: the psychology of new venture creation. *Entrepreneurship Theory & Practice*, *16*(2), 23-45.
- Shittu, A., & Dosunmu, Z. (2014). Family background and entrepreneurial intention of fresh graduates in nigeria. *Journal of Poverty, Investment and Development*, *5*, 78-90.
- Soria, K., Honores, G., & Gutiérrez, J. (2016). Gender and social legitimacy of entrepreneurship: Contribution to entrepreneurial intention in university students from Chile and Colombia. *Journal of Technology Management*, *11*(3—), 67-76.
- Soria-Barreto, K., Jara, S. Z., & Ruiz-Campo, S. (2016a). Determinantes de la intención emprendedora: nueva evidencia. *Revista Interciencia*, *41*(5), 325-330.
- Soria-Barreto, K., Jara, S. Z., & Ruiz-Campo, S. (2016b). Educación e intención emprendedora en estudiantes universitarios: Un caso de estudio. *Formación Universitaria*, *3*(1), 25-34.
- Suárez-Álvarez, J., & Pedrosa, I. (2016). The assessment of entrepreneurial personality: The current situation and future directions. *Papeles del Psicólogo*, *37*(1), 62-68.
- Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice*, *33*(3), 669-694.
- Thurik, R., & Dejardin, M. (2011). The impact of culture on entrepreneurship. *The European Business Review*, *1*(2), 57-59.
- Tong, J., & Wang, L. (2012). Work locus of control and its relationship to stress perception, related affectations, attitudes and behaviours from a domain-specific perspective. *Stress and Health*, *28*(3), 202-210.
- Uddin, R., & Kanti, T. (2012). Determinants of entrepreneurial intentions of business students in Bangladesh. *International Journal of Business and Management*, *7*(24), 128-137.
- Venkataraman, S. (1997). Advances in entrepreneurship, firms emergence and growth. In J. Katz & R. Brockhaus (Eds.), (p. 119-138). Greenwich: JAI Press.
- Verheul, I., Thurik, R., Grilo, I., & Zwan, P. (2012). Explaining preferences and actual involvement in self-employment: gender and the entrepreneurial personality. *Journal of Economic Psychology*, *33*(2), 325-341.
- Wadhwa, V., Aggarwal, R., Holly, K., & Salkever, A. (2009). *The anatomy of an entrepreneur: family background and motivation*. New York, NY: Kauffman Foundation.
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship. *Education. Entrepreneurship theory and practice*, *31*(3), 387-406.
- Winn, J. (2005). Women entrepreneurs: Can we remove the barriers? *International Entrepreneurship and Management Journal*, *1*, 381-397.
- Zhao, H., Siebert, S., & Hills, G. E. (2005). The mediating role of self-efficacy development of entrepreneurial intentions. *Journal of Applied Psychology*, *90*(6), 1265-1272.
- Zula, K., Yarrish, K., & Christensen, S. (2010). Initial assessment and validation of an instrument to measure student perceptions of leadership skills. *Journal of Leadership Studies*, *4*(2), 48-55.