

# Prior Exposure and Educational Environment towards Entrepreneurial Intention

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**Abstract:** This research is based on the responses to a questionnaire applied to 351 students of business management in Chile and Colombia. Through the analysis of structural equations on Ajzen's model, we found that entrepreneurial education, the University environment, and the prior entrepreneurial exposure are mediated by the factors of the Ajzen's model to generate entrepreneurial intention in higher education students. The results show that entrepreneurial education strengthens the perceived control of behavior and, with it, albeit in a differentiated way, the entrepreneurial intention of men and women. University environment affects entrepreneurial intention through attitude towards entrepreneurship; and finally, the work experience, used as one of the variables that measure prior entrepreneurial exposure, explains the entrepreneurial intention inversely through the subjective norms. We found that gender has a moderate effect on perceived control of behavior and entrepreneurial education. The scarce studies on the impact of the University environment and the mixed results of the entrepreneurial education and prior entrepreneurial exposure toward entrepreneurial intention show the necessity for further research. A second contribution is the opportunity to present new evidence about the relationship between University environment, entrepreneurial education and prior exposure to developing countries of South America, including the gender effect (moderator) for entrepreneurial intention. It is important to note that most of the research in this area applies to developed countries, and some scholars suggest that extrapolating the results is not convenient.

**Keywords:** entrepreneurial intention; prior entrepreneurial exposure; entrepreneurial education; higher education; Chile; Colombia.

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## Introduction

The decision to create a new business relates to opportunity perception and entrepreneurial intention. Several researchers emphasize that entrepreneurial intentions represent a commitment of individuals to start a new business and that it becomes the first step toward entrepreneurial behavior (Krueger & Carsrud, 1993). The Theory of Planned Behavior (TPB) by Ajzen (1991) is one of the most used models of EI, and it has been applied as a theoretical framework to analyze the formation of intentions in various fields (Fayolle, 2013). The TPB model considers three attitudinal variables or dimensions that explain EI (i.e., personal attitude toward entrepreneurship (ATE), perceived behavioral control (PBC), and subjective norms, SN). In this regard, this study aims to understand the formation of intention in the field of entrepreneurship education using the Ajzen's model (1991) adding three exogenous variables: University environment (UE), entrepreneurial education (EE), and prior entrepreneurial intention (PEE).

The literature on EI has increased exponentially. Liñán & Fayolle (2015) analyzed a total of 409 papers published in Scopus database during 2004-2013 all related with EI. 61% of those publications are at most three years old. The growth in the number of EI publications reflects the interest that EI has generated in the research community worldwide. However, looking at emerging economies in Latin America, the literature on entrepreneurial intentions and related variables using the TPB model is still limited, and there is even less on students' entrepreneurial intentions from two different higher education

institutions. This research considered the responses of 351 University students in the area of business management from two emerging economies in South America such as Chile and Colombia. The sample considers data from 245 students from the Universidad Católica del Norte (Coquimbo, Chile) and 106 students from the Universidad Piloto de Colombia (Bogotá, Colombia).

This paper seeks to contribute to two main points of interest. First, the research goes deeper on the study of the Ajzen's TPB. Specifically, this research includes three additional variables named above (UE, EE, PEE) that could show an indirect effect through EI. We propose that perceived behavioral control (PBC), personal attitude toward entrepreneurship (ATE) and subjective norms (SN) could be mediators. Specifically, University environment could affect ATE, entrepreneurial education (EE) is related to PBC, and prior entrepreneurial exposure (PEE) might impact SN, respectively.

Regarding the University environment, no further information was obtained. Related to institutional analysis, Walter and Block (2016) found that education for entrepreneurship has stronger relationships with subsequent entrepreneurial activity in seemingly entrepreneurship-hostile institutional environments. Most studies show a positive effect of EE on entrepreneurial intention; however, there is another group of research that found a negative, discouraging effect of entrepreneurial education.

In the case of prior entrepreneurial exposure, there are also inconclusive findings. In this study, the PEE is considered from two points

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of view as Zapkau et al. (2015) point out. First, the individual's personal history related to entrepreneurship such as parents, relatives, friends and colleagues, and second by prior experience working in a small firm. Some authors find entrepreneurial parents to stimulate children's EI, while others do not support this finding. Research on the impact of work experience is scarce and also with contradictory results towards the interest to start a new business.

On one hand, studies on the impact the University environment are scarce, and on the other hand the mixed results of the entrepreneurial education and prior entrepreneurial exposure toward EI need further research. This study addresses these gaps and explores if the University endowment, entrepreneurial education and, previous exposure to entrepreneurs and new firms activity, could affect the entrepreneurial intention indirectly. Therefore, the relationships found here could initiate further discussions.

A second contribution is the opportunity to present new evidence about relationship between University environment, entrepreneurial education and prior exposure for developing countries of South America including the gender effect (moderator) for entrepreneurial intention. Also, it is relevant to take account that most of EI literature has been done on developed countries, and some scholars suggest that it is not convenient to extrapolate results of developed countries to developing economies (De Vita et al., 2014). Drawing on TBP model by Ajzen, this study contributes to extend the application of this model in entrepreneurship education research including UE, EE, and PEE as well as to reinforce the impact of Ajzen's variables through EI, respectively. Also this study contributes to test if prior results on developing countries coincide with this research results.

In summary, these results could clarify the contribution of Ajzen's TPB theory when explaining EI to the undergraduate students in the sample. This study extends the traditional TPB model of intention including three exogenous variables such as University environment (UE), entrepreneurial education (EE) and the prior entrepreneurial exposure (PEE) to look at the direct or indirect effects those might have on EI, including gender effect for entrepreneurial education.

Chile and Colombia are two emerging economies. Colombia has 48 million inhabitants, compared to 18 million people in Chile, about two and a half times. Taking into account the accumulated per capita GDP between 2008 and 2013 the difference is noticeable. The per capita gross domestic product of Colombia is about one-third of Chile's gross domestic product per capita; GDP per capita in Chile is around USD 23,500, while GDP from Colombia is USD 13,800. The annual unemployment rate has also a marked difference. For the same time period detailed previously, 2008 - 2013, unemployment in Chile stood at 7.6%, while in Colombia was 11.2% on average. In relation to the entrepreneurial activity, according to GEM 2015 data, the rate of entrepreneurial activity in the nascent stage (less than 3 months) was 16.5% and 15.6% for Chile and Colombia, respectively. While the early stage activity rate (TEA) reached 25.9% and 22.7% for Chile and Colombia, respectively.

It can be seen that each country has differences in size and economic indicators; however, in the area of business creation, according to the GEM, the indicators are quite similar and both have policies that encourage entrepreneurship, both in the educational and economic fields. Thereby its results motivated the analysis of the entrepreneurial reality of these Latin American countries, with differences in macro-economics indicators.

The rest of the paper is organized as follows. The next section details the theoretical framework about EI, University endowment, entrepreneurial education and prior entrepreneurial exposure, as well as the detail of the hypothesis. The third section describes data, variables and methodology used during the investigation. The results and discussion are then presented. Finally, the conclusion and limitations of research are presented in the last one.

## Theoretical Framework and Hypotheses

### Entrepreneurial Intentions (EI)

The entrepreneurial intention (EI) is the first step toward entrepreneurial behavior (Krueger & Carsrud, 1993) and it plays an important role in the decision to create a new firm (Liñán and Chen, 2009;). In the literature, EI is determined by attitudes, and attitudes are affected by exogenous influences or determinants. Several scholars have recognized different determinants for EI including personal traits and situational variables. Among determinants of EI, we can find in previous research: entrepreneurship education (Fayolle, 2013), exposure to entrepreneurial activity (Krueger, 1993), and gender (Karimi et al., 2013). Those appear to be an important antecedent of EI and might have a direct or indirect effect on individual EI (Karimi et al., 2016). Indeed, there is another approach to research the link that individual character variables might have with those of the environment (Muehler & Conway, 2013; Liñán et al. 2011).

The Theory of the Planned Behavior (Ajzen 1991) contains three explanatory variables: attitude towards entrepreneurial behavior (ATE), subjective norms (SN) and perceived behavioral control (PBC). The TPB describes how behavior is formed and it has been widely applied in entrepreneurship research due to its powerful empirical results (Kolvereid, 1996; Krueger et al., 2000; Liñán, 2004; Liñán et al., 2011;). The central factor of the TPB is the individual intention to perform a given behavior (Karimi et al., 2016). The entrepreneurial models of intention that apply the TPB, have become validated theoretical frameworks that have shown applicability in different contexts and settings (Fayolle & Gailly, 2013;). Kautonen et al. (2015) indicate that ATE, SN and, PBC typically explain 30%-45% of the variance in intentions.

Literature on entrepreneurship and TPB shows that the attitude dimension is a very important psychological construct that affects and predicts many behaviors. The more favorable ATE it should be expected that the EI's perform should be increased. Additionally, PBC is related with the election of an action than the individual thinks will be able to control and master. It could be said that PBC is similar to

self-efficacy of Bandura (1986) and is included in the model of Krueger (1993). Finally, the dimension of subjective norms are defined as individuals' perception about the values, beliefs, and norms held by the people whom they respect or regard as important and the individuals' desire to comply with those norms (Ajzen, 1991).

So, the first group of hypotheses would be to verify the fit of TBP model and its antecedents considered in this research for undergraduates students of Chile and Colombia.

H1a: Personal attitude toward entrepreneurship positively influences EI

H1b: Perception of behavior control positively influences EI

H1c: Subjective norms positively influences EI

### University Environment and Entrepreneurial Education

The model of Ajzen (1991) is a relevant tool to model the development of entrepreneurial intention through entrepreneurship education courses in the University context. Higher education institutions worldwide have become one of the major contributors to fostering entrepreneurial behaviors in potential entrepreneurs (Fayolle, 2013). Therefore, the main challenge for many universities is to become more entrepreneurial institutions in order to expand their entrepreneurial education and become part of the entrepreneurial ecosystem. Only few studies have analyzed the influence of the University environment on students' entrepreneurial intention (Fayolle et al., 2006). Guerrero et al. (2016) study the relationship between entrepreneurship environment at universities and regional competitiveness. They characterized the University environment (UE) using formal (attitudes) and informal factors (EE programs) that reinforce and support entrepreneurship inside the University. They found a positive and significant impact of the entrepreneurial University environment on the University's entrepreneurial activity in all the tested samples. These results could be a possible explanation for the reason some universities are more entrepreneurial than others. And, therefore, it could be more interesting to test how institutional variables toward entrepreneurship inside universities such as the culture, structure, and resources might influence the dimensions of students' EI.

There is a great variety of studies relating to entrepreneurial education (Walter & Block, 2016; Liñán et al., 2011). Literature on entrepreneurship research and model of intentions shows that the TPB is also an appropriate assessment tool for measuring effectiveness in entrepreneurial education (EE), including external influences on entrepreneurship activity such as the type of EE course, pedagogical methods and learning objectives.

The TPB model has been verified in various developed countries over the past two decades (Fayolle & Gailly, 2015). However, very limited empirical research on the relationship between EE and EI has focused on developing countries. Fayolle et al. (2006) found that although EE has a strong and measurable effect on students' EI, it has a positive, but

not significant one on their PBC. Finally, a study on Iranian students' entrepreneurial intentions at six Iranian universities found significant positive impacts on students' subjective norms and perceived behavioral control after participating in entrepreneurship courses (Karimi et al., 2016).

These findings contribute to the TPB and have implications for the design and delivery of entrepreneurship education (EE) in universities. Therefore, more research is needed to look at the different components of the EE programs including some environmental variables in order to explore their relationship and the effect they may have on the individual entrepreneurial intention (Fayolle & Liñán, 2013; Karimi et al., 2016).

With this background in mind we propose that University environment and entrepreneurial education affects positively but indirectly the interest of the higher educational students to start a new business. This suggests the following hypothesis for UE and EE.

H2: Attitude towards entrepreneurship mediates the impact of University environment through EI.

H3: Perceived behavioral control mediates the impact of entrepreneurial education through EI.

### Gender

There is a growing interest in research focused in women entrepreneurship (Wilson et al., 2007; BarNir, Watson & Hutchins, 2011; Karimi et al., 2013; Mueller & Conway, 2013; Maes et al., 2014). Liñán & Fayolle (2015) found that 30 of 409 papers published between 2004 and 2013 (inclusive) linked with EI were related with gender issues.

The first contribution is from Wilson et al. (2007), who concludes that entrepreneurship education has a greater effect on female's self-efficacy and, through this, on EI. In fact, Kolvareid (1996), applying the TPB model, showed that gender influences self-employment intentions indirectly through its impact on attitude, subjective norms and PBC. So, the role of gender continues to be an area that could help to generate accurate entrepreneurial education programs to reduce the gender effect in the creation of new firms.

Additionally, Haus et al. (2013) conclude that women transform their intentions into action to a much lesser extent than men do. Evidence suggests that female students, compared with male students, have lower confidence in their business abilities (Wilson et al. 2007). Women also perceived their environment to be more difficult and they will likely have a lower sense of personal control over activities associated with entrepreneurial career than men (BarNir et al. 2011). It is worth noting a different impact in males and females on EI. Therefore, gender difference might be a sociocultural dimension that influences entrepreneurship (Karimi et al., 2013). This is the reason gender could be tested as a moderator for the three dimensions on the TPB model. Maes et al. (2014), conclude that women choose not to become entrepreneurs because they perceived lack of locus of

internal control or of self-efficacy. So, gender is assumed to also have a moderating effect on the impact of EI. Negative feedback about their entrepreneurial abilities could alter female student expectations with respect to their potential creation of a new firm more than in the case of their male partners.

Within the analysis, this study tested the moderating effect of gender on entrepreneurial education, perceived behavior control and entrepreneurial intention. So, we position gender as a moderator for the entrepreneurial education and its mediator toward entrepreneurial intention.

H4: Gender moderates impact of PBC towards EI

H5: Gender moderates the relationship between EE towards perceived behavioral control

H6: Males have more EI than females

**Prior Entrepreneurial Exposure**

Entrepreneurial role models can be seen as a possible source for entrepreneurship learning and inspiring students to become entrepreneurs (Karimi et al., 2013). Role models in entrepreneurship are considered as situational or sociocultural factors that could enhance the predictive ability of the traditional TPB model. Prior experiences in entrepreneurship might influence intentions indirectly through attitude (including social norms) and perceived behavioral control. Then, entrepreneurial role models or prior entrepreneurial exposure (PEE) influence entrepreneurship indirectly, because it must affect attitudes in order to affect intentions (Krueger, 1993).

Zapkau et al., (2015) argue that individuals with parents who have previously started a business display higher levels of entrepreneurial intention. Using the TPB model and adapting prior entrepreneurial exposure from Krueger (1993) they found that exposure to parental role models only positively influences the subjective norm, whereas it has no significant effect on either attitude or perceived behavioral control in regard to starting a business. Karimi et al., (2013) explored the effect of role models as a mediator on EI as well as the moderator effect of gender in EI into the TPB model. In their study among a sample of Iranian college students, they found that entrepreneurial role models influence indirectly students' EI through the antecedents (ATE, SN, PBC). No direct effect of role models on EI was found by the authors. These findings are consistent with previous research (Krueger, 1993); however, more research is needed to understand better the relationship between prior entrepreneurial exposure and entrepreneurial intention.

The last group of hypothesis expands the TPB with the incorporation of the prior entrepreneurial exposure measured in two domains: a) link with family and relatives entrepreneurs, and b) actual work experience. The PEE referred to the close owners of business is proposed as a variable mediated by subjective norms. That is, we argue that the fact of having been related to people who are founders and in charge of their own the business generates a positive indirect effect on the entrepreneurial intention.

On the other hand, prior work experience is more global. That is, we believe that young people who have entered the labor market, are different from those who have not. Therefore, this factor is considered as a moderator in general. The relationship proposed is a positive one, in the sense that higher educational students with work experience have a greater predisposition to create their own company in the future. Consequently, the hypotheses referred to the PEE are as follows.

H7: Subjective norms mediate the impact of prior entrepreneurial exposure (family and relatives entrepreneurs) through EI.

H8a: PEE (labor experience) moderates the relationship between University environment and ATE

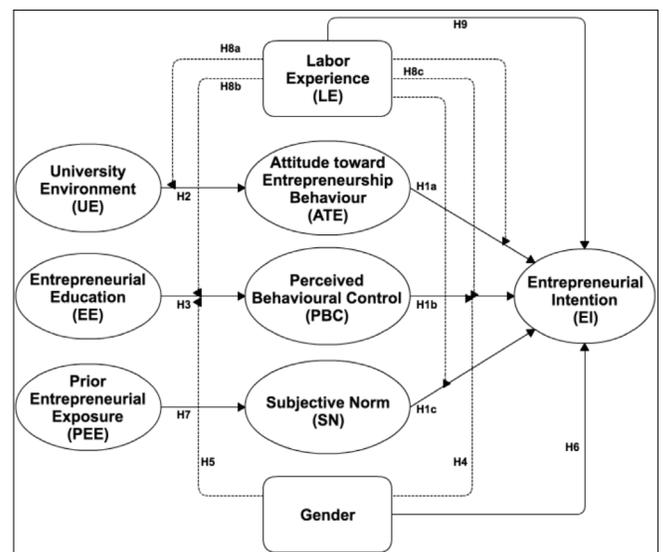
H8b: PEE (labor experience) moderates the relationship between entrepreneurial education and PBC

H8c: PEE (labor experience) moderates the relationship between ATE, PBC and SN towards entrepreneurial intention

H9: PEE (labor experience) affects the entrepreneurial intention.

So with the arguments above described, we aim in this research to propose the following conceptual framework and hypothesis. Figure 1 shows the conceptual model guiding this work and summarizes the hypothesis. This diagram illustrates the mediating effect that could have social norms (SN), perceived behavior control (PBC), and attitude towards entrepreneurship (ATE) on the decision to start a new business (EI). We also position some exogenous variables as mediators of the traditional TPB model of intention such as prior entrepreneurial exposure with entrepreneurs (PEE), entrepreneurial education (EE), and University environment (UE). Further, we position PEE (labor experience) as a moderator for the overall effect of entrepreneurial intention and gender as a moderator for EE and perceived behavior control.

**Figure 1:** Theoretical framework and study hypotheses



## Materials and Methods

The data was collected from a survey of higher educational students in one University of Chile and Colombia from January to July 2015. The profile of the students who participated in the research was of business administration. A student sample is ideal given that they must make a decision regarding their future professional development; creating a company can be an alternative, as mentioned by Maes et al. (2014).

They were asked to complete a survey instrument via internet with a link to access the survey. The results are shown in Table 3. The sample consists of 351 effective responses, of which 245 are students from Chile and 106 from Colombia. Of the total sample, 43% students are men and 57% are women. Respondent's age ranges from 18 to 39 years, with an average of 21 years and a standard deviation of 3 years. It should be noted that 40% of students in Colombia are in an evening regime, which explains that the average age is higher (23 years), given that they are students of this system. 71 percent of Colombian and 56 percent of Chilean students indicated they had some previous work

experience. Finally, 39 percent of Chilean students have a monthly family income lower than USD1000. So, the undergraduates in Colombia, in average, have a higher income. Only 12 percent of the sample has family income over USD1000. In Chile, 68 percent of the students' family income is lower than USD 2001, while in Colombia 40 percent of the students are in this range. 62% of students are between the first and second year of school. For the case of Colombian students, the highest proportion is in the first year (47%), while in the case of Chilean youth, the sample has 38% of students in their second year of studies in higher education.

In the total sample, 35% of the respondents indicated that they had no ties with owners and managers of companies with more than 5 workers. However, at the level of each country this figure is very different. For Chile, 43% of the students indicated that they had no relation with entrepreneurs, whereas for the case of Colombian students, this percentage is 16%. The young students indicate that close relatives are the most mentioned as entrepreneurial referents with an importance of 30%, very similar for each country (31% for Colombia and 29% for Chile).

**Table 1:** Characteristics of the sample

	Total	Chile	Colombia
<b>Number of students</b>	351	245	106
<b>Gender</b>			
Men	150	101	49
Women	201	144	57
<b>Monthly family income</b>			
Less than USD1000	31%	39%	12%
Between USD1001 and USD2000	29%	29%	28%
Between USD2001 and USD3000	17%	13%	25%
Between USD3001 and USD4000	10%	8%	15%
Between USD4001 and USD5000	5%	5%	8%
Between USD5001 and USD6000	5%	4%	6%
More than USD6000	3%	2%	6%
<b>Labour Experience</b>			
Yes	60%	56%	71%
No	40%	44%	29%
<b>Entrepreneurial Exposure (founder or a company)</b>			
Father/mother	19%	16%	25%
Brother/sister	3%	1%	8%
Close relatives	30%	29%	31%
Friends relatives	14%	11%	21%
Don't know anyone related to entrepreneurship	35%	43%	16%
<b>University semester</b>			
1 <sup>st</sup> - 2 <sup>nd</sup>	33%	27%	47%
3 <sup>rd</sup> - 4 <sup>th</sup>	29%	38%	10%
5 <sup>th</sup> - 6 <sup>th</sup>	16%	14%	21%
7 <sup>th</sup> - 8 <sup>th</sup>	13%	11%	17%
9 <sup>th</sup> - 10 <sup>th</sup>	9%	10%	5%

The variables are measured in a Likert scale from one to five, where 1 indicates strong disagreement and 5 total agreement. In addition there are dummy variables. The survey is presented in the Appendix.

**(1) Entrepreneurial Intention (EI):** Dependent variable. It is constructed from a set of six phrases adapted from the instrument designed by Liñán & Chen (2009).

**(2) Perceived Behavioral Control (PBC):** This variable is based on a set of five sentences, taken from the instrument of Liñán & Chen, (2009).

**(3) Subjective Norm (SN):** This independent variable is measured on the basis of three questions concerning the relevance that has its immediate environment in relation to entrepreneurship. The questions were taken from the instrument of Liñán & Chen (2009).

**(4) Attitude towards Entrepreneurship Behavior (ATE):** This variable is measured through seven sentences, describing the attitude of the person in different circumstances. They are taken from the instrument created by Liñán & Chen (2009) and Lepoutre et al. (2010).

**(5) Gender (GEN):** Dummy variable, 0 for female, 1 for male.

**(6) Prior Entrepreneurial Exposure (PEE):** This variable is measured in two ways (observed and direct): a) link with people who are entrepreneurs (observational) and b) work experience (direct). The first one is an index that is obtained by a multiplication of two questions, one dummy and another percentage. The first question includes the identification of previous PEE antecedents based on six statements related to the link with people founder and owner of a company with

more than 5 employees. This dummy is multiplied with the importance that each person gave the opinion of their close relatives or friends. The second one, labor experience, is a dummy variable: 1 if the person has prior work experience, 0 if the student doesn't have prior labor experience.

**(7) Entrepreneurial Education (EE):** This variable is measured through six sentences, describing the importance and how valuable was the course of entrepreneurial education. The affirmations were taken from Keat, et al., 2011

**(8) University Environment (UNIV):** This variable is measured through twelve sentences, describing the perception of the person in relation to the role of the University to promote entrepreneurial intention. The affirmations were taken from Keat, et al., 2011.

## Results

A structural equation model (SEM) analysis by the method of partial least squares (PLS) was used to test hypotheses. The data obtained by the instrument described above were subjected first to a confirmatory factor analysis (CFA) using Lisrel package.

Table 2 shows the assertions that explain each of the latent variables. Questions not charged well for each construct were eliminated, leaving only those that altogether explain and have better fit indices. The results show acceptable composite reliability index (IFC) for each of the constructs, the same as the extracted variance (AVE). When analyzing goodness of fit index, it could be shown that the ratio Chi-square / degrees of freedom is acceptable, being well below 1.35. The maximum acceptable is 3. The same applies to the RMSEA 0.031 being well below the maximum acceptable 0.8 and NNFI, GFI and AGFI still all very close to 1.

**Table 2:** Confirmatory Factor Analysis

Constructs and ítems	Reability			Validity	
	T-values	IFC	AVE	standardized charges	Hair et al. (1998)
<b>Entrepreneurial Intention (EI)</b>					
EI1. I am determined to create a firm in the future.	16.19			0.77	
EI4. I will make every effort to start and run my own firm.	12.08	0.77	0.53	0.61	0.72
EI6. The likelihood that I will ever run my own business is very high.	16.91			0.79	
<b>Perceived Behavioral Control (PBC)</b>					
PBC1. To start a firm and keep it working would be easy for me	13.88			0.69	
PBC2. I can control the creation process of a new firm	17.10	0.79	0.50	0.81	0.68
PBC3. I know the necessary practical details to start a firm	9.75			0.52	
PBC4. It will be easy for me to develop a business idea	14.58			0.73	
<b>Subjective Norm (SN)</b>					
SN1. My close family think I should start a new company in the future.	5.56	0.84	0.72	0.91	0.85
SN2. My best friends think I should start a new company in the future.	9.47			0.78	
<b>Attitude towards Entrepreneurship Behavior (ATE)</b>					
ATE1. Being an entrepreneur implies to me more advantages than disadvantages.	15.46			0.76	
ATE2. A career as entrepreneur is attractive for me.	19.64			0.85	
ATE3. If I had the opportunity and resources, I would like to start a firm.	20.74	0.86	0.60	0.89	0.77
ATE5. Among various options, it would entail great satisfaction for me.	11.04			0.56	
<b>Entrepreneurial Education (EE)</b>					
EE1. Knowledge about the business environment.	20.94			0.89	
EE4. The skills needed to be an entrepreneur.	23.26	0.94	0.83	0.95	0.91
EE6. Detection of business opportunities.	21.62			0.91	
<b>University Environment (UE)</b>					
UE1. The University is an ideal location to learn about starting a business.	14.75			0.72	
UE3. Business examples are included in classroom teaching.	16.15	0.85	0.58	0.79	0.76
UE4. In college, students are encouraged to pursue business ventures.	15.98			0.78	
UE7. Received entrepreneurship education prepare people well for the creation of a company	16.45			0.77	
$\chi^2(137)=185.1, p=0.00479$ ; RMSEA=0.031 ; SRMR=0.034 ; NNFI=0.9907 ; CFI=0.9926 ; GFI=0.9477 ; AGFI=0.9274					

Table 3 shows the correlations of each construct with others. It can be seen that the most intense relationships between different constructs are: EI with the ATE with close to 76% levels: followed, by PBC with ATE

with a correlation value of 66%. The relationship between gender with University environment and entrepreneurial education are negative; it emphasizes that the relationship between gender and ATE is the lowest.

**Table 3** Item- Construct Correlations

	EI	PBC	SN	ATE	GEN	PEE	EE	UNIV
EI	1							
PBC	0.645	1						
SN	0.571	0.515	1					
ATE	0.765	0.657	0.538	1				
GEN	0.032	0.006	0.011	0.001	1			
PEE	0.198	0.163	0.243	0.185	0.013	1		
EE	0.182	0.175	0.127	0.176	-0.0961	0.020	1	
UE	0.168	0.219	0.154	0.208	-0.117	0.110	0.444	1

After evaluating the reliability of the variables and identifying each of the constructs with their respective items, it proceeds to use SEM for EI models. In Table 4 we can see the results for TPB of Ajzen (Model 1) for the total sample. It can be observed that for the standard model, all variables are significant at the 99 % confidence level, therefore ATE, PBC and SN explain the entrepreneurial intention of students surveyed, so it can support hypotheses H1a, H1b and H1c. Besides, of all variables considered to extend the Ajzen model, PEE (labor experience) is the only variable that proves to be explanatory for EI at 95%

confident; so, H9 is confirmed. The result is to pay special attention because the relationship is reversed; young college students with working experience, would be less interested in starting their company in the future. These results complement the findings of Zaptan et al. (2015), who also studies work experience as an explanatory variable for the three variables of the Ajzen model. They reject the hypothesis that work experience perceived as positive, increases entrepreneurial intention. Finally, as Model 1 shows, gender has no direct effect on entrepreneurial intention, so H6 is rejected.

**Table 4:** Regression results

	Model 1	Model 2	Model 3	Model 4
	EI	ATE	PBC	SN
<b>Main effect</b>				
Attitude Toward Entrepreneurship	0.5377***			
Perceived Behavioral Control	0.1842***			
Subjective Norm	0.1743***			
University Environment	-0.0386	0.2081***		
Entrepreneurial Education	0.0438		0.1817***	
Prior Entrepreneurial Exposure	0.0291			0.2433***
<b>Interactive effect</b>				
Attitude Toward Entrepreneurship*Gender	-0.0386			
Perceived Behavioral Control*Gender	0.0841**			
Prior Entrepreneurial Exposure*Gender		0.0197		
Entrepreneurial Education*Gender			0.0901	
University Environment*Gender				0.0855
Attitude Toward Entrepreneurship*LE	0.0389			
Perceived Behavioral Control*LE	0.0463			
Subjective Norm*LE	0.0602			
University Environment*LE		0.0522		
Entrepreneurial Education*LE			0.01408	
Prior Entrepreneurial Exposure*LE				-0.0061
Gender	0.0287	0.0078	0.2610	
Labol Experience	-0.0856**	0.0503	0.1103**	0.0279
Sobel Test SN	3.1783***			
Sobel Test PBC	2.7278***			
Sobel Test ATE	3.7507***			
Adjusted R Square	0.6499	0.0513	0.0391	0.4292
F	70.35***	7.315***	4.71***	6.23***
*** p<0.01, ** p<0.05	70.35***	7.315***	4.71***	6.23***

The research of Guzmán-Alfonso & Guzmán-Cuevas (2012) measured the model of Ajzen (1991) for Latin America. Their results are consistent for the case of ATE and PBC variables. However, in the case of subjective norms they found an inverse relationship to the IE.

The basis for this study model presents three variables that are mediated by the variables of the classical model of Ajzen (ATE, PBC, SN). The observed results show that the variables included in this framework (University endowment, entrepreneurial education and prior entrepreneurial exposure) have no direct effect on EI, as can be seen in Model 1, where none of these is significant, but they have an indirect effect through the variables of the classical model, which is seen in the last three models. In those, each of these variables is

significant with respective variable at 99% confidence level. Also, the change of the coefficients produced by this mediator effect is significant by the Sobel test, which notes that all three have a 99 % confidence. This result gives support to the H2, H3 and H7 hypothesis. So, each of the variables linked to Ajzen’s model explains its respective mediator. These argue that the University environment affects indirectly the entrepreneurial intention through the attitude toward entrepreneurship. Likewise, entrepreneurial education impacts on the IE indirectly and positively through perceived behavioral control, and finally the prior entrepreneurial exposure (link with entrepreneurs) empowers the interest to create a company through subjective norms. The next table resumes the results related with variables that explain de entrepreneurial intention for an extended model of TPB.

**Table 5:** Results of Global Model for Entrepreneurial Intention

Model	Hypothesis	Relationship	Finding
1	H1a	Actitud Toward Entrepreneurship => EI	Confirmed
1	H1b	Percieved Behavioral Control => EI	Confirmed
1	H1c	Subjective Norms => EI	Confirmed
2	H2	University Environment => ATE	Confirmed
3	H3	Entrepreneurial Education => PBC	Confirmed
1	H6	Gender => EI	Rejected
4	H7	Prior Entrepreneurial Exposure => SN	Confirmed
1	H9	Laboral Experience => EI	Confirmed

Model 1 shows the gender and prior entrepreneurial experience (working experience) as a variable moderator for the explanatory variables of entrepreneurial intention. The results show that gender is a moderator for perceived control behavior with 95% confidence, which

explains that if a man perceived behavioral control is enhanced, positively affecting the relationship with the entrepreneurial intention, checking the hypothesis H4. The results for all the moderation effects and their respective hypotheses could be seen in the table 6.

**Table 6:** Results of Moderation Effects

Model	Moderator	Hypothesis	Relationship	Finding
1 y 2	Gender	H4	Percieved Behavioral Control => EI	Confirmed
1 y 3	Gender	H5	Entrepreneurial Education => PBC	Rejected
1 y 2	Laboral Experience	H8a	University Environment => ATE	Rejected
1 y 3	Laboral Experience	H8b	Entrepreneurial Education => PBC	Rejected
1 y 2	Laboral Experience	H8c	Actitud Toward Entrepreneurship => EI	Rejected
1 y 3	Laboral Experience	H8c	Percieved Behavioral Control => EI	Rejected
1 y 4	Laboral Experience	H8c	Subjective Norms => EI	Rejected

**Discussion**

The results indicate that the Ajzen’s model fits perfectly to explain IE in Chile and Colombia (H1a; H1b and H1c). Our results are similar to the revised model shows that better explains Ajzen IE (Maes et al., 2014; Valencia et al., 2015; Lanero et al., 2015; López Vidal, 2013). It is interesting to note that IE literature includes studies where SN does not appear as significant. Such is the case of the research group as results shown by Ruizalba et al. (2015). Garcia-Rodriguez et al. (2015) show

that in context of less economic development, the role of SN (perceived social pressure) to carry out or not a new firm loses its capacity to EI.

Despite proven empirically that the model explains the IE Ajzen University students in Chile and Colombia, it is not able to verify that gender plays a moderator role on EI. That is, no significant difference found in the IE of men and women as Wilson et al. (2007) and Mueller and Conway (2013) did for American students. This contrasts with results found by Díaz & Jiménez (2010), and Maes et al. (2014).

The results show that the moderating effect of gender is given on PBC and EE, being a significant effect on entrepreneurial education at 95%. This result could be compared with other related. First of all, the results are interesting in the sense that the impact of skills on the intention to develop a new company is different for men than for women. In general, women tend to think they have a lower self-confidence to run a business. While on the other hand, men tend to be overconfident about their performance. However, this fact is not necessarily related with more success on EI (Díaz & Jiménez, 2010). Sánchez Escobedo et al. (2014), emphasize that for the perception of self-efficacy, gender differences have been discovered, with the variable being significant for men in efficiency and innovation driven countries, which is not the case of Chile and Colombia. Karimi et al. (2013), also using TBP, explored the effects of gender and role models on EI. They found an opposite result, that is to say, no gender differences in the relationship between PBC and EI. Entrepreneurship is considered a male domain. So, more studies could be made related to this construct to go deeply and discover if men have a major optimistic ATE.

Nevertheless, the moderating effect of gender on entrepreneurial education is an interesting result. This becomes important if we take into consideration that there are studies whose findings indicate that women have to minimize their capacity to generate a business. They tend to attribute their success to external variables (external locus of control) than their own skills or effort (Verheul et al., 2012). In this regard, it is important to find that gender makes differences in the impact of EE on the perceived behavioral control. Programs that seek to enhance the EE should take into account that there is a differentiated view for males and females. So, the University and their entrepreneurial programs should take this information in order to motivate young people to start a new company. It becomes necessary to enhance women's own skills, increase their self-confidence and enhance their view on the cost-benefit assessment between becoming an entrepreneur or be an employed dependent.

In relation to the impact of the previous experience, a double impact could be verified. Firstly, that exposure to close entrepreneurs indirectly affects the entrepreneurial intention through subjective norms and, on the other hand, previous work experience directly and inversely affects the entrepreneurial intention. Consequently, it can be affirmed that the observation of the entrepreneurial activity in people close to the youngsters increases the interest to create companies. In this sense, given these results, it can be very interesting to incorporate into the entrepreneurial education activities that allow students to interact with entrepreneurs so that they can see everything that implies being an entrepreneur and perhaps lose the fear of undertaking. The results of this research are in the same line as those of Bosma et al. (2012), Tarling et al (2016) and Branir & Hutchins (2011). Bosma et al (2012) point out that 54% of the entrepreneurs they analyzed stated that they had a link with them and 80% stated that they would not have undertaken without such support; It also indicate that they are the close referents who achieve the motivation to undertake, not those that come out in the media. On the other hand, Tarling et al. (2016) and BarNir, Watson & Hutchins (2011) also find that there is a positive influence of families to become an entrepreneur.

Work experience was the other variable used to measure the prior entrepreneurial exposure, which is more direct. The results found indicate an inverse relationship between work experience and entrepreneurial intention. This fact is no less important, given that the results suggest that once young people are linked as dependent workers they are no longer interested in creating their own company in the future. With this, work experience would be an inhibitor of entrepreneurial intention. This can be explained, because students may find it more comfortable to be dependent, thus losing their enthusiasm for being their own future boss or for generating employment. This theme is interesting to address since increasingly a large number of students share their student work with a job. If this is accentuated, it could diminish the entrepreneurial intention and with it the entrepreneurs and the emergence of new companies. Undoubtedly, this motivates to continue deepening the analysis in the sense of looking for entrepreneurs by opportunity. Perhaps the work filters the young people, with which the entrepreneurial education and the University environment must play an important role to empower students who want to develop their company by chance and with innovation.

## Conclusion

Based on information collected for students of business management from two Latin American universities, the study shows that the Ajzen's model fits well de EI for those young people. The three variables incorporated to the model of Ajzen, University endowment, entrepreneurial education and prior entrepreneurial exposure, showed that have and indirect effect through EI: UE affects EI through attitude towards entrepreneurship; EE makes the same indirect impact through perceived control of behavior and finally, PEE affects EI toward subjective norms. The findings for gender are that there is a moderate effect for PBC and entrepreneurial education.

Gender proved to be a moderator for the relationship between entrepreneurial education, which opens a line of research related to generating differentiated pedagogical strategies for men and women. With this, another field that remains open for future study has to do with the best strategies of entrepreneurship teaching for males and which for females.

Another interesting result is that the work experience used as one of the variables that measures prior entrepreneurial exposure, explains the entrepreneurial intention in an inverse way. That is, young people who have worked in a company of more than 5 workers, are less motivated to create their own company in the future. This fact turns out to be interesting and it allows continuing investigating on the reason why the dependent work inhibits the enterprising intention and with her the potential emergence of new companies.

Besides the interesting results discussed above, we have to recognize some limitations of this research. The type and size of sample may have been constrained in this study. In each country the sample contains students from a single University in each city. However, given the limited number of studies on EI in Latin American countries, our investigation may motivate researches to analyze different types of entrepreneurial education to fit the requirements for male and female, or the impact of public policies and entrepreneurial education also in other countries of this part of the world.

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## Appendix: Entrepreneurial Intention Questionnaire

Indicate your level of agreement with the following statements from 1 (strongly disagree) to 5 (strongly agree)

### Entrepreneurial Intention (EI)

- EI1. I am determined to create a firm in the future.
- EI2. I am saving money to become an entrepreneur.
- EI3. My professional goal is to become an entrepreneur.
- EI4. I will make every effort to start and run my own firm.
- EI5. After finishing my studies, I would like to work in an established company.
- EI6. The likelihood that I will ever run my own business is very high.

### Perceived Behavioural Control (PBC)

- PBC1. To start a firm and keep it working would be easy for me
- PBC2. I can control the creation process of a new firm
- PBC3. I know the necessary practical details to start a firm
- PBC4. It will be easy for me to develop a business idea,
- PBC5. If I tried to start a firm, I would have a high probability of succeeding

### Subjective Norms (SN)

- SN1. My closest family thinks I should create a new firm in the future.
- SN2. My best friends think I should create a new firm in the future.
- SN3. My colleagues think I should create a new firm in the future.

For you, how important is the opinion of ...? (Four scale : 25% - 50% - 75% and 100%)

1. Your family
2. Your Friends
3. Your colleagues and companions

### Attitude Towards Entrepreneurial Behaviour (ATE)

- ATE1. Being an entrepreneur implies more advantages than disadvantages to me.
- ATE2. A career as entrepreneur is attractive for me.
- ATE3. If I had the opportunity and resources, I'd like to start a firm.
- ATE4. Being an entrepreneur would entail great satisfactions for me.
- ATE5. Among various options, would entail great satisfaction for me.
- ATE6. Entrepreneurs are job creators.
- ATE7. Entrepreneurship is the basis of wealth creation, benefiting us all.

### University Environment (UE)

In relation to the role that the university has to promote entrepreneurship ...

- UE1. The university is an ideal location for learns about starting a business.
- UE2. More entrepreneurship and business educational programs on campus would help students to start businesses.
- UE3. Business examples are included in classroom teaching.
- UE4. In college students are encouraged to pursue business ventures.
- UE5. The university infrastructure and policies encourage entrepreneurship.
- UE6. People are actively encouraged to pursue their own business ideas.
- UE7. Received entrepreneurship education prepares people well for the creation of a company
- UE8. The student clubs on campus which promote entrepreneurship.
- UE9. A creative university environment inspires me to develop ideas for new business.
- UE10. Entrepreneurial activities are limited only to business students.
- UE11. Entrepreneurship courses should be made compulsory in order to stimulate entrepreneurial spirit in campus.
- UE12: The university should provide resources to assist student entrepreneurs.

### Entrepreneurial Education (EE)

To what extent do you consider that this course or module helped you to develop the following aspects:

- EE1 Knowledge about the business environment.
- EE2 Increase de positive recognition of the entrepreneur
- EE3 The preference to become an entrepreneur
- EE4 The skills needed to be an entrepreneur.
- EE5 Entrepreneurial intention has been raised
- EE6 Detection of business opportunities.

### Prior Entrepreneurial Exposure (PEE)

#### Role Models

Antecedents of entrepreneurship (can mark more than one alternative)

- Father is founder and owner of a company with more than 5 employees
- Mother is founder and owner of a company with more than 5 employees
- Brother or sister is founder and owner of a company with more than 5 employees
- Relatives are founders and owners of a company with more than 5 employees
- Close friends are founders and owners of a company with more than 5 employees
- No one you know of has been a founder neither owner of a company with more than 5 employees

#### Work Experience (Dummy)

Have you had any kind of work experience in companies with more than 5 employees during your university studies? (Yes/No)

