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## ENTREPRENEURSHIP IN UNIVERSITY: A LOGIT METHODOLOGICAL EVALUATION IN AN EMERGING ECONOMY

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**ABSTRACT.** Self-employment has now become one of the most important access routes to the labor market in emerging economies. In these countries, the role of women entrepreneurs is fundamental not only for their economic development but also to fight against the gender gap. The university, as an institution, is a hub of potential entrepreneurs, which could help reduce these differences. This work explores if there is a gender gap in the inclination towards entrepreneurship among university students from a developing country (Ecuador) and the determining factors of entrepreneurial intention by gender. Based on the Theory of Planned Behavior, the study analyzes the moderating role of gender in university entrepreneurship. Multivariate logit regression was used to examine motivational factors (personal attitude, subjective norm, and perceived behavioral control) that favor entrepreneurial intention. The data reveals that entrepreneurial intention is lower among female students. The determinants of entrepreneurial intention are different by gender. The study contributes to a better understanding of the role of gender in entrepreneurial behavior.

**JEL Classification:** I25, L26,  
P46

**Keywords:** education, University, entrepreneurship, gender,  
Ecuador

### Introduction

The beginning of this century has led the society to profound changes (economic, social, environmental) where an individual's uncertainty about future becomes a constant (Bauman & Bordoní, 2016), in different areas such as the labor market. In this sense, the entrepreneurial spirit acts as an essential element in the generation of new job opportunities (Parker, 2018), providing the individual with the cognitive and behavioral tools necessary for these new times.

In this context, entrepreneurship raises few doubts about its multiple benefits: economic development, job creation, innovation, economic growth, and social welfare (Acs et al., 2009; Van Praag & Versloot, 2007). In the search for these benefits, many developed and developing countries are promoting entrepreneurship (Brixiova & Egert, 2017; Urbano & Aparicio, 2016). In this sense, universities are aware of the need to contribute to the development of the community where they are set up through the development of training programs in

entrepreneurship skills that serves as a key instrument in reducing the effect of limiting factors or barriers to entrepreneurship (Bischoff et al., 2020; Martínez-García et al., 2019). Due to these actions, universities are gaining prominence as promoters of the entrepreneurial spirit (Rasmussen et al. 2011), becoming a starting point for potential entrepreneurs.

Among the studies that analyze entrepreneurial activity, a rapidly evolving research area focuses on entrepreneurial intention (hereinafter EI) as a predictor of real entrepreneurial activity (Ferreira et al., 2012; Liñán & Fayolle, 2015). An important line of research in this area deals precisely with the study of EI in university students (Aloulou, 2015; Sitaridis & Kitsios, 2017), mainly in advanced countries such as, the United Kingdom, Spain, Taiwan, Finland, Sweden, and the Netherlands (Liñán & Chen, 2009; Liñán et al., 2013), and less often in emerging economies (Shiri et al., 2017).

Another aspect to which more and more attention is being paid is the possible gender differences concerning the entrepreneurial vocation (GEM, 2018). As previously indicated, entrepreneurship is an exit valve to the labor market. Therefore, it would be desirable to promote the incorporation of women into entrepreneurial activity, thus playing an essential role as a vector for reducing the gender gap. Therefore, international organizations such as the United Nations seek practical solutions to reduce the gender gap, becoming a global priority to achieve equality of opportunities among gender. The Sustainable Development Goals, SDG (2015-2030), in this sense searches the promotion of "an increase in the number of young people and adults who have the necessary skills to access employment or who can start up entrepreneurial projects" (objectives 4 and 5). Based on the scientific literature, this problem is being approached from different perspectives: feminist theories and their influence on EI, the implications for education, the revision of the methodological approach, or the intersection of gender in entrepreneurial activity (Henry et al., 2016), among others. The existing analysis has been aimed primarily at countries or environments with significant gender differences regarding entrepreneurial activity (Aloulou, 2015). As shown by the latest data from the Global Entrepreneurship Monitor (GEM) in 2018, these differences have narrowed in most countries, but they are still mainly favorable to men. A particular case is shown in Ecuador, which has the highest rates of female entrepreneurship (1/3 of women of working age are starting to create a business) and presents similar early entrepreneurship rates among men and women, women, 38% and 34%, according to (GEM, 2018, p.58) respectively.

This work aims to deepen the knowledge about entrepreneurial orientation, specifically EI (Schlaegel & Koenig, 2014), of students during their undergraduate stage. Unlike previous studies, this study focuses on Ecuador, a country that stands out in two aspects: on the one hand, it is the efficient economy with the highest Total early-stage Entrepreneurial Activity (TEA), leading the world ranking, and on the other hand, it is the second economy with the highest TEA proportions parity according to the latest GEM report. In this way, we contribute to the debate on EI and the gender gap at the university. To achieve this, an adaptation of one of the most consolidated theoretical frameworks in the analysis of EI is used, the Theory of Planned Behavior (TPB) (Ajzen, 1991), performing a quantitative analysis of a sample of 740 students from the University of Casa Grande (UCG) in Guayaquil.

From here, the document is structured as follows: the second section presents the theoretical framework and develops the proposed hypotheses, the third describes the sample and the data collection process, and the statistical methodology used. The fourth section presents the main results obtained in the empirical analysis. Finally, the main conclusions are presented, and the theoretical and practical implications are discussed, as well as the limitations and future lines of research.

## **1. Theoretical framework and hypothesis development**

Among the research trends focused on clarifying the cognitive factors that shape the motivations and desires that encourage certain people to create their own companies (Fayolle & Liñán, 2014), the TPB stands out, widely contrasted and used repeatedly to measure EI in students (Ruizalba-Robledo et al., 2015; Sitaridis & Kitsios, 2017). Entrepreneurship is considered intentional behavior (Delanoe-Gueguen & Fayolle, 2019; Krueger, 2017). The intention captures the strength of the motivation to perform a specific behavior, acting the mental disposition for action as its predictor and thus becoming the immediate antecedent to the actual performance of the behavior (Delanoe-Gueguen & Fayolle, 2019; Gollwitzer & Sheeran, 2006). This theory explains how creating a new business can be explained from a set of pre-existing attitudes and intentions (Ajzen, 1991; Schifter & Ajzen, 1985). According to this theory, three primary constructs underlie behavioral intention (in this case, entrepreneurial intention): attitude towards entrepreneurship, subjective norm, and perceived control over entrepreneurship.

### ***1.1. The attitude towards entrepreneurship***

The dimension of the attitude towards the act or personal attitude (PA) is a psychological factor that influences and predicts personal behaviors (Krauss et al., 2005). The present study refers to the degree to which the individual has a (un) favorable personal valuation of entrepreneurship (Ajzen, 1991). From this perspective, entrepreneurial behavior is understood as a consequence of previous attitudes rather than spontaneous activity. There is a consensus in the literature about the existence of a positive relationship between attitude and EI (Kautonen et al., 2013). In the university context, Ruizalba-Robledo et al. (2015) found that this relationship is maintained among potential entrepreneurs.

### ***1.2. Subjective norm***

Subjective norm (SN) refers to the intensity with which cultural expectations are embedded in intentionality (Pittaway & Cope, 2007). In this case, the discrepancy regarding its effect on EI is greater. On the one hand, Lima et al. (2015) considered that the university had a positive influence on EI. On the other hand, Ruizalba-Robledo et al. (2015) found no relationship between the subjective norm and the EI of university students.

### ***1.3. Perceived behavioral control***

Self-efficacy or perceived behavioral control (PBC) refers to the personal vision (of the individual him/herself) on issues related to the existence or lack of resources and opportunities necessary to carry out a specific task, particularly when the activity to be carried out is new and challenging (Ajzen & Madden, 1986; Bandura, 2012). In this sense, subjects with a higher vision of self-efficacy can visualize more opportunities in a risky choice and even take more risks than others. There is a broad consensus in the literature on the positive effect of self-efficacy on business intentions (Lima et al., 2015; Rae & Carswell, 2000). In the university context, Ruizalba-Robledo et al. (2015) found a positive relationship between perceived control over entrepreneurship and the probability of declaring an entrepreneurial intention.

#### ***1.4. The role of gender in entrepreneurship in the university context***

Approximately half of the world's workforce are women. However, it is common for female entrepreneurship to lag behind male (Langowitz et al., 2005). Different studies affirm that women have a lower tendency toward entrepreneurship (Haus et al., 2013; Langowitz & Minniti, 2007). The reasons behind this resistance could be diverse: greater fear of failure (Wagner, 2007) or the fact that this field still preserves a stereotype of a male entrepreneur (Dickerson & Taylor, 2000), where women are under-represented (Scherer et al., 1990). The latest GEM reports seem to point this out. Thus, according to the GEM (2018), women generally showed lower levels of perception of opportunities and capacities, lower levels of intentionality, and a greater fear of failure than men. In addition, it has also been noted that women declare that they are judged both by themselves and by their environment as less valid than men for entrepreneurship (Langowitz & Minniti, 2007).

On the other hand, different authors agree on how the individual's gender influences the perceived control over entrepreneurship (Ruizalba-Robledo et al., 2015). Specifically, they have considered that young women have a lower level of self-efficacy than men (Do Paço et al., 2015; Scherer et al., 1990). They have also found that women admit that they need more financial help than men (Jones & Tullous, 2002). Despite all that has been said, there is still no widely accepted consensus in the literature on this topic since, for example, Mueller and Dato-On (2008) could not observe links between self-efficacy and gender.

Regarding compliance with regulatory models, Soria et al. (2016) expose how stereotyped behavior becomes a prerequisite for women, affecting their decision to create new businesses. This fact can be explained for various reasons. In the first place, women are more aware in their day-to-day life of obstacles to obtaining financial resources from financial institutions (Shneor et al., 2013). Second, social values historically have not favored women's business development. Thus, the direct consequence has been that society does not grant aid, and women as a whole internalize that the creation of a company is not an engaging activity (Díaz-García & Jiménez-Moreno, 2010). Finally, affiliation needs are higher among women; therefore, they are more concerned with satisfying social expectations in accordance with dominant beliefs (Morris et al., 2005; Ruizalba-Robledo et al., 2015).

Therefore, the possibility is suggested that the gender of the potential entrepreneur affects the elements that make up the TPB that determine EI (Leiva, 2004). Facing this situation, the university, as an institution that generates knowledge for society, acts as a seedbed that generates and facilitates entrepreneurial attitudes equally between men and women.

#### ***1.5. Theoretical application to the Ecuadorian context***

However, the effects of TPB elements in IE may vary in different contexts. Ecuador presents perceptions and attitudes in its population especially favorable to entrepreneurship with social values that support and celebrate it. In the TPB approach, shared cultural values affect the antecedents of motivational intention (Liñán & Chen, 2009, p.598). As they point out (Liñán et al., 2013), it is expected that the theories and analyses established in developed nations will apply to other contexts, emerging or culturally different economies, demanding more research in this line (Munir et al., 2019). For this reason, the analysis of entrepreneurial activity is complex since it occurs in contexts with very different social norms. Cultural values change slowly, and the traditions of countries tend to remain stable despite globalization (Shiri et al., 2017). As noted in the introduction, Ecuador has two specific cultural characteristics, such as the efficient economy with the highest TEA and equal proportions in access to entrepreneurial

activity. Therefore, it would be expected that gender (unlike in other contexts) is not a determining factor in relation to EI in the context analyzed.

Based on the previous discussion and in accordance with Figure 1, a set of three hypotheses are proposed for the Ecuadorian context:

Hypothesis 1 (H1). The female students show an EI level similar to male students in the Ecuadorian context.

Hypothesis 2a (H2a). The female students show a level of PA towards EI similar to male students in the Ecuadorian context.

Hypothesis 2b (H2b). The female students show a level of SN similar to male students in the Ecuadorian context.

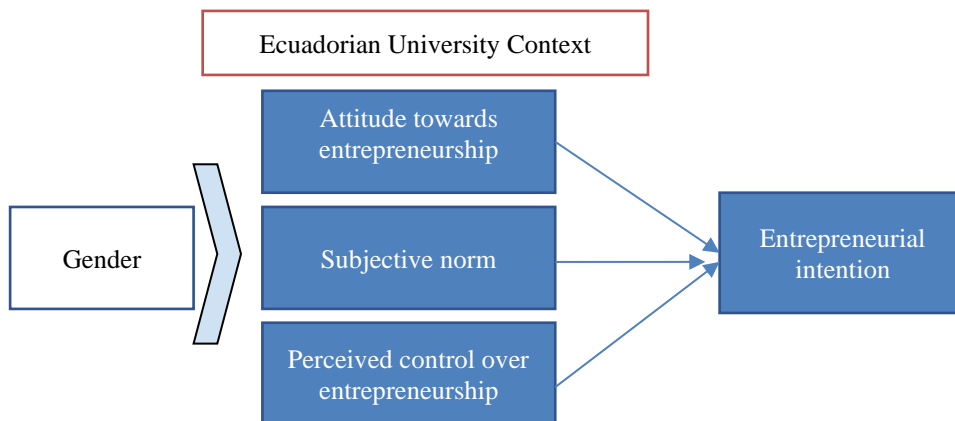
Hypothesis 2c (H2c). Female students show a level of PBC similar to male students in the Ecuadorian context.

Hypothesis 3a (H3a). Male (female) students in higher education have a similar relationship between individual attitudes and EI.

Hypothesis 3b (H3b). Male (female) students in higher education have a similar relationship between the subjective norm and EI.

Hypothesis 3c (H3c). Male (female) students in higher education have a similar relationship between perceived control and EI.

Figure 1. Theory of planned behavior (TPB) and gender in the Ecuadorian university context



Source: adapted from Ajzen (2002)

### 1.6. Control variables

The above hypotheses are tested by taking into account a series of control variables, both sociodemographic (age, professional experience, degree, and stage of studies) and the environment (existence of a family member) that the literature has indicated are involved in cognitive processes, the relationship between determining factors and EI (Leiva, 2004). The student's degree variable is distributed between studies more prone to business creation (hereinafter ProBC) and those less prone to their creation (NoProBC).

## 2. Method

The study is developed from information collected at the University of Casa Grande (UCG), a private center in Guayaquil, Ecuador. The methodology is based on the empirical analysis of university students using an adaptation of the questionnaires used by Muñoz-Fernández et al. (2016) and García-Urbe et al. (2016). The draft was discussed with two entrepreneurship experts to validate its content. It was then tested in a reduced sample (n = 40), with gender representation in different degrees. The test confirmed its functionality. However, minor adaptations were included to adapt the wording to the Ecuadorian context.

The information in the questionnaire is divided into five sections. The first focused on the sociodemographic characteristics of the respondent (gender, age, stage of studies, university career, professional experience, and family businesses) with six questions. The second section includes statements about the EI of the participants and four questions. The third assesses the personal attitudes of students toward entrepreneurship with 13 items. The fourth comprises questions on normative beliefs about entrepreneurship four items. The fifth is related to the perceived control over entrepreneurship by the respondents, 13 items. Table 1 shows the variables used.

Table 1. Variables used in the analysis

Variable	Modality
Dependent Variable I am seriously considering starting my own business EI	Dichotomous variable. I intend to undertake an economic activity (1) / I do not intend to undertake an economic activity (0)
Behavioral variables towards the intention of the individual	
Attitude towards entrepreneurship AE	- Likert scale variable. I feel fulfilled when I can develop activities or behaviors related to the creation of companies (1 = completely disagree, 5 = completely agree)
Subjective norm SN	- Likert scale variable. My closest environment would support me in the idea of creating my own business (1 = completely disagree, 5 = completely agree), recoded in Dichotomous variable (1-3 = No; 4-5 = Yes)
Perceived control over entrepreneurship CP	- Likert scale variable. I enjoy I face continuous difficulties in a spirited and optimistic way (1 = completely disagree, 5 = completely agree), recoded in Dichotomous variable (1-3 = No; 4-5 = Yes)
Sociodemographic and environmental variables	
Gender	Dichotomous variable. Men (0) / Women (1)
Age	Continuous variable
Professional experience	Dichotomous variable. Works or has worked (1) / Has never worked (0)
Degree	Dichotomous variable. ProBC (1) / NoProBC (0)
Study stage	Categorical variable. Starting grade (0) / in the middle stage of the grade (1) / finishing grade (2)
Familiar businessman	Dichotomous variable. A close relative has started his or her own business (1) / No close relative has started his or her own business (0)

Source: *own compilation*

Reliability was calculated using Cronbach's alpha, reaching a score of 0.81, which allows us to conclude that the questionnaire is conceptually supported by the previous literature.

### 2.1. Sample and data collection

To have a faithful representation of the reality of the university studied, it was decided to apply a non-probabilistic and stratified sample selection procedure. For this purpose, the

questionnaire was applied based on the distribution of students among the different degrees of the Faculties of Administration and Political Science, Communication, and Education.

For data collection, students were asked to fill out a questionnaire in classrooms. They were first informed about the purpose of the research before requesting their participation in this research. One of the authors responsible for data collection administered the questionnaire to each student. The study was conducted over a period of two months: from August to September 2017.

Out of a total population of 1,347 enrolled students, 770 participated in the study. After a process of pre-evaluation and refinement of results (Hair et al., 2017), the sample was reduced to a total of 740 valid responses, yielding a coverage of 54.16%, which far exceeds the minimum estimated sample size of 605 individuals for a confidence level of 95% and a sampling error of 5%. Table 2 shows the sample distribution: 264 students from ProBC studies and 476 enrolled in NoProBC studies (mostly, communication sciences, 386). These samples were also tested for statistical significance at the 95% level.

Table 2. Sample calculation

Degrees taught	Population	Sample Mín. e = 5%	Sample obtained
ProBC	365	198	264
NoProBC	982	428	476
<b>Total number of students</b>	<b>1,347</b>	<b>626</b>	<b>740</b>

Source: *own calculation*

## 2.2. Applied statistical techniques

In the first stage, univariate descriptive analysis is carried out at the aggregate level and by gender. Next, a bivariate analysis is applied using contingency tables using the Chi-square statistic ( $\chi^2$ ) to verify the existence of significant differences between the dependent and independent variables.

Subsequently, a binary logistic regression model is used to jointly analyze the different theoretically proposed determinants of EI among university students. In line with previous studies (e.g., Contreras-Cueva & González-Morales, 2019), this technique is especially indicated for behavioral modeling at the individual level in binary forms, such as the presence or absence of EI, employing explanatory variables that can be both categorical variables (dichotomous or not) and continuous. In this way, the estimated coefficients for the explanatory variables allow us to interpret the effect exerted on the probability of occurrence of EI.

$$\text{logit (EI male / female)} = \beta_0 + \beta_1 \text{ attitude towards entrepreneurship} + \beta_2 \text{ subjective norm} + \beta_3 \text{ perceived control over entrepreneurship} + \beta_4 \text{ age} + \beta_5 \text{ professional experience} + \beta_6 \text{ degree} + \beta_7 \text{ stage of studies} + \beta_8 \text{ family businessperson} + e$$

The Hosmer and Lemeshow test is formulated to check the proposed model's goodness of fit. This test is widely used in logistic regressions, and its objective is to check whether the proposed model can explain what is observed. The criterion of the acceptable model is  $\text{sig} > 0.5$ . It is a test where the distance between what is observed and expected is evaluated.

### 3. Results

#### 3.1. Descriptive results and chi-square

The sample is made up of a more significant number of women than men, with 64.6% and 35.4%, respectively, which is in line with the actual distribution in the university center where the study is carried out. Table 3 reflects the distribution of the dependent variable (IE), the explanatory variables of the EI according to the TPB as the different control variables. In the case of variables such as subjective norm (NS), perceived control (PC), age, and professional experience, similar proportions are identified regardless of gender. Regarding differences by gender, EI is higher among men, with 70.2%, compared to 63.8% among women. However, women's attitude towards entrepreneurship (AE) is significantly higher. Concerning the control variables, the proportion of students in careers (ProBC) is higher among male students. In addition, there is a slightly higher proportion of women in higher grades. In their closest family environment, a more significant proportion of people are dedicated to entrepreneurial activities.

Table 3. Demographic characteristics of individuals

Categorical variables		Total %	Men %	Women %	p-valor ( $\chi^2$ )
EI	Yes	66.1	70.2	63.8	0.046**
	No	33.9	29.8	36.2	
Professional experience	Yes	50.9	51.5	50.6	0.438
	No	49.1	48.5	49.4	
Degree	ProBC	34.4	40.8	32.4	0.014**
	NoProBC	64.6	59.2	67.6	
Study stage	Initial	38.5	43.9	35.6	0.081*
	Intermediate	39.2	36.3	40.8	
	Final	22.3	19.8	23.6	
Familiar businessman	Yes	72.2	68.7	74.1	0.071*
	No	27.8	31.3	25.9	
Continuous variables and likert scale		Total Average	Men Average	Women Average	p-valor t-test
AE		4.5	4.4	4.5	0.010*
SN		2.2	2.3	2.1	0.107
CP		4.0	4.0	3.9	0.883
Age		20.9	21.0	20.9	0.925
Total		100.0	35.4	64.6	

\*p-valor < 0.10; \*\*p-valor < 0.05

Source: *own calculation*

#### 3.2. Multivariate logit analysis

Finally, the work addresses the previously hypothesized relationships simultaneously between the independent variables identified in the surveyed subjects and the dependent variable, IE (H3a-c). This is achieved through a binary logistic regression model (logit) that determines the response to EI regarding the probability of occurrence of the event in question.



In this case, the possible answers are categorized into two dichotomous alternatives: "interested in undertaking" / "not interested in undertaking."

One aspect to highlight is the degree of prediction of the model in relation to the observed results. On the one hand, it gives an account of the degree of sensitivity, which represents the correct percentages of affirmative answers, that is, if it is declared to have EI; on the other hand, the specificity shows the opposite. In the case of men, the sensitivity is high (100%), and the specificity is low (0%). In the case of women, it happens in a similar way, scoring high sensitivity (91.1%) and specificity scoring low (42.2%). These data indicate that the model scores highly for those who state they have EI and low for those who do not. The overall percentage is acceptable, with a level of success above 50% for men (73.4%) and women (63.8%).

The goodness-of-fit measures of the model on the collected data are shown in Table 4. In this sense, it is observed that the chi-square for the Omnibus test has a p-value  $<0.05$ , which indicates that the independent variables explain the dependent one. The Nagelkerke  $R^2$  (men = 0.189; women = 0.216) indicates the percentage the model can explain in each case concerning EI. Finally, the Hosmer and Lemeshow test is equal to 3.774 for men and 0.511 for women, so the model's fit in both cases is appropriate (sig.  $> 0.5$ ).

The relationship of the independent variables with the dependent or likelihood ratio is detailed below. Thus, to facilitate the interpretation of the coefficients, the effect of each dependent variable on the probability of EI is compared. Although not all the variables are significant enough to consider the existence of a relationship, the behavior of the variable can be observed through the sign of  $\beta$  and the strength of the relationship through  $\text{Exp}(\beta)$ .

The results in the case of men show that having behavioral attitudes highlights the attitude towards entrepreneurship (AE) which multiplies the EI by 1.6 times,  $\text{Exp}(\beta) = 1.595$ . Similarly, student confidence in the development of necessary skills and perceived control raises EI by 30%,  $\text{Exp}(\beta) = 1.305$ . However, the environmental influence does not affect student EI. Regarding the control variables, having professional experience versus not having it doubles the probability of developing EI,  $\text{Exp}(\beta) = 2.176$ , with the same sign, but to a lesser extent, having a family business influences EI, causing EI to halve  $\text{Exp}(\beta) = 1/0.481$ .

On the other hand, the results for women show, similarly to their peers, that having a positive attitude towards entrepreneurship doubles their EI,  $\text{Exp}(\beta) = 1.969$ ; Furthermore, the perceived control over the skills necessary to carry out a business activity has a high degree of influence on EI, even increasing it by 1.5 times,  $\text{Exp}(\beta) = 1.49$ . Regarding contextual variables, the following should be highlighted: age has a direct effect on EI, increasing by 13.6% ( $\text{Exp}(\beta) = 1.136$ ), for each additional year, the probability of developing EI; taking studies that predispose entrepreneurship to have a significant effect on the dependent variable, increasing by 66.9% ( $\text{Exp}(\beta) = 1.136$ ) the possibilities of developing an entrepreneurial vocation compared to those who carry out NoProBC studies. Furthermore, women see their EI significantly increased ( $\text{Exp}(\beta) = 1.797$ ) once they have completed their studies; having a family member, with an  $\text{Exp}(\beta) = 0.389$ , practically triples the probabilities of presenting an EI.

Table 4(a). Logit regression for EI in men

Men (N=261)						
Variable	$\beta$	ET	Wald	gl	p-value	Exp( $\beta$ )
AE	0.467	0.179	6.8	1	0.009**	1.595
SN	-0.076	0.112	0.457	1	0.499	0.927
CP	0.266	0.162	2.695	1	0.045**	1.305
Age	0.081	0.084	0.95	1	0.33	1.085
Professional experience	0.777	0.339	5.263	1	0.022**	2.176
Degree	0.409	0.319	1.648	1	0.199	1.505
Study stage (initial)			0.082	2	0.960	
Study stage (intermediate)	0.070	0.355	0.039	1	0.843	1.073
Study stage (final)	-0.051	0.475	0.011	1	0.915	0.950
Familiar businessman	0.780	0.315	6.142	1	0.013**	0.481
Constant	1.742	0.721	5.837	1	0.016**	0.175
-2 Log of the verisimilitude	251.824	R2 of Nagelkerke				0.189
Cox and R2 de Snell	0.134	Hosmer and Lemeshow test				3.774

\*p-value &lt; 0.10; \*\*p-value &lt; 0.05

Table 4(b). Logit regression for EI in women

Women (N=478)						
Variable	$\beta$	ET	Wald	gl	p-value	Exp( $\beta$ )
AE	0.678	0.153	19.523	1	0.000**	1.969
SN	-0.06	0.075	0.637	1	0.425	0.942
CP	0.399	0.124	10.283	1	0.001**	1.49
Age	0.127	0.06	4.443	1	0.035**	1.136
Professional experience	-0.197	0.243	0.654	1	0.419	0.822
Degree	0.512	0.241	4.512	1	0.034**	1.669
Study stage (initial)			3.582	2	0.167	
Study stage (intermediate)	0.353	0.252	1.956	1	0.162	1.423
Study stage (final)	0.586	0.331	3.144	1	0.076*	1.797
Familiar businessman	0.999	0.240	17.395	1	0.000**	2.716
Constant	3.122	0.569	30.118	1	0.000**	0.044
-2 Log of the verisimilitude	491.665	R2 of Nagelkerke				0.216
Cox and R2 de Snell	0.158	Hosmer and Lemeshow test				0.511

\*p-value &lt; 0.10; \*\*p-value &lt; 0.05

Source: own calculation

Considering the results by gender, a number of underlying similarities and differences in the determinants of EI between men and women are identified. In relation to the main factors of the TPB model for both men and women, the positive effect of the individual's attitudes and self-perception of capabilities appear as critical factors towards entrepreneurship. Furthermore, it is found that NS is not a significant predictor of EI for either men or women. In relation to the rest of the factors, the existence of a family member with entrepreneurial experience is a common element in determining the level of EI. For men, EI also tends to be influenced by previous professional experience. In contrast to men, women show a greater willingness to be entrepreneurial in relation to age, the choice of a degree that tends to develop EI-related skills and content, and the passage through the final stages of their studies are decisive in defining EI scores among women.

#### 4. Discussion and conclusions

In this work, the determining factors of EI have been identified in a large sample of university students whose education and training are considered important resources for achieving self-employment in the future. The study results show that, in emerging economies, such as Ecuador, there are very favorable cultural values for entrepreneurship and a high degree of parity in their rates. Even so, men present slightly higher EI than women at the university level. Regarding the determinants of EI, evidence is provided to enrich the discussion on gender differences. In this way, it is found that both SN and PBC are equally decisive for both men and women. Additionally, PA towards entrepreneurship, although it presents high values among both men and women, exerts a more significant influence on the determination of EI among the latter.

In this way, new evidence is thrown on previous research that study entrepreneurial intention under TPB's prism. Regarding entrepreneurial intention, it has been observed that, despite the high degree of parity in the Ecuadorian context, the results of the study do not correlate with previous evidence (GEM, 2018). Although high levels are shown in both groups, the students present a higher EI than the female students. In this way, H1 is rejected. This result can be better interpreted if it is taken into account that age, choice of a ProBC career, and stage of studies are positively correlated with EI among female students. In this way, it can be said that EI is reinforced with the passage of female students through the university institution.

Regarding H2 (a-c), the results are mixed. On the one hand, H2b and H2c are supported, and SN and PC have a similar impact between men and women; however, H2a is disproved, and PA is significantly higher among women. These results, compared to those obtained in H1, reveal the possible gap between the determinants and the intention itself. While women show attitudes and capacities toward entrepreneurship equal to or superior to men, these are not reflected in their motivation for entrepreneurship. The differences found compared to previous works may be due, according to Liñán and Chen (2009), to the specific cultural characteristics in which TCPB is applied, hence the importance seconded by various authors such as Shneor et al. (2013) on the need to expand the research to other types of economies such as the one studied.

Considering limitations, this study is based on data collected before the Covid-19 pandemic. In this case, the pandemic had likely affected students' behavior regarding entrepreneurial intention. However, evidence is still inconclusive about the impact of Covid-19. Further studies should focus on how the pandemic reconfigures the entrepreneurial behavior of students.

Finally, concerning H3 (a-c), the results are consistent with the hypothesized relationships. Thus, it is observed that for both genres, PA and PBC are determinants of EI, while SN is not. These results are consistent with Langowitz and Minniti (2007) regarding female PA towards entrepreneurship; Do Paço et al. (2015); Scherer et al. (1990) in relation to SN, and Soria et al. (2016) regarding the influence of PBC on entrepreneurship.

Bearing these considerations in mind, it is worth reflecting on the role of university teaching in fostering an entrepreneurial culture and reducing the gender gap and empowering women in Latin America. The values favorable to entrepreneurship do not crystallize equally in Ecuadorian society. According to the GEM 2018, the distribution of the educational level of new and nascent entrepreneurs in Ecuador is overwhelmingly among people with primary or secondary studies. It is much scarcer in individuals with post-secondary, university, and master's or doctorate training, the latter being precisely the ones who present lower rates of entrepreneurship by necessity. In this sense, not only as Martínez-García et al. (2019), it would be necessary to promote entrepreneurship from the early school stages, but also to reinforce this

promotion in the higher stages of education, even more so when it has been shown in the present research that the university institution has an important effect on the EI of the female students passing through their classrooms.

This study is not without limitations, it is a cross-sectional analysis, and the effects of the different components of TPB may be more visible in longitudinal studies that cover more extended periods. Furthermore, it would be interesting to replicate this study in different contexts and to be able to compare the results with the present investigation. It would also be interesting to know how many of the students with EI finally go on to real entrepreneurship.

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