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Article

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European Research on Management and Business Economics (ERMBE)

Provided in Cooperation with:
European Academy of Management and Business Economics (AEDEM), Vigo (Pontevedra)

Suggested Citation: Moreno-Gómez, Jorge; Gómez-Araujo, Eduardo; Ferrer-Ortíz, Daiwer; Peña-Ruiz, Ricardo (2022) : Gender perspective of parental role model influence on nascent entrepreneurs: Evidence from Colombia, European Research on Management and Business Economics (ERMBE), ISSN 2444-8834, Elsevier, Amsterdam, Vol. 28, Iss. 1, pp. 1-8, https://doi.org/10.1016/j.iedeen.2021.100156

European research on management and business economics 28 (2022) 100156

European Research on Management and Business Economics

www.elsevier.es/ermbe

Gender perspective of parental role model influence on nascent entrepreneurs: Evidence from Colombia

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ARTICLE INFO

Article History:
Received 27 October 2020
Revised 2 June 2021
Accepted 10 June 2021
Available online 23 December 2021

Keywords:
Nascent entrepreneur
Gender
Parental entrepreneurial role model
Entrepreneurship

JEL codes:
M13
J16

ABSTRACT

We examine the effect of parental entreprenurial role model in nascent entrepreneur's activity by gender perspective. We distinguish between father and mother entreprenurial role models and investigate how their influence on students' decision to become nascent entreprenuer activity is moderated by gender We employ a logit model on a sample of 15.424 university students from Colombia GUESSS 2018. The findings show not only that the presence of parental entreprenurial role model impact the decision to become nascent entrepreneur, but also the effect of this impact is moderated by gender. This effect is significant in the case of father entrepreneurial role model. We discuss the implications of our findings for research on entrepreneurial families and parental role models.

1. Introduction

Currently, when analyzing the positive effects of entrepreneurial activity on economic growth and development of the countries, one of the main reasons for this influence is that entrepreneurship generates employment (Sedláček & Sterk, 2017; Mohan, Watson & Strobl, 2018; Bennett, 2019), innovation (Audretsch, Falck & Heblich, 2012; Maritz & Donovan, 2015; Lafuente & Gómez-Araujo, 2016; Almodóvar-González, Fernández-Portillo & Díaz-Casero, 2020) and competitiveness (Acs & Amoros, 2008; Ferreira, Fernandes & Ratten, 2017; Moreno-Gómez & Lafuente, 2019).

That is why countries and economies that want to grow seek to stimulate entrepreneurial activity. But there is no magic formula for successfully getting people to be entrepreneurial, the academy plays a decisive role in the analysis and planning of strategies for this purpose. In general, academic research has indicated that entrepreneurial activity is generated by three main factors: the individual (physiological and psychological traits, upbringing, education, attitudes, and skills, etc.), the environment (social, cultural, economic, and political factors), and the interaction between them. Precisely, there are multiple theories that help explain this interaction, theories such as the so-called push and pull factors (Amit & Muller, 1995; McClelland, Swail, Bell & Ibbotson, 2005; Segal, Borgia & Schoenfeld, 2005; Schjoedt & Shaver, 2007), formal and informal factors of institutional economic theory (North, 1990; Bruton, Ahlstrom & Li, 2010; Urbano & Alvarez, 2014), the theory of planned behavior (Ajzen, 1991; Armitage & Conner, 2001; Sieger, Fueglistaller,Zellweger & Braun, 2019), among many others.

Global entrepreneurship research groups have proposed that traits such as role models, risk aversion, social fear failure, and self-confidence, among others, are fundamental variables that allow the analysis of entrepreneurial activity precisely by integrating both the individual and the environmental factors (Sieger et al., 2019; Bosma et al., 2020). In this sense, a variable such as a role model stands out among other variables because it can be analyzed at both levels, in the individual and his or her social environment (Gnyawali & Fogel, 1994; Nowiński & Haddoud, 2019). The importance of role models in the entrepreneurial process has been highlighted in recent years by important academic, economic, and political world organizations such as Global University Entrepreneurial Spirit Students' Survey (GUESSS) (Sieger et al., 2019), Global Entrepreneurship Monitor

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https://doi.org/10.1016/j.iedeen.2021.100156

(GEM) (Bosma et al., 2020), the Organization for Economic Co-operation and Development (OECD, 2014) and the World Economic Forum (WEF, 2013), among many others.

This variable, the role model, applied to the field of entrepreneurship, is understood as the capacity of an individual to identify with and learn from the actions and behaviors of entrepreneurs with whom he/she relates, and this influences his/her entrepreneurial activity. Something very interesting when analyzing role model is that research has shown that its impact on the desire to be an entrepreneur is conditioned by other factors such as age (Geldhof et al., 2014; Gómez-Araujo & Bayon, 2017), gender (Bruni, Edelman, Manolova & Welter, 2014; Carter, Gartner, Shaver & Gatewood, 2003; Wyrwich, Stuetzer & Sternberg, 2016; Moreno-Gómez, Gómez-Araujo & Castillo-De Andreis, 2019), or kinship (Criaco, Sieger, Wennberg, Chirico & Minola, 2017), etc.

Precisely concerning kinship, in recent years some authors have highlighted the importance of the parental model in the decision of children to become entrepreneurs, especially this impact tends to be stronger in men than in women (Criaco et al., 2017; Moreno-Gómez et al., 2019; Nowiński & Haddoud, 2019). However, most of these studies have been carried out in developed countries and in regions such as Latin America, there is a lack of studies to corroborate these results (Urbano & Alvarez, 2014). Even countries in this region such as Colombia is an interesting case to carry out this type of research because historically it has a high rate of entrepreneurial activity and the gap between men and women entrepreneurs is increasingly decreasing (Varela Villegas et al., 2020). For the above, this study aims to examine the effect of parental entrepreneurial role models in nascent entrepreneurs' activity from a gender perspective.

Our study makes multiple contributions to the literature on entrepreneurship. First, this study contributes to the debate on under what conditions parental entrepreneurial role models impact an individual's propensity to become an entrepreneur and we generate evidence of this from a developing country. Second, we corroborate in the case of Colombia that the impact of parental entrepreneurial role models on the decision of children to become entrepreneurs differs by gender. Third, we differentiate between the entrepreneurial role models of the father and the mother and evaluate which of them has a greater influence on their children's decision to become entrepreneurs. And fourth, the results of this study could contribute to educators and policymakers to generate better strategies to promote entrepreneurship.

This article is organized as follows. The second section contains the literature review and hypotheses. The third section describes the data and methods used for the variables proposed for subsequent analysis. The fourth section continues with a presentation of the results of the empirical analysis. Finally, the fifth section presents the discussion and conclusions.

2. Literature review and hypotheses development

2.1. Gender and nascent entrepreneur

The academy considers gender as a social construct (Scott, 1986). In this social construction, women and men have historically played different roles. These roles applied to the economy led to men having a more predominant role than women; although these roles are gradually becoming more balanced in some nations, especially in developed countries, in developing countries the change is more delayed (Elam et al., 2019). Women historically have been ignored from job activity. They have been relegated not only because of the type of work they could do but moreover from the job that they could be in charge and the salaries they could obtain; all of which are generally lower than men's (Crofts & Coffey, 2017; Moreno-Gómez, Lafuente, & Vaillant, 2018; Moreno-Gómez & Calleja-Blanco, 2018).

Concerning entrepreneurship, scholars worldwide have shown that women present less entrepreneurial intention and activity than men (Elam & Terjesen, 2010; Estrin & Mickiewicz, 2011; Klyver, Nielsen, & Evald, 2013; Bruni et al., 2014; Goltz, Buche, & Pathak, 2015; Henry, Foss, & Ahl, 2016; Moreno-Gómez et al., 2019) and the number of women entrepreneurs is significantly lower than that of men (Minniti, 2010). Some researchers have tried to explain this phenomenon considering the individual, the environment, and the interaction between them. With respect to the individual's perspective, some studies mention that perceptual variables such as opportunity recognition (Terjesen & Amorós, 2010), self-confidence, fear of failure (Koellinger, Minniti & Schade, 2013), role model (Moreno-Gómez et al., 2019), self-efficacy, internal locus of control are important drivers on the entrepreneurial propensity; nevertheless, these variables do not impact equally on the two sexes (Hughes, Jennings, Brush, Carter & Welter, 2012; Murzacheva, Sahasranamam & Levie, 2020). And this is due in part to the role of women as a social construction has confined women to domestic and family tasks, creating a strong social and cultural barrier that prevents society from conceiving women as capable of creating and managing their businesses, which has negatively impacted women's self-confidence, beliefs and intention to dedicate themselves to the entrepreneurial activity (Langowitz & Minniti, 2007; Klyver et al., 2013; Molino, Dolce, Cortese & Ghislieri, 2018; Panda, 2018; Cho, 2019).

On the other hand, about the environmental perspective, there are two strong barriers for women to be involved in entrepreneurial activity in an economy; the first barrier is the social discriminations when faced with work or business activity (Estrin & Mickiewicz, 2011; Liguori et al., 2018; Moreno-Gómez & Calleja-Blanco, 2018), and Brush et al., (2019) even reveals that, within certain entrepreneurial ecosystems, women are at a disadvantage relative to men in the support they receive for start-ups.; and the second barrier is the lack of regulations and low political participation that benefit the female gender in the labor market or the business creation (Klyver et al., 2013; Goltz et al., 2015 Women, U. N.,2019; Foss et al., 2019). Also, in some cases policymakers pursuit to stimulate entrepreneurship sometimes focus their attention on women. However, these initiatives for women entrepreneurs necessarily do not contribute to social changes and gender equality (Pettersson, Ahl, Berglund & Tillmar, 2017).

Prior research indicates a men entrepreneurs have the advantage compared with women, emphasizing gender differences in entrepreneurial activity worldwide (Hughes et al., 2012; Murzacheva et al., 2020). The women preferences decreasing nascent entrepreneur rates (Alsos & Ljunggren, 1998; Marlow et al., 2012; Carter et al., 2015), because they prefer part-time self-employment, flexible working hours, and take care of the family (children education and home task). Also, Jayawarna et al. (2015) considered that these preferences limit the accrual on entrepreneurial competence compare with men, like managerial skills (Koellinger et al., 2013; Zolin et al., 2013; Foss et al., 2019), finance (Roper & Scott, 2009; Freel, Carter, Tagg & Mason, 2012; Cho, 2019). Furthemore, Zisser, Johnson, Freeman and Staudenmaier (2019) found that men nascent entrepreneurs have less levels of cooperation and openness than women nascent entrepreneurs.

Finally, from a human capital perspective, the nascent entrepreneurial activity could be affecting by opportunity recognition and entrepreneurial self-efficacy (Marvel, Davis & Sproul, 2016). Women are at disadvantage to their men peer in terms of both society and family reasons (Saridakis et al., 2014; Hughes & Jennings, 2020). Also, gender disparities in human capital may generate downside in the development entrepreneurial skills. Therefore, we expected taking into account contextual factors that there are differences in nascent entrepreneur activity between men and women in specific human capital or in general (Swail & Marlow, 2018). Given the above-related

literature and the arguments explained, we propose our first hypotheses:

H1. Entrepreneurial activity is greater among men than women

2.2. Parental entrepreneurial role model and nascent entrepreneur

Role models is one of the determinant drivers of an entrepreneurial career (Gnyawali & Fogel, 1994; Krueger & Brazeal, 1994; Bosma, Hessels, Schutjens, Van Praag, & Verheul, 2012; Wyrwich et al., 2016; Gómez-Araujo & Bayon, 2017). According to Shapiro et al. (1978). Role models refer to individuals whose actions, behavior, personality, and attributes are follow by others.

A nascent entrepreneur can be motivated when individuals cognitively process their learning, beliefs, and experiences to achieve a positive assessment of self-competence and desire for a self-employment career (Shapero, 1972). Shapero and Sokol, (1982) found that parents and family are one of the principal influencer to be a nascente entrepreneur.

Criaco et al. (2017) found that family represents an important part of the development and behavior in the entrepreneurial career choice and parents are the family members that are most probably influences in their decision to be self-employment. In the same line, Chlosta et al. (2012) showed that growing up in an entrepreneurial family provides the possibility to understand and learn from the self-employed parent serving as a role model and acquiring a practical preview experience of self-employment. Therefore, our second hypothesis is as follows:

H2. Having a parental role model increases nascent entrepreneur activity.

On the other hand, prior research shows that gender is an important factor that impacts role models differentially between men and women. Nascent entrepreneurs are considered generally as men's career options (Yang & del Carmen Triana, 2019). The lack of incentive or motivators decreases the probability that women iniciate a nascent entrepeneur career (Barnir et al., 2011). Parents' entrepreneurial role model impacts less on women to be a nascent entrepreneur than men (Gupta, Turban, Wasti, & Sikdar, 2009; Barnir, Watson, & Hutchins, 2011; Westhead & Solesvik, 2016). Therefore, the third first hypothesis is as follows:

H3. The positive relationship between the parental role model and nascent entrepreneur activity is moderated by gender

3. Method

3.1. Data and Sample

We used data from Global University Entrepreneurial Spirit Students Survey (GUESSS) Colombia 2018 (Martins et al., 2019). GUESSS[1] is a global survey that investigates entrepreneurial intentions and activities of University students. The survey examines students' the entrepreneurial motivation, attitudes, career intentions, family background, and student businesses as well as their future entrepreneurial visions. The data was collected through an online questionnaire applied to university students. In total 15.575 students from 33 Higher Education Institutions of the main Colombian cities took part in the GUESSS 2018. 85.5% of the participants were enrolled in a bachelor program and 14.5% were studying at the postgraduate level (master or Ph.D. program). The final sample was 15.424 students, after excluding observations with missing values for the dependent and independent variables for quantitative data analysis.

3.2. Variables

Dependent Variable: To identify nascent entrepreneurs (NE), students were asked the following question asked if they have already created their firm? to identify whether the students are nascent entrepreneurs (Mohan et al., 2018; Laspita, Breugst, Heblich, & Patzelt, 2012). To measure this variable, we coded as one (1) if students indicated that they have already created their firm, and zero (0) otherwise.

Independent variables: Our independent variables included in our analysis are *gender* and *parental role model. Gender* is a binary variable that it is coded one (1) for women and zero (0) for men. We measure *parental entrepreneurial role models* through the answer of the following of their family background (Are your parents self-employed?). This binary variable is subdivided. First, parental role model takes the value of one (1) for those students that the father or mother, or both are entrepreneurial and zero (0) otherwise. Second, we differentiate between father and mother entrepreneurial role model and, those students confronted with father role model was coded with one (1) and zero (0) otherwise (Chlosta *et al*., 2012; Criaco et al., 2017; Moreno-Gómez et al., 2019).

Control variables: we controlled for students' age (Gómez Araujo et al., 2017; Minola, Criaco & Obschonka, 2016, Moreno-Gómez et al., 2019) and field of study (Criaco et al., 2017; Moreno-Gómez et al., 2019). Age is a continuous variable that represents the age of the students and field of study with 12 dummy variables for the following fields: Arts / Humanities, Business / Management, Computer sciences / IT, Economics, Engineering (incl. architecture), Human medicine/ health sciences, Law, Mathematics, Natural sciences, Science of art, Social sciences.

4. Results

4.1. Descriptive results

The summary statistics of the independent and dependent variables are presented in Table 1, for the analysis of the 15.424 active university students from 2019. Results in Table 1 for the full sample indicate that most of the students are enrolled in Business / Management (35.3%) and Engineering (31.7%), programs and they are on average 24.1 years old. Moreover, findings show 15% of the sample manifest they have already created their firm (nascent entrepreneur). Observe that the rate of nascent entrepreneurs between men (15.6%) is significantly higher than that reported for women (14.4%). This results are in line with previos studies (Contín−Pilart & Larraza−Kintana, 2015; Mohan et al., 2018).

Also, Table 1 shows the descriptive statistics regarding the variables linked to parental entrepreneurial role models. The results indicate that 57.1% of the student have a parental entrepreneur role model (both of them or father/mother independently). The rate of father and mother entrepreneurial role model is 21.5% and 12.3% respectively. Moreover, the results in Table 1 reveal that the rate of paternal entrepreneurial role models among men (22.3%) is significantly higher (at 1% level) than that found among women (20.7%). In the case of the mother entrepreneurial role models variable, the results are in opposite hold compare with father entrepreneurial role model. The evidence indicates that 13% of men have a mother entrepreneurial role model and this rate is higher than the value reported by women (11.5%), however, this relation is non- significantly. These results are in line with those found by Chlosta et al. (2012) in eight

[1] GUESSS lead by the Swiss Research Institute of Small Business and Entrepreneurship of St. Gallen University (KMU-HSG) since 2003 and since 2016 together with the University of Bern. For more information see www.guesssurvey.org. Recently GUESSS data has been used in research articles (e.g., Zellweger et al., 2011; Laspita et al., 2012; Criaco et al., 2017).

Table 1
Descriptive statistics for the study variables.

	Full sample		Sub-sample of women		Sub-sample of men		
N	15.424		8.075		7.349		
Dependent variable	Mean	Sd	Mean	Sd	Mean	Sd	t
Nascent entrepreneur	0.150	0.357	0.144	0.352	0.156	0.363	1.9883**
Independet variables							
Gender	0.524	0.499					
Parental entrepreneurial role model	0.571	0.495	0.560	0.496	0.582	0.493	2.7072***
Father entrepreneurial role model	0.215	0.411	0.207	0.405	0.223	0.416	2.4540***
Mother entrepreneurial role model	0.123	0.328	0.130	0.336	0.115	0.319	-2.8778
Control variables							
Age	24.10	5.644	23.88	5.431	24.34	5.859	5.0639***
Type of study							
Arts / Humanities	0.031	0.174	0.039	0.194	0.022	0.148	-5.9592
Business / Management	0.353	0.478	0.395	0.478	0.307	0.461	-11.4643
Computer sciences / IT	0.032	0.176	0.012	0.107	0.055	0.228	15.3461***
Economics	0.038	0.191	0.041	0.197	0.035	0.184	-1.8342
Engineering and architecture)	0.317	0.465	0.220	0.415	0.420	0.494	27.3129***
Health sciences	0.068	0.253	0.095	0.293	0.039	0.194	-13.7535
Law	0.020	0.143	0.022	0.147	0.019	0.138	-1.1752
Mathematics	0.005	0.074	0.054	0.074	0.054	0.074	-0.0051
Natural sciences	0.024	0.154	0.027	0.162	0.022	0.146	-2.0493
Science of art	0.007	0.086	0.008	0.087	0.007	0.085	-0.2479
Social sciences	0.055	0.229	0.080	0.272	0.028	0.165	-14.3525

*** Significant at the 0.01 level.
** Significant at the 0.05 level.
* Significant at the 0.10 level.

German universities and contrary to those found by Moreno-Gómez et al. (2019) in the Colombia study.

It should be kept in mind that the gender distribution of the sample might be conditional on families' support to attend university. Although we lack specific information to identify this potential bias, notice that in the study sample the gender distribution is relatively even (women: 52.4% and men: 47.6%) which suggests that the potential bias linked to different families' support attitudes does not raise any methodological concern in our analysis.

4.2. Multivariate Results

To test the proposed hypotheses that focus on the importance of gender and parental self-employed role-models in explaining nascent entrepreneurs of university students, we employ a binary choice model (logit) considering the characteristics of the dependent variable used in this research. The full model used in this study has the following form:

$$NE_i = \beta_0 + \beta_1 gender_i + \beta_2 parentalentrepreneurialrolemodel_i + \beta_3 controlvariables_i + e_{it} \quad (1)$$

In Eq. (1), nascent entrepreneur (NE) is the dependent variable, β_j is the vector of coefficients estimated for the independent variables (j), and e_{it} is the logistically distributed error term computed for each observation in the sample (i). Control variables refer to student's age and field of studies. The findings for the empirical application are presented in Table 2.

In Table 2, model 1 present the results for the baseline model that considers the influence of gender and parental entrepreneurial role model on a nascent entrepreneur. Model 2 reports the result for the baseline model and introduces an interaction term among gender and parental entrepreneurial role model. Finally, model 3 presents the results for the full model that considers the joint impact of gender and the father and mother parental entrepreneurial role model.

The average VIF values for the logit model are reported in Table 2. We computed the average variance inflation factor (VIF) for all variables to address the threat of collinearity. In all model specifications, VIF values do not exceed 10, a generally accepted rule of thumb for assessing collinearity (Greene, 2003). The results of this diagnostic test do not raise collinearity concerns.

To test the hypothesis 1 and 2, Model 1 and 2 are used. Results reveal that the gender variable (model 1and 2: $b1$=-0.0196, p <0.01; b1=-0.0128, p >0.10) have a negative and statistically significant influence on nascent entrepreneur, but only for model 1. Parental entrepreneurial role model variable (model 1: $b2$=-0.0329, p <0.01; model 2: $b2$=-0.026, p <0.01) have a negative and statistically meaningful impact on nascent entrepreneur. To interpret the results correctly, we look at the marginal effects. The results show that among the sampled students, women are 1.96 and 1.28 percentage points less likely to be an entrepreneurial activity, compared to the probability of men (Model 1 and 2 in Table 2). Moreover, observe in model 2 we find have no impact on the nascent entrepreneur taking into account the interaction term between gender and parental entrepreneurial role model is not meaningful. For the control variables, the age and field of studies increase and decrease respectively, the probability of being a nascent entrepreneur.

The evidence suggests that the probability of the women to be nascent entrepreneur decreases by less of 1.96 percentage point, the odds of being an entrepreneur. Therefore, hypothesis 1, proposes that nascent entrepreneur activity is greater among men than women is supported. Likewise, our findings suggest that the probability of nascent entrepreneur decreases by 3.29 percentage points if the individual has a parental entrepreneurial role model, compared to the probability of individuals without a parental role model. Thus, hypothesis 2 stated that having a parental role model increases nascent entrepreneur among university students is not support. Overall, these results are against prior studies analyzing (Chlosta et al., 2012; Criaco et al., 2017; Moreno-Gómez et al., 2019).

The findings in model 3 show that gender (b1=-0.101, p >0.10) has a negative and non-significant influence on nascent entrepreneur. Father entrepreneurial role model (b2=0.0213, p <0.01) and mother entrepreneurial role model (b3=0.088, p >0.10) have a negative effect on a nascent entrepreneur. However, only the father's entrepreneurial role model is statistically significant. Moreover, the interaction has effect nascent entrepreneurs. For the control variables in model 3,

Table 2
Logit regression results: Gender, parental role models and nascent entrepreneur.

Variables	Model 1	Model 2	Model 3
Gender	-0.0196***	-0.0128	-0.0101
	(0.001)	(0.129)	(0.147)
Parental entrepreneurial	-0.0329***	-0.026***	
role model	(0.000)	(0.001)	
Father entrepreneurial			-0.0213**
role model			(0.038)
Mother entrepreneurial role			-0.0188
model			(0.161)
Interactions			
Parental entrepreneurial role		-0.0126	
model* Gender		(0.265)	
Father entrepreneurial			-0.0299**
role model* Gender			(0.044)
Mother entrepreneurial role			-0.0238
model*Gender			(0.129)
Control variables			
Age	0.0221**	0.0221**	0.0243***
	(0.015)	(0.015)	(0.007)
Arts / Humanities	-0.0669***	-0.0671***	-0.0658***
	(0.001)	(0.001)	(0.002)
Business / Management	-0.0439***	-0.0440***	0.0439***
	(0.000)	(0.000)	(0.000)
Computer sciences / IT	-0.0731****	-0.0731***	-0.0715***
	(0.000)	(0.000)	(0.001)
Economics	-0.0494***	-0.0493***	-0.0484***
	(0.009)	(0.009)	(0.010)
Engineering and architecture)	-0.639***	0.0639***	-0.0631***
	(0.000)	(0.000)	(0.000)
Health sciences	-0.0204	-0.0204	-0.0197
	(0.187)	(0.189)	(0.204)
Law	0.0129	0.1330	0.0134
	(0.530)	(0.518)	(0.515)
Mathematics	0.0042	0.0042	0.0011
	(0.907)	(0.909)	(0.976)
Natural sciences	-0.0160	-0.0162	-0.0142
	(0.437)	(0.432)	(0.482)
Science of art	-0.0956**	-0.0954**	-0.0962**
	(0.017)	(0.017)	(0.016)
Social sciences	-0.0280*	-0.0279*	-0.0274*
	(0.090)	(0.091)	(0.097)
Intercept	-1.710***	-1.7414***	-1.8649***
	(0.000)	(0.000)	(0.000)
VIF	1.03	1.50	1.55
Wald Test (Chi2)	103.09***	103.93***	106.55***
Log Likelihood	-6479.1958	-6478.527	-6476.8186
Observations	15.424	15.424	15.424

*** Significant at the 0.01 level,
** Significant at the 0.05 level,
* Significant at the 0.10 level.
Notes: Logit regression is the econometric technique used when the dependent variable is the entrepreneurial intentions. Robust standard errors are presented in brackets.

the age increases the probability of nascent entrepreneur, whereas field study decreases it, except for the student of Business / Management.

Finally, hypothesis 3 states that the positive relationship between the parental role model and nascent entrepreneur is moderated by gender is supported. Our results reveal that the probability of entrepreneurial activity decreases by 2.13 and 1.88 percentage points if the individual has a father and mother entrepreneurial role model respectively, compared to the probability of individuals without a parental entrepreneurial role model. We find a meaningful interaction between the presence of paternal role models and gender, but only with the father entrepreneurial role model.

In order to better understand these interactions, Fig. 1 displays the parental role model nascent entrepreneur relationship moderated by gender (model 2). This Figure shows that the relationship between parental role models-nascent entrepreneur is negative for all values of the moderating variable. The results suggest that the effect of paternal role model tends to be higher in men than women. Fig. 2 presents the parental role model- nascent entrepreneur distinguish between father and mother entrepreneurial role model relationship moderated by gender (model 3). The figure reveals that the relationship between father and mother entrepreneurial role model- nascent entrepreneur is negative for all values of the moderating variable. However, the results are shown in Figs. 1 and 2 allow us to confirm that the effect of interaction between the parental entrepreneurial role model- nascent entrepreneur and father entrepreneurial role model – nascent entrepreneur is statistically significant in the sample analyzed, but in the case of mother entrepreneurial role model-nascent entrepreneur is not statistically meaningful. For the above, we can affirm that the parental entrepreneurial role model affects the individual of the sample differently, dependently the gender of the entrepreneurial role model, be this father or mother. In our study, the father entrepreneurial role model hurts nascent entrepreneurs.

5. Discussion and conclusions

This paper aims to analyze the impact of parental entrepreneurial role models in gender nascent entrepreneurs in university Colombian. We use a logit model on a sample of 13.200 university students from Colombia GUESSS 2018-2019. Overall, our findings are consistent with previous studies that underline the differences between men and women in entrepreneurial activity (Henry, Foss, & Ahl, 2016; Moreno-Gómez et al., 2019). Furthermore, parental entrepreneurial role model influences their children the decision to become a nascent entrepreneur (Criaco et al., 2017; Holienka et al., 2017; Moreno et al., 2019).

The empirical evidence is conclusive about the differences in the entrepreneurial activity between men and women (Minniti, 2010). According to the literature, one of the reasons is associated with the disparities of opportunity women in the society compared with men. Women have been discriminated against and hampered their participation in the economy. Thus, gender social construction has generated to the women a negative and less favorable perception for entrepreneurship (Langowitz & Minniti, 2007; Elam & Terjesen, 2010).

In Colombia, the women's role does not differ from the conception that has been by society worldwide. The perception of Colombia women related with business opportunities is fewer than men (Henríquez Daza et al., 2010; Terjesen & Amorós, 2010; Soria et al., 2016) Moreover, the participation in labor and business activities is limited, because of the historical social discrimination that women have received (Posada & Rubio, 2015). On the other hand, our findings indicate that the parental entrepreneurial role model affects nascent entrepreneurs. This result is against prior research, which reports that the parental entrepreneurial role models promote and influence the perception of the individuals positively enhancing their attitudes, to contribute to children decision to initiate an entrepreneurial career (Chlosta et al., 2012; Criaco et al., 2017).

Moreover, the evidence shows that having a father or mother entrepreneur is a negative influence on the intention to be a nascent entrepreneur. However, only the father's entrepreneurial role model impacts the decision to be an entrepreneur. One reason for these results is that the parental entrepreneurial role model effect may vary across cultures and societies (Hofstede, 1980). Also, Criaco et al. (2017) found that the effect of paternal entrepreneurial role model is conditioned to individuals openness, while the influence of mother entrepreneurial role model does not. Finally Russel et al. (2003), found that father and son influences appear stronger compare with relation for mother and daughters supported in the social learning theory and entrepreneurial activity.

The results of this study have strong practical implications. First, we contribute to the literature on the field of

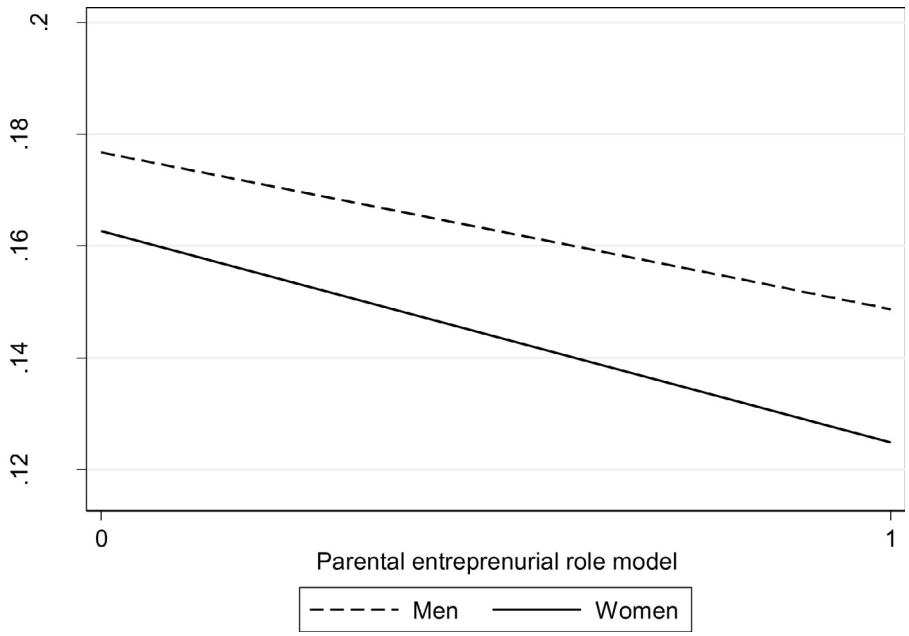

Fig. 1. Interactions (model 2) between parental entreprenurial role model- gender.Source: Authors' elaboration based on the study data.

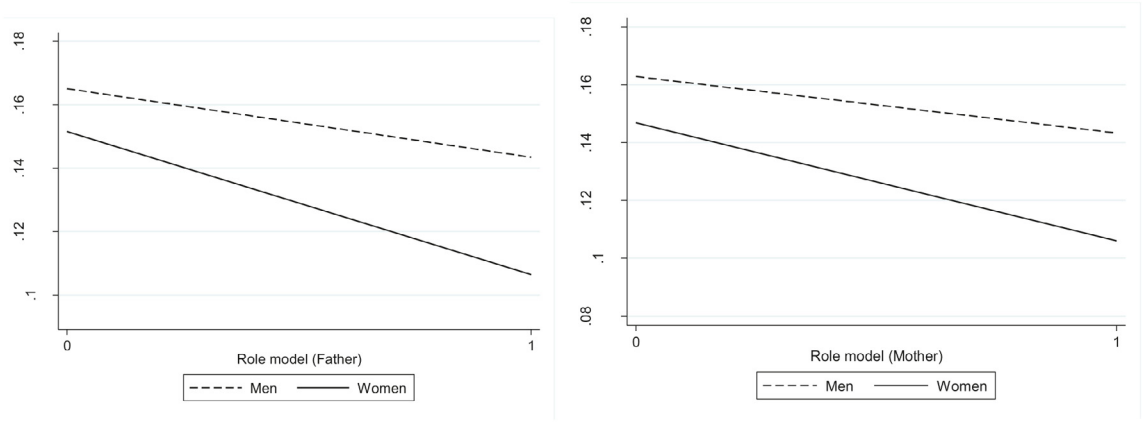

Fig. 2. Interactions (model 3) between father and mother entreprenurial role model- gender.Source: Authors' elaboration based on the study data.

entrepreneurship making emphasis on gender perspective and also complement existing literature on parental entrepreneurial role models and their influences on nascent entrepreneurs. Second, this study provides scientific knowledge and evidence from Latin American to contribute a better comprehension of the effect by gender of parental entrepreneurial role model in the nascent entrepreneur among university students. Third, we provide relevant information to universities president and policymakers that permit design strategies to promote entrepreneurial activity. These strategies must be the focus in the university context and parents' role to empower women and enhance their skills, their confidence, their motivation, their entrepreneurial competencies, and the environment-related with an entrepreneurial career. There are some limitations related to the study. First, data limitation for a single period. It is recommended for future research should lead to longitudinal research. Also, data limitations do not permit analysis in which way parental entrepreneurial role models contribute to increasing entrepreneurial activity. Second, we do not consider the impact of the certain features of the father or mother entrepreneurial role model, for instance, age, education, culture, experience to evaluate the link with the nascent entrepreneur. Third, our study must be replicated in another context different from Colombia to establish whether our results are similar to other developing countries.

References

Acs, Z. J., & Amorós, J. E. (2008). Entrepreneurship and competitiveness dynamics in Latin America. *Small Business Economics*, *31*(3), 305–322.
Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211.
Almodóvar-González, M., Fernández-Portillo, A., & Díaz-Casero, J. C. (2020). Entrepreneurial activity and economic growth. A multi-country analysis. *European Research on Management and Business Economics*, *26*(1), 9–17.
Alsos, G. A., & Ljunggren, E. (1998). *Does the business start-up process differ by gender. A Longitudinal Study of Nascent Entrepreneurs. Frontiers of Entrepreneurial Research*. Wellesley, MA: Babson College.
Amit, R., & Muller, E. (1995). Push" and "pull" entrepreneurship. *Journal of Small Business & Entrepreneurship*, *12*(4), 64–80.
Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology*, *40*(4), 471–499.
Audretsch, D. B., Falck, O., Feldman, M. P., & Heblich, S. (2012). Local entrepreneurship in context. *Regional Studies*, *46*(3), 379–389.

Barnir, A., Watson, W. E., & Hutchins, H. M. (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.

Bennett, D. L. (2019). Infrastructure investments and entrepreneurial dynamism in the US. *Journal of Business Venturing*, *34*,(5) 105907.

Bosma, N., Hessels, J., Schutjens, V., Van Praag, M., & Verheul, I. (2012). Entrepreneurship and role models. *Journal of Economic Psychology*, *33*(2), 410–424.

Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Levie, J., Tarnawa, A., , & the Global Entrepreneurship Research Association (GERA). (2020). *GEM 2019 /2020 Global Report*. London Business School, UK: GERA.

Bruni, A., Gherardi, S., & Poggio, B. (2014). *Gender and Entrepreneurship: An Ethnographic Approach*. Routledge.

Brush, C., Edelman, L. F., Manolova, T., & Welter, F. (2019). A gendered look at entrepreneurship ecosystems. *Small Business Economics*, *53*(2), 393–408.

Bruton, G. D., Ahlstrom, D., & Li, H. L. (2010). Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future? *Entrepreneurship Theory and Practice*, *34*(3), 421–440.

Carter, S., Mwaura, S., Ram, M., Trehan, K., & Jones, T. (2015). Barriers to ethnic minority and women's enterprise: Existing evidence, policy tensions and unsettled questions. *International Small Business Journal*, *33*(1), 49–69.

Carter, N. M., Gartner, W. B., Shaver, K. G., & Gatewood, E. J. (2003). The career reasons of nascent entrepreneurs. *Journal of Business Venturing*, *18*(1), 13–39.

Chlosta, S., Patzelt, H., Klein, S. B., & Dormann, C. (2012). Parental role models and the decision to become self-employed: The moderating effect of personality. *Small Business Economics*, *38*(1), 121–138.

Cho, E., Moon, Z. K., & Bounkhong, T. (2019). A qualitative study on motivators and barriers affecting entrepreneurship among Latinas. *Gender in Management*, *34*(4), 326–343.

Contín-Pilart, I., & Larraza-Kintana, M. (2015). Do entrepreneurial role models influence the nascent entrepreneurial activity of immigrants? *Journal of Small Business Management*, *53*(4), 1146–1163.

Criaco, G., Sieger, P., Wennberg, K., Chirico, F., & Minola, T. (2017). Parents' performance in entrepreneurship as a "double-edged sword" for the intergenerational transmission of entrepreneurship. *Small Business Economics*, *49*(4), 841–864.

Crofts, J., & Coffey, J. (2017). Young women's negotiations of gender, the body and the labor market in a post-feminist context. *Journal of Gender Studies*, *26*(5), 502–516.

Elam, A., & Terjesen, S. (2010). Gendered institutions and cross-national patterns of business creation for men and women. *The European Journal of Development Research*, *22*(3), 331–348.

Elam, A. B., Brush, C. G., Greene, P. G., Baumer, B., Dean, M., Heavlow, R., , & Global Entrepreneurship Research Association. (2019). *Women's Entrepreneurship Report 2018/2019*. Global Entrepreneurship Research Association.

Estrin, S., & Mickiewicz, T. (2011). Institutions and female entrepreneurship. *Small Business Economics*, *37*(4), 397–415.

Freel, M., Carter, S., Tagg, S., & Mason, C. (2012). The latent demand for bank debt: Characterizing "discouraged borrowers. *Small Business Economics*, *38*(4), 399–418.

Ferreira, J. J., Fernandes, C. I., & Ratten, V. (2017). Entrepreneurship, innovation and competitiveness: What is the connection? *International Journal of Business and Globalization*, *18*(1), 73–95.

Foss, L., Henry, C., Ahl, H., & Mikalsen, G. H. (2019). Women's entrepreneurship policy research: A 30-year review of the evidence. *Small Business Economics*, *53*(2), 409–429.

Geldhof, G. J., Malin, H., Johnson, S. K., Porter, T., Bronk, K. C., Weiner, M. B., & Damon, W. (2014). Entrepreneurship in young adults: Initial findings from the young entrepreneurs study. *Journal of Applied Developmental Psychology*, *35*(5), 410–421.

Goltz, S., Buche, M. W., & Pathak, S. (2015). Political empowerment, rule of law, and women's entry into entrepreneurship. *Journal of Small Business Management*, *53*(3), 605–626.

Gnyawali, D. R., & Fogel, D. S. (1994). Environments for entrepreneurship development: Key dimensions and research implications. *Entrepreneurship Theory and Practice*, *18*(4), 43–62.

Greene, W. (2003). *Econometric Analysis*. Pearson Education India.

Gómez-Araujo, E., & Bayon, M. C. (2017). Socio-cultural factors and youth entrepreneurship in rural regions. *Revista Brasileira de Gestão de Negócios*, *19*(64), 200–218.

Gómez Araujo, E., Manoj Chandra, B., & Moreno-Gómez, J. (2017). Regional variations of the impact of role models and fear of failure on entrepreneurship amongst the youth. *International Journal of Economic Research*, *14*(6), 377–389.

Gupta, V. K., Turban, D. B., Wasti, S. A., & Sikdar, A. (2009). The role of gender stereotypes in perceptions of entrepreneurs and intentions to become an entrepreneur. *Entrepreneurship Theory and Practice*, *33*(2), 397–417.

Henríquez Daza, M. C., Mosquera Sánchez, C. E., & Arias Sandoval, A. (2010). La creación de empresas en Colombia desde las percepciones femenina y masculina. *Econ. Gest. Desarro. Cali (Colombia)*, *10*, 61–77.

Henry, C., Foss, L., & Ahl, H. (2016). Gender and entrepreneurship research: A review of methodological approaches. *International Small Business Journal*, *34*(3), 217–241.

Holienka, M., Gal, P., & Kovačičová, Z. (2017). Drivers of student entrepreneurship in visegrad four countries: Guess evidence. *Central European Business Review*, *6*(2), 54–63.

Hofstede, G. (1980). *Culture's Consequences: International Differences in Work Related Values*. Beverly Hills, CA: Sage.

Hughes, K. D., Jennings, J. E., Brush, C., Carter, S., & Welter, F. (2012). Extending women's entrepreneurship research in new directions. *Entrepreneurship Theory and Practice*, *36*(3), 429–442.

Hughes, K. D., & Jennings, J. E. (2020). A legacy of attention to embeddedness in gendered institutions. *International Journal of Gender and Entrepreneurship*, *12*(1), 53–76.

Jayawarna, D., Jones, O., & Marlow, S. (2015). The influence of gender upon social networks and bootstrapping behaviors. *Scandinavian Journal of Management*, *31*(3), 316–329.

Klyver, K., Nielsen, S. L., & Evald, M. R. (2013). Women's self-employment: An act of institutional (dis) integration? A multilevel, cross-country study. *Journal of Business Venturing*, *28*(4), 474–488.

Koellinger, P., Minniti, M., & Schade, C. (2013). Gender differences in entrepreneurial propensity. *Oxford bulletin of Economics and Statistics*, *75*(2), 213–234.

Krueger, N., & Brazeal, D. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship: Theory and Practice*, *18*(3), 91–104.

Langowitz, N., & Minniti, M. (2007). The entrepreneurial propensity of women. *Entrepreneurship Theory and Practice*, *31*(3), 341–364.

Lafuente, E., & Gómez-Araujo, E. (2016). The territorial economic impact of entrepreneurial youthfulness. *Strategic Change*, *25*(2), 187–204.

Laspita, S., Breugst, N., Heblich, S., & Patzelt, H. (2012). Intergenerational transmission of entrepreneurial intentions. *Journal of Business Venturing*, *27*(4), 414–435.

Liguori, E. W., Bendickson, J. S., & McDowell, W. C. (2018). Revisiting entrepreneurial intentions: A social cognitive career theory approach. *International Entrepreneurship and Management Journal*, *14*(1), 67–78.

Maritz, A., & Donovan, J. (2015). Entrepreneurship and innovation: Setting an agenda for greater discipline contextualization. *Education+ Training*, *57*(1), 74–87.

Martins, I., Pérez, J., Álvarez, C., López, T., Moreno, J., & Hugueth, A. (2019). El espíritu emprendedor de los estudiantes en Colombia. *Resultados del Proyecto GUESSS 2018*.

McClelland, E., Swail, J., Bell, J., & Ibbotson, P. (2005). Following the pathway of female entrepreneurs: A six-country investigation. *International Journal of Entrepreneurial Behavior and Research*, *11*(2), 84–107.

Marlow, S., Hart, M., Levie, J., & Shamsul, M. K. (2012). *Women in Enterprise: a Different Perspective*. .

Marvel, M. R., Davis, J. L., & Sproul, C. R. (2016). Human capital and entrepreneurship research: A critical review and future directions. *Entrepreneurship Theory and Practice*, *40*(3), 599–626.

Minniti, M. (2010). Female entrepreneurship and economic activity. *The European Journal of Development Research*, *22*(3), 294–312.

Minola, T., Criaco, G., & Obschonka, M. (2016). Age, culture, and self-employment motivation. *Small Business Economics*, *46*(2), 187–213.

Mohan, P., Watson, P., & Strobl, E. (2018). Nascent entrepreneurs in Caribbean small island developing states: Opportunity versus necessity. *Journal of Developmental Entrepreneurship*, *23*(4), 1–18.

Molino, M., Dolce, V., Cortese, C. G., & Ghislieri, C. (2018). Personality and social support as determinants of entrepreneurial intention. Gender differences in Italy. *Plos One*, *13*(6), 1–19.

Moreno-Gómez, J., & Lafuente, E. (2019). Analysis of competitiveness in Colombian family businesses. *Competitiveness Review: An International Business Journal*, *30*(3), 339–354.

Moreno-Gómez, J., Gómez-Araujo, E., & Castillo-De Andreis, R. (2019). Parental role models and entrepreneurial intentions in Colombia. *Journal of Entrepreneurship in Emerging Economies*, *12*(3), 413–429.

Moreno-Gómez, J., Lafuente, E., & Vaillant, Y. (2018). Gender diversity in the board, women's leadership and business performance. *Gender in Management: An International Journal*, *33*(2), 104–122.

Moreno-Gómez, J., & Calleja-Blanco, J. (2018). The relationship between women's presence in corporate positions and firm performance: The case of Colombia. *International Journal of Gender and Entrepreneurship*, *10*(1), 83–100.

Murzacheva, E., Sahasranamam, S., & Levie, J. (2020). Doubly disadvantaged: Gender, spatially concentrated deprivation and nascent entrepreneurial activity. *European Management Review*, *17*(3), 669–685.

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge university press.

Nowiński, W., & Haddoud, M. Y. (2019). The role of inspiring role models in enhancing entrepreneurial intention. *Journal of Business Research*, *96*, 183–193.

OECD. (2014). *Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship*. The Hague, Netherlands: Final Report to OECD.

Panda, S. (2018). Constraints faced by women entrepreneurs in developing countries: Review and ranking. *Gender in Management: An International Journal*, *33*(4), 315–331.

Pettersson, K., Ahl, H., Berglund, K., & Tillmar, M. (2017). In the name of women? Feminist readings of policies for women's entrepreneurship in Scandinavia. *Scandinavian Journal of Management*, *33*(1), 50–63.

Posada, L. M. L., & Rubio, J. G. (2015). Entrepreneurship y género: Mitos y realidades de la mujer empresaria. *Revista Faccea*, *5*(1), 35–43.

Roper, S., & Scott, J. M. (2009). Perceived financial barriers and the start-up decision an econometric analysis of gender differences using GEM data. *International Small Business Journal*, *27*, 149–171.

Russel, J., Jarvis, M., Roberts, C., Dwyer, D., & Putwain, D. (2003). *Angles on Applied Psychology*. Nelson Thornes.

Saridakis, G., Marlow, S., & Storey, D. J. (2014). Do different factors explain male and female self-employment rates? *Journal of Business Venturing*, *29*(3), 345–362.

Schjoedt, L., & Shaver, K. G. (2007). Deciding on an entrepreneurial career: A test of the pull and push hypotheses using the panel study of entrepreneurial dynamics data. *Entrepreneurship Theory & Practice*, *31*(5), 733–752.

Scott, J. (1986). Gender: A useful category of historical analysis. *The American Historical Review*, *91*(5), 1053–1075.

Shapero, A. (1972). The process of technical company formation in a local area. In A. C. Cooper, & J. L. Komives (Eds.), *Technical Entrepreneurship: A Symposium, Center for Venture Management* (pp. 63–95) Milwaukee, WI.

Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. In C. Kent, D. Sexton, K. Vesper (Eds.), *Encyclopedia of Entrepreneurship* (pp. 72–90).
Shapiro, E. C., Haseltine, F. P., & Rowe, M. P. (1978). Moving up: Role models, mentors, and the patron system. *Sloan Management Review*, *19*(3), 51 (Pre-1986).
Sedláček, P., & Sterk, V. (2017). The growth potential of startups over the business cycle. *American Economic Review*, *107*(10), 3182–3210.
Segal, G., Borgia, D., & Schoenfeld, J. (2005). The motivation to become an entrepreneur. *International Journal of Entrepreneurial Behaviour and Research*, *11*(1), 42–57.
Sieger, P., Fueglistaller, U., Zellweger, T., & Braun, I. (2019). *Global Student Entrepreneurship 2018: Insights From 54 Countries*. St.Gallen/Bern: KMU-HSG/IMU.
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 & Innovation*, *11*(3), 67–76.
Swail, J., & Marlow, S. (2018). Embrace the masculine; attenuate the feminine'—gender, identity work and entrepreneurial legitimation in the nascent context. *Entrepreneurship & Regional Development*, *30*(1-2), 256–282.
Terjesen, S., & Amorós, J. E. (2010). Female entrepreneurship in Latin America and the Caribbean: Characteristics, drivers and relationship to economic development. *The European Journal of Development Research*, *22*(3), 313–330.
Urbano, D., & Alvarez, C. (2014). Institutional dimensions and entrepreneurial activity: An international study. *Small Business Economics*, *42*(4), 703–716.
Varela Villegas, R., Moreno Barragán, J. A., Soler Libreros, J. D., Pereira Laverde, F., Osorio Tinoco, F. F., Gómez Araujo, E., & Gómez Núñez, L. (2020). *Dinámica de la Actividad Empresarial en Colombia*. Cali, Colombia: Editorial Universidad ICESI.
Westhead, P., & Solesvik, M. Z. (2016). Entrepreneurship education and entrepreneurial intention: Do female students benefit? *International Small Business Journal*, *34*(8), 979–1003.
Women, U. N. (2019). *Progress of the World's Women 2019–2020*. USA: Women, U. N ISBN: 978-1-63214-156-9.
Wyrwich, M., Stuetzer, M., & Sternberg, R. (2016). Entrepreneurial role models, fear of failure, and institutional approval of entrepreneurship: A tale of two regions. *Small Business Economics*, *46*(3), 467–492.
World Economic Forum. (2013). *Entrepreneurial Ecosystems around the Globe and Company Growth Dynamics: 11*Ginebra, Zurich: World Economic Forum.
Yang, T., & del Carmen Triana, M. (2019). Set up to fail: Explaining when women-led businesses are more likely to fail. *Journal of Management*, *45*(3), 926–954.
Zellweger, T., Sieger, P., & Halter, F. (2011). Should I stay or should I go? Career choice intentions of students with family business background. *Journal of Business Venturing*, *26*(5), 521–536.
Zisser, M., Johnson, S., Freeman, M., & Staudenmaier, P. (2019). The relationship between entrepreneurial intent, gender and personality. Gender in management". *An International Journal*, *34*(8), 665–684.
Zolin, R., Stuetzer, M., & Watson, J. (2013). Challenging the female underperformance hypothesis. *International Journal of Gender and Entrepreneurship*, *5*(2), 116–129.