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Research article

International entrepreneurship and Mexican listed family firms' CEO/Board characteristics

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Abstract

The objective of this research is to analyze the influence on international entrepreneurship of both Chief Executive Officers (CEOs) and board of directors' traits. It takes into account 52 listed family firms in Mexico (2001-2015), an emerging market where ownership concentration is particularly high. Results obtained from a binary probit model show that family involvement reduces the odds of pursuing foreign endeavors. However, when the CEO has a business administration academic background, the probability of having subsidiaries or branches abroad rises considerably. Finally, there is evidence that the presence of women on boards reduces the odds of international entrepreneurship.

Keywords: quantitative analysis, international entrepreneurship, family firm, Mexico.

Emprendimiento internacional y características de los Consejos de Administración y Directores Generales de las empresas familiares listadas en México

Resumen

El objetivo de este trabajo es analizar la influencia tanto de características de los Directores Generales (CEO, por su sigla en inglés) como de los consejos de administración, en el emprendimiento internacional. Se contemplan 52 empresas familiares listadas en México (2001-2015), un mercado emergente donde la concentración de la propiedad es particularmente alta. Los resultados obtenidos a partir de un modelo probit binario muestran que la participación de la familia reduce las probabilidades de internacionalización. No obstante, cuando el CEO tiene formación académica en negocios, la probabilidad de tener filiales o sucursales en el extranjero aumenta. Finalmente, hay evidencia que la presencia de mujeres en los consejos reduce las probabilidades de emprendimiento internacional.

Palabras clave: análisis cuantitativo, emprendimiento internacional, empresa familiar, México.

Empreendedorismo internacional de empresas familiares mexicanas listadas e características do CEO / Conselho de administração

Resumo

O objetivo deste trabalho é analisar a influência das características dos Gerentes Gerais (CEO) e dos conselhos de administração, no empreendedorismo internacional. Existem 52 empresas familiares listadas no México (2001-2015), um mercado emergente onde a concentração de propriedades é particularmente alta. Os resultados obtidos a partir de um modelo probit binário mostram que a participação da família reduz as chances de internacionalização. No entanto, quando o CEO tem uma formação acadêmica nos negócios, a probabilidade de ter subsidiárias ou filiais no exterior aumenta. Finalmente, há evidências de que a presença de mulheres nos conselhos reduz as chances de empreendedorismo internacional.

Palavras-chave: análise quantitativa, empreendedorismo internacional, empresa familiar, México.

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1. Introduction

After Brazil, Mexico is the largest economy in Latin America (International Monetary Fund, 2017). It is also the leading export country in this geographical area. In 2017 Mexico's export value was 410 billion U.S. dollars (ranked 13th in the world), followed by Brazil with 215 billion U.S. dollars and coming 27th in the global ranking (The World Factbook, 2018). Although Mexico is a key player in the global arena, little research has been developed on Mexican companies' international entrepreneurship (IE).

International entrepreneurship is understood as the exploitation of business and financial opportunities present in external markets, in order to attain competitive advantages and increase profits (Oviatt & McDougall, 2005). IE is therefore a type of entrepreneurial activity that implies venturing into external markets. Internationalization opportunities take place whenever gaps in external markets can be filled by local companies (Karra & Phillips, 2004).

Entrepreneurship, including IE, is an strategy that depends on companies' top management and board of directors (Perks & Hughes, 2008). It has been documented that board diversity and certain Chief Executive Officer (CEO) characteristics favor entrepreneurship (Wincent, Thorgren, & Anokhin, 2014; Ahn, Minshall, & Mortara, 2017). Previous literature demonstrates a positive relationship between IE and top management international work experience, foreign education, and academic achievements (Zahra & George, 2002; Herrmann & Datta, 2005). However, related studies for family firms (especially for listed family-owned companies) are scarce (Wright, De Massis, Scholes, Hughes, & Kotlar, 2016; Ramón-Llorens, García-Meca, & Duréndez, 2017). This paper studies the influence of CEOs' and board members' attributes with regard to IE, taking into account large (listed) family firms in Mexico - an emerging market economy where most listed companies are family-owned, and where ownership concentration is above all high (on average 54%). Entrepreneurial behavior of family firms has a family and a firm level component (Martin & Lumpkin, 2003; Zellweger, Nason, & Nordqvist, 2012). The family element incorporates considerations of security and control, stability, and long-term orientation (Wright et al., 2016). Family involvement influences entrepreneurship (and IE), however the direction of this association is not trivial (Eddleston, Kellermanns, & Zellweger, 2010; Daspit, Chrisman, Sharma, Pearson, & Long, 2017).

The objective of this research is to determine the influence of CEO and board of directors' characteristics on international entrepreneurship (IE), taking into account listed family firms in Mexico. The pursuit of this type of entrepreneurship depends, among other factors, on the particularities of boards and top management. Specifically, the influence of board diversity (gender, independent directors, family and non-family members) and CEO characteristics (membership or non-membership of the family), tenure, international exposure, academic background and achievement) on international entrepreneurship are analyzed.

The present study contributes to the literature, as most

studies on international entrepreneurship deal with English-speaking economies (Meyer, Libaers, Thijs, Grant, Glanzel, & Debackere, 2014). Corporate governance practices of Mexican firms are quite different from those prevailing in English-speaking nations. Accounting principles, legal requirements, and information disclosure standards are stricter in those more developed countries. Mexican companies that intend to become international face greater costs, as they must meet more stringent requirements in terms of corporate governance. The latter somehow reduces the benefits of exploiting opportunities abroad. In addition, in Mexico a larger percentage of corporations are family owned, with higher ownership concentration and predominance of family members in strategic positions. It is not clear in the literature whether decision centralism and excessive power harms or helps entrepreneurial actions and firm performance (Molina-Parra, Botero-Botero, & Montoya-Restrepo, 2017). These, among other distinctive factors, influence international entrepreneurship (Bai, Tsang, & Xia, 2019).

The paper is organized as follows: section 2 reviews relevant literature on international entrepreneurship and CEO/Board characteristics, from which hypotheses are derived. Section 3 describes the data, variables, and methodology employed to test the hypotheses. Results are presented in section 4, and section 5 offers some conclusions.

2. Literature review and hypotheses

This section begins with a literature review on international entrepreneurship (IE -subsection 2.1). The relationships between IE and different CEO/Board characteristics are presented in subsections 2.2-2.5. The CEO/Board traits (variables) considered are family involvement, CEO tenure, foreign exposure, education, and board diversity (gender, independency, participation of non-controllers). Hypotheses were constructed for each of these variables and their relationship with IE.

2.1 International entrepreneurship (IE)

Entrepreneurship involves the ability and disposition to bear uncertainty and take advantage of business opportunities, developing new products or markets to increase profits (Venkataraman, 1997). Entrepreneurship deals with autonomy, competitive aggressiveness, innovation, proactivity, risk-taking, venturing, and strategic renewal (Lumpkin & Dess, 1996; Zahra, 1993). In an attempt to unify the definition for entrepreneurship, Sharma and Chrisman (1999) propose the following: "Entrepreneurship encompasses acts of organizational creation, renewal, or innovation that occur within or outside an existing organization" (p.17).

International entrepreneurship (IE) is a type of entrepreneurship that extends local boundaries. It seeks opportunities beyond domestic markets to increase competitiveness and returns. As such, internationalization is an entrepreneurial action, which involves innovation, risk-taking, and strategic change (Schumpeter, 1934). International entrepreneurship has been defined as "a combination

of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations" (McDougall & Oviatt, 2000, p. 903). IE includes "cooperative alliances, corporate entrepreneurship, economic development initiatives, entrepreneur characteristics and motivations, exporting and other market entry modes, new ventures and initial public offerings (IPOs), transitioning economies, and venture financing" (McDougall & Oviatt, 2000, p. 903).

International entrepreneurship involves both opportunities and challenges. It is a venture full of risks, where market and relational knowledge are vital (Casillas, Barbero, & Sapienza, 2015). IE comprises top management motivation, commitment, and firm preparation; generally companies gradually become international, although some follow a rapid path and others are born global (Wright & Etemad, 2001). The IE literature mentions three different internationalization dimensions: "time (to internationalization), market presence, and mode" (Dimitratos, Johnson, Plakoyiannaki, & Young, 2016, p. 1212).

2.2. Family involvement and international entrepreneurship

Family firms, compared to non-family companies, face both restrictions and advantages in order to become international (Calabró & Mussolino, 2013). Long-term orientation, high commitment, and a greater number of communication channels constitute positive family level components for IE. However, higher risk aversion and the search for alternative objectives (related to socio-emotional wealth) create barriers for IE. Therefore, the relationship between family involvement and IE is unclear (Daspit et al., 2017; Pukall & Calabró, 2014).

Within family firms, inconclusive evidence has been found which suggests that the presence of family members in strategic positions impacts international entrepreneurship. Internationalization is complex and full of uncertainties. Family-member CEOs tend to have better information and more experience in their companies than non-family CEOs. This provides knowledge that can be used for new insights and innovation (Le Breton-Miller, Miller, & Bares, 2015), which gives companies headed by family-member CEOs an advantage when undergoing internationalization (Weerawardena, Sullivan, Mort, Liesch, & Knight, 2007).

However, a family-member CEO might not have the adequate managerial skills in order to pursue international entrepreneurial acts (Pinheiro & Yung, 2015). Family CEOs might make more conservative strategic decisions, being more cautious about internationalization ventures (Binacci, Peruffo, Oriani, & Minichilli, 2016; Chirico & Nordqvist, 2010). Furthermore, family CEOs have limited exposure to the external environment, as most of their professional experiences lie within the family business. This limits CEOs' aptitudes when visualizing novel prospects and promotes the conservation of the status quo (Hambrick & Fukutomi, 1991). In contrast, a non-family CEO offers the firm additional contacts and managerial/market knowledge (Arregle, Hitt, Sirmon, & Very, 2007; Claver, Rienda, & Quer, 2009). The

nomination of a non-family CEO favours the adoption of more risky initiatives and stimulates decisions based on logic and rational analysis (Block, 2011). Accordingly, hypothesis 1 is proposed:

- H1: companies headed by family-member CEOs are less likely to become international.

2.3. CEO tenure and international entrepreneurship

Tenure is an indicator of experience and human capital; it enlarges the ability to process information and make decisions (Herrmann & Datta, 2005). Longer tenure facilitates the understanding and managing of complexities related to internationalization, which improves the odds of pursuing international entrepreneurship (Jaw & Lin, 2009; Rivas, 2012). In addition, CEO tenure is associated with firm-specific knowledge, deeper networks, and better internal communication channels, which are crucial for international expansion (Li, 2018).

Nevertheless, it has also been proven that long term CEOs avoid strategic changes (Finkelstein & Hambrick, 1996). The number of years that a CEO works with a firm is positively correlated with their preference to preserve the status quo (Hambrick & Fukutomi, 1991). Particularly in family firms, where risk-aversion is higher and decisions tend to be more conservative, CEOs' tenure can reinforce the obstacles in the way of international entrepreneurship. Therefore, hypothesis 2 is proposed:

- H2: CEO tenure is negatively associated with the probability of becoming international.

2.4. CEO Foreign exposure, education, and international entrepreneurship

CEOs' experiences abroad, by working in external markets and/or studying in foreign institutions, increases their knowledge and willingness to pursue international ventures (Wei & Ling, 2015). CEOs' international exposure relates to achievements in foreign language proficiency and travel experience, in addition to better tolerance and understanding of other cultures and ways of doing business (Andersen & Rynning, 1994; Zucchella, Palamara, & Denicolai, 2007). The latter reduces uncertainties from international endeavors and fomenta a global mindset (Hsu, Chen, & Cheng, 2013; Alayo, Maseda, Iturralde, & Arzubuaga, 2019). It has been emphasized that CEOs who have lived in other countries tend to export more and internationalize their companies faster than others (Reuber & Fischer, 1999). For these reasons, the following hypothesis is proposed:

- H3: the odds of international entrepreneurship are higher when CEOs have studied in foreign universities.

Education raises human capital (Peni, 2014). Management studies add knowledge, perspective, and understanding on how to run a business, and increase the willingness to exploit

growth opportunities present in external markets (Andersen & Rynning, 1994). A rigorous academic training favours the development of socio-cognitive skills, promoting the ability to learn and accept new ideas (Hitt & Tyler, 1991) and also becoming more open-minded towards other cultures (Herrmann & Datta, 2005). CEOs with elevated business educational qualifications are considered more adaptive and competent in implementing new strategies in response to changing market conditions (Goll, Johnson, & Rasheed, 2007). Education provides tools and opportunities in order to process information faster and make better decisions. The higher the educational level, the greater the possibilities for CEOs to analyse complex situations and manage risk effectively, which encourages entrepreneurship (including IE). Previous studies have proven that highly educated CEOs are more interested in internationalization (Amorós, Etchebarne, Torres-Zapata, & Felzensztein, 2016; Ramón-Llorens et al., 2017). Therefore, hypotheses 4 and 5 will be tested:

- H4: CEOs who are Business Administration graduates increase the odds of international entrepreneurship.
- H5: CEOs with postgraduate qualifications are more likely to internationalize their companies.

2.5. Board diversity and international entrepreneurship

Board diversity includes gender diversity, a combination of independent and non-independent board members, and a mixture of family and non-family directors. Board diversity has implications for the management of the firm and previous literature generally shows a positive effect on international entrepreneurship. Diversity implies different and complementary knowledge and abilities, which favors strategic complex decisions such as IE (Rivas, 2012; D'Angelo, Majocchi, & Buck, 2016; Alayo et al., 2019).

It has been argued that gender diversity can increase international entrepreneurship, as the presence of women on boards expands firms' competitive advantages due to their greater market understanding and the positive image they reflect on the customers (Ramón-Llorens et al., 2017). In addition, women complement male capabilities and skills, which stimulate IE (Kirsch, 2018). However, women tend to have less managerial and board experience than men, diminishing their potentially positive impact on international entrepreneurship (Dang, Bender, & Scotto, 2014). In addition, female business leaders tend to be more risk-averse than males, which can hinder internationalization (Amorós et al., 2016). This is particularly true in family firms, where females tend to adopt a more traditional, security-oriented role (Bianco, Ciavarella, & Signoretti, 2015). Therefore, hypothesis 6 is proposed:

- H6: female board representation negatively relates with internationalization odds.

Independent board members can bring international knowledge to the companies, in addition to external experiences and managerial abilities that positively influence

revenues and strategic orientation. Independent directors are able to reduce internationalization uncertainties, due to their industry and global experiences and expertise (Chen, Hsu, & Chang, 2016). Compared with family board members, outside directors tend to be less risk-averse and more eager to internationalize (Herrera-Echaverri, Geleilate, & Gaitan-Riaño, 2016). Independent board members pursue entrepreneurial objectives, without being directly involved in family issues or career progress concerns, which positively impacts internationalization efforts (Mitter, Duller, Feldbauer-Durstmüller, & Kraus, 2014; Min & Smyth, 2014). As these board members are mainly aware of their reputation in directors' labor markets, they look for profit-maximizing strategies, playing an active role in monitoring and advising top management and family entrepreneurs in order to succeed in international endeavors (Chen et al., 2016). Independent directors face less resistance to change and can influence family entrepreneurs with growth and diversification ideas, including internationalization (Kellermanns & Eddleston, 2006). Therefore, hypothesis 7 will be tested:

- H7: the greater the presence of independent board members, the higher the probability of international entrepreneurship.

Excessive family control can be detrimental for international entrepreneurship (Fernández & Nieto, 2005). A combination of family and non-family board members is required in order to take advantage of outsiders' resources, networks, knowledge and skills for the foreign expansion of family firms (Cerrato & Piva, 2012). External directors can extend family entrepreneurs' vision, in order to benefit from opportunities present in international markets (Ramón-Llorens et al., 2017). In addition, greater inclusion of outsiders on the board of directors signals more professionalization and better corporate governance arrangements, which aid in complex decisions such as those related to international entrepreneurship (Rivas, 2012). As such, hypothesis 8 is proposed:

- H8: the greater the percentage of non-family members on the board of directors, the greater the odds of international entrepreneurship.

3. Methodology

This section explains the data, variables, and methodology used in the study.

3.1. Data

For this research, annual balanced data for 89 non-financial companies quoted in the Mexican Stock Market from 2001-2015 is considered. Financial and state-owned companies were excluded in the dataset, given the differences in their shareholding structure and the fact that their strategies are significantly affected by government regulations.

The data derives from a prior research project financed by CONACYT, the Mexican Council of Science and Technology. It is the first and only detailed corporate governance dataset constructed for companies listed on the Mexican Stock Exchange (Bolsa Mexicana de Valores - BMV). The data compiled, referring to corporate governance, internationalization, and financial information, was obtained from companies' annual reports, which are available online from BMV. These reports were complemented by an extensive search to identify the final controllers of each company and consequently determine its familial or non-familial nature.

Among other aspects, the following data was recorded: the name of the CEO; board members' names, gender, and their participation as family, non-family or independent contributors; the top ten shareholders of the firm and their respective shareholdings; the education background of the CEO (Doctor of Philosophy - PhD, Master's, Bachelor - BA, or no university studies); the university which awarded the highest degree obtained by the CEO and the title of the degree pursued (for those with university studies); the CEO's number of years' experience within the firm; total assets; stockholders' equity; net income; and presence of subsidiaries or branches in foreign markets.

The average ownership concentration of these firms is 54%. Following previous literature for Mexico (San Martín-Reyna & Durán-Encalada, 2012), in this study a family business is defined as such when a family owns at least 51% of the firm's shares (52 companies fit this definition).

3.2. Variables

In accordance with the data compiled for Mexican listed family businesses, the following variables were constructed:

- Dependent variable: international entrepreneurship (IE). IE is approximated by a dichotomous variable, being 1 if during a particular year the company had subsidiaries or branches in foreign markets and 0 otherwise. On average, 57% of the companies studied participated in this type of foreign endeavour.
- CEO attributes: b1. Family affiliation (FA). This was measured by a dummy variable, being 1 if the CEO belongs to the family that owns the company (on average this is the case for 45% of CEOs), and 0 otherwise; b2. Tenure (TE). This refers to the number of years the CEO has worked in the firm (the mean value being 20 years); b3. International exposure (IX). This is approximated by a categorical variable, being 1 if the CEO studied abroad, and 0 otherwise (on average 34% of CEOs have attained foreign education); b4. Academic background (AB). This was constructed as a dummy variable, being 1 if the CEO majored in Business Administration (on average this is the case for 48% of CEOs), and 0 otherwise; b5. Academic achievement (AA). This is measured by a dichotomous variable, being 1 if the CEO pursued graduate studies (the mean value is 38%), and 0 otherwise.
- Board diversity: c1. Gender diversity (GD). This is measured as the percentage of board membership which is female (on average female participation on boards is only 4%); c2. Board

independency (BI). This was constructed as the percentage of independent directors on boards (the mean value being 44%); c3. Family vs. non-family members (FN). This indicates the percentage of non-controllers on boards (on average they correspond to 76% of board members).

- Control variables: d1. Firm size (FS). This is measured by the natural logarithm of total assets. d2. Return on equity (ROE). This variable reflects book value, and is calculated as net income over equity.

3.3. Methodology

The relationship between international entrepreneurship and CEO/board characteristics was empirically studied through a binary probit model. For this model, a significant positive (negative) sign on an independent variable's parameter indicates that greater values of the variable increment (reduce) the odds of international entrepreneurship. Heteroscedasticity was taken into account by employing QML (Huber/White) robust standard errors. Marginal effects were obtained for all significant explanatory and control variables (p -value<0.01). Hence, the following equation was formulated:

$$IE_{it} = \partial_0 + \partial_1 FA_{it} + \partial_2 TE_{it} + \partial_3 IX_{it} + \partial_4 AB_{it} + \partial_5 AA_{it} + \partial_6 GD_{it} + \partial_7 BI_{it} + \partial_8 FN_{it} + \partial_9 FS_{it} + \partial_{10} ROE_{it} + \mu_{it} \quad (1)$$

Where i refers to the company; t is time; IE corresponds to the dependent variable: international entrepreneurship; FA, TE, IX, AB, and AA are the CEO attributes: family affiliation, tenure, international exposure, academic background, and academic achievement; GD, BI, and FN stand for the board diversity variables: gender diversity, board independency, and family vs. non-family board members; FS and ROE are the control variables: firm size and return on equity; and μ is a random error term.

4. Results

4.1. Descriptive statistics

Table 1 shows descriptive statistics for the 780 observations recorded for Mexican listed family firms. The correlations between the variables are shown in Table 2. Most of the explanatory and control variables correlate significantly with family businesses' international entrepreneurship, measured by the dichotomous variable IE (being 1 if during a particular year the company had subsidiaries or branches in foreign markets). This finding validates the explanatory power of these variables on internationalization and justifies their inclusion in the model. The greatest correlations are between academic background (AB) and academic achievement (AA), and between academic achievement (AA) and international exposure (IX). However, in all cases the variance inflation factors are less than 10. The highest value is observed for AA (9.6), followed by IX (9.4); therefore, multicollinearity does not require any further treatment.

4.2. Econometric results

The econometric results of the relation between international entrepreneurship and CEO/board traits of listed Mexican family businesses are presented in Table 3. Marginal effects for the significant explanatory and control variables (p -value<0.01) are shown in Table 4.

Results indicate low family-level international entrepreneurship in Mexican listed companies. The probability of having subsidiaries or branches abroad declines 24% when the CEO is a family member and rises 6% with each 10% increment of non-controllers on the board. This finding suggests a family inclination towards security, stability, and tradition, counteracting firm-level IE behavior. This outcome contrasts evidence found for the U.K. and the U.S. (Wright et al., 2016; Zahra, 2003), where it has been documented that the presence of a family-member CEO positively impacts innovation and IE.

In addition, the probability of IE increases 42% when the CEO majored in business administration. This education background favours strategic planning and management. It facilitates information processing, reduces risk aversion, provides a stronger international outlook, enables visionary thinking, and opens the way to innovation (Durán,

Kammerlander, van Essen, & Zellweger, 2016; Christiansen, Joensen, & Rangvid, 2008; Dalziel, Gentry, & Bowerman, 2011).

Results also indicate that a 1% increment in female representation on boards decreases the likelihood of IE by 2%. Previous research suggests that gender diversity on boards facilitates entrepreneurship. It has been argued that women on boards promote a more positive environment, extend discussions on strategic matters, increase human capital, and reduce conflicts (Wilson, Wright, & Scholes,

Table 3. IE and CEO/Board traits binary probit model.

Variable	Coefficient		Std. Error
Constant	-5.51	***	2.09
FA	-0.80	***	0.27
TE	-0.01		0.01
IX	-0.44		0.31
AB	1.38	***	0.26
AA	0.42		0.31
GD	-6.55	***	1.51
BI	-0.17		0.88
FN	1.89	***	0.47
FS	0.21	***	0.08
ROE	-0.97		0.72
R-squared	0.34		
LR statistic	107.26		
Prob(LR statistic)	0.00		

*** Significant at 1% level

Source: own elaboration.

Table 4. Marginal effects

Variables	Effect
FA	-0.24***
AB	0.41***
GD	-1.97***
FN	0.57***
FS	0.06***

*** Significant at 1% level

Source: own elaboration.

Table 1. Descriptive statistics.

Variables	Minimum	Maximum	Average	S.D.
IE	0	1	0.57	0.50
FA	0	1	0.45	0.50
TE	0	60.0	19.93	11.01
IX	0	1	0.34	0.47
AB	0	1	0.48	0.50
AA	0	1	0.38	0.49
GD	0	0.3	0.04	0.07
BI	0.1	0.9	0.44	0.15
FN	0	1	0.76	0.21
FS	9.7	27.9	23.00	1.95
ROE	-1.6	1.3	0.07	0.21

Source: own elaboration.

Table 2. Correlation Matrix.

	IE	FA	TE	IX	AB	AA	GD	BI	FN	FS	ROE
IE											
FA	-0.31***										
TE	-0.14**	0.18***									
IX	-0.03	0.09	-0.03								
AB	0.34***	0.12*	0.01	-0.06							
AA	0.12*	0.29***	0.13**	0.37***	0.38***						
GD	-0.13**	0.09	0.35***	-0.18***	0.13**	0.19***					
BI	0.05	0.16**	-0.09	0.31***	0.13**	0.33***	-0.12				
FN	0.27***	-0.30***	-0.17***	0.27***	0.05	0.08	-0.02	0.26***			
FS	0.19***	-0.36***	0.05	-0.11*	-0.17***	-0.06	0.22***	-0.25***	-0.07		
ROE	-0.06	-0.15**	-0.07	-0.09	-0.12**	-0.26***	0.04	-0.06	-0.06	0.26***	

*** p -value < 0.01; ** p -value < 0.05; * p -value < 0.10.

Source: own elaboration.

2013; Huse, Nielsen, & Hagen, 2009). However, a recent paper (Sepúlveda & Bonilla, 2014) employing APS surveys from the GEM project for several Latin American countries shows that fear of failure, and therefore risk aversion, is higher for women than men.

Regarding control variables, company size positively relates with the probability of IE, while ROE does not show a significant effect on IE likelihood.

5. Conclusions

International entrepreneurship involves - among other factors - complex decision-making, effective risk management, international knowledge, and experience. Family firms, in particular those where ownership is highly concentrated, tend to be more conservative in terms of their strategy and risk orientation. In addition, their resources are limited as important business decisions and implementation rely mostly on family collaborators. This reduces the probability that the company will engage in international entrepreneurship.

In spite of the restrictions these family businesses face with regard to internationalization, their governance structure and executive attributes - which in this study are referred to as CEO/board traits - play an important role in determining the companies' international entrepreneurship. The literature emphasizes family involvement, executives' education and experience (as well as board diversity) as determinants for entrepreneurship, internationalization, and outcomes.

For this study, 52 non-financial family firms quoted in the Mexican Stock Exchange from 2001-2015 were considered. Of these, 57% had subsidiaries or branches in foreign markets. Mean ownership concentration for these companies was 54%, which is indicative of elevated family control. Results confirm that family involvement reduces the odds of pursuing foreign endeavors. On average, the presence of family-member CEOs decreases the probability of having subsidiaries or branches abroad by 24%. In addition, it was found that the probability of following this type of internationalization venture grows significantly by reducing the proportion of controllers in the board of directors.

Regarding executives' education, the results show that CEOs' academic backgrounds influence international entrepreneurship. In particular, CEOs that majored in business administration raise the probability of having subsidiaries or branches abroad by 42%. This educational background helps develop professional expertise and international perspective. It contributes to knowledge, vision, and understanding of the technical and theoretical concepts of international business administration. Business studies facilitate information-processing, complex decision-making, and open the way to innovation and internationalization. In addition, management training provides CEOs with better skills to deal with risk and balance the family's and company's objectives, making foreign ventures more attractive.

The results also show that the presence of female board members reduces the likelihood of international entrepreneurship. In Mexican listed family firms, women

have less managerial and board experience than men. It is a fact that for the 52 companies studied, there was not a single female CEO during the period 2001-2015. Additionally, on average only 4% of board members were women. The latter indicates that women play a more conservative, traditional, family-oriented, security role in these firms, which restrains internationalization decisions. It may also suggest that companies with higher inclination towards family objectives (related to socio-emotional wealth) are the ones that include women on their boards.

The present study contributes to the literature on international entrepreneurship by addressing listed family firms in an emerging market with extremely high ownership concentration. The international literature defines a family business as such, when the family controls between 10% (for English-speaking countries) and 25% (for the European Union) of shares. This research defines a family business as when a family owns at least 51% of the shares. Future research could separate family CEOs into founders and later generations, contrast internationalization undertakings considering family vs. non-family firms, and integrate into the study non-listed family businesses.

Conflict of interest

The authors declare no conflict of interest.

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