Received: 25 November 2019 | Revised: 25 June 2020 | Accepted: 28 June 2020

DOI: 10.1002/ijfe.2147

WILEY

RESEARCH ARTICLE

Leverage in family firms: The moderating role of female directors and board quality

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Funding information
Ministerio de Ciencia e Innovación, Grant/Award Number: PID2019-104304GB-I00; Spanish Ministry of Economy and Competitiveness, Grant/Award Number: ECO2016-77631-R AEI/FEDER UE

Abstract

Grounded in the agency, socioemotional wealth and resource dependence theories, we study how debt decisions are influenced by family control and how such relationship is moderated by an internal corporate governance mechanism, the quality of the board of directors. Our results show that family-controlled firms use more leverage at lower levels of family ownership to retain family control over the business, but once their socioemotional wealth is fulfilled at higher levels of ownership, they decrease leverage in pursuit of conservative financing policies. These actions are found to be moderated by board quality (i.e., experience and expertise) and female directors (predominantly independent).

KEYWORDS

board quality, family control, gender diversity, Latin America, leverage

1 | INTRODUCTION

Financing decisions relate to the firm's credit risk and, therefore, impact on the probability of corporate failure. Thus, it is key to understand the influence that certain types of shareholders exert on these decisions, as well as the mediating effect of corporate governance practices. Of particular relevance is the case of family owners who become risk-seeking influenced by the threat of losing their socioemotional wealth (SEW), favouring the increase in debt over the loss of equity (Keasey, Martinez, & Pindado, 2015). Therefore, it is their loss aversion rather than their risk aversion that influences their financing decisions. Once the family's SEW is fully reached (gain frame), they may follow a conservative attitude towards debt, reducing the probability of bankruptcy.

Schmid (2013) shows that the maintenance of control is very important to founders and their families, which directly influences the use of leverage. Therefore, given the particular non-economic characteristics that influence family members' decisions in a company, firms should count for corporate mechanisms that control these decisions, dismissing the firms' probability to fail and maximizing firm's value. In this sense, the composition and characteristics of boards of directors have been central to the debate that revolves around effective corporate governance mechanisms to reduce agency problems in the corporation as described by Jensen and Meckling (1976). In light of the wave of accounting scandals, the importance of the monitoring and advising role of the board of directors has been stressed (Adams & Ferreira, 2009). Hence, directors' experience (Hillman & Dalziel, 2003; Kroll, Walters, & Wright, 2008), connections (Horton, Millo, & Serafeim, 2012), risk preferences (Ferrero-Ferrero, Fernández-Izquierdo, & Muñoz-Torres, 2012) and affiliations (Anderson & Reeb, 2004; Westphal, 1999) become relevant when overseeing

corporate financial decisions that will serve in the interest of shareholders.

On the basis that equity holding is a proxy for the predisposition to dilute control, in this paper we hypothesize that family firms prefer to finance with debt up to the point where the threat of losing control is decreased (quadratic effect). We model such relationship using the characteristics of the board of directors as mediators of leverage decisions, particularly considering that family affiliation may impede directors' advisory role. Family firms benefit from board monitoring since the control function of the board protects the interest of non-family shareholders. Previous literature has found that boards of directors are significant in explaining differences in the way firms function and how they perform (Adams, Hermalin, & Weisbach, 2010; Khan, Al-Jabri, & Saif, 2019) and their effect on firm's reputation (Brammer, Millington, & Pavelin, 2009), highlighting the importance of the role of board of directors not only as monitors of management (Hermalin & Weisbach, 2001) but also as strategists to the selection of projects (Dominguez-Martinez, Swank, & Visser, 2008) such as, promoting strategic initiatives and taking strategic decisions (Minichilli, Zattoni, & Zona, 2009). Thus, the relevance of boards of directors in a corporation can be rationalized not only with agency theory but also in complement with resource dependence theory (Hillman & Dalziel, 2003). That is, efficient boards decrease agency costs by reducing the expropriation of resources through monitoring but also require the relevant experience in advising management effectively (Carpenter & Westphal, 2001; Valenti & Horner, 2020). Our study seeks to reconcile these perspectives in our theoretical framework to assess the moderating effect of the board of directors over actions from family-controllers. In this sense, we anticipate that boards play a role in setting corporate strategies (i.e., level of leverage) and provide imperative resources to the firm, such as fostering networks and connections (Finkelstein, Hambrick, & Cannella, 2009) and quality in the decisions made (Ferris, Jagannathan, & Pritchard, 2003).

Our research framework incorporates developments in the family business literature stressing the impact of social structures and social relationships on the behaviour of family firms. We test whether family firms are averse to dilute their control stake resulting in an increased leverage. To this end, we consider that the benefits of control might result from both having a large shareholding and holding a position in the board. Herein, we analyse the quadratic relationship between family ownership and leverage to test whether the family's leverage preferences change at different levels of ownership as a result of SEW incentives (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). Then, we consider boards' quality and gender diversity as corporate governance mechanisms that moderate the non-linear relationship between family control and leverage, considering that the influence of social relationships on family firms differ to those of non-family firms because of the controlling family's organizational and relational embeddedness in the firm (Bird & Zellweger, 2018). Finally, we observe that boards are endogenous because economic actors select them in response to financial and governance matters in the corporation (Hermalin & Weisbach, 2001). Therefore, our estimations are robust with the application of the system GMM, that, as explained by Khan et al. (2019), helps to control the autocorrelation, the heteroscedasticity and the issue of endogeneity.

Our research design captures firm ownership structure and corporate governance practices across countries by examining individual firms. To test our hypotheses, we employ data from six Latin American countries, which represent the largest stock markets of the region: Argentina, Brazil, Chile, Colombia, Mexico and Peru (187 non-financial firms and 1,108 observations over the period of 2005–2016). The Latin American corporate market is relevant for this research for various reasons. First, it is characterized by family control and a weak legal protection (Castro, Brown, & Báez-Díaz, 2009; La Porta, Lopez de Silanes, & Shleifer, 1999), which exacerbates the family opportunities for expropriation of resources (through self-benefiting decisions) and stresses the importance of internal corporate governance mechanisms to protect minority investors (i.e., board quality and composition). Second, specific institutional and cultural contexts are crucial to understand the impact of corporate governance (Aguilera & Jackson, 2003; Husted & de Sousa-Filho, 2019). Therefore, the "culture" of the region is relevant for the development of the analytical framework through the inclusion of the socioemotional wealth theory. Third, as studies based on USA or other developed economies do not apply to all regions, research on smaller markets is vital for the advancement of knowledge where is most needed. Therefore, as advocated by Aguilera and Crespi-Cladera (2016) and more recently by Gómez-Mejía, Basco, González, and Muller (2020), we further empirical evidence where research has been limited to study the relationship between family firms, the quality of the board and leverage. Our main findings show that family-controlled firms take more leverage as a financing decision. Such position changes at higher levels of family ownership, where the family's SEW is rich enough, and therefore leverage is decreased allowing for other more optimal sources of financing. In addition, we find support for the

moderating role of board of directors' quality as an effective corporate governance mechanism to maximize firms' wealth. In particular, more qualified and independent female directors balance family firms' preferences, inversely moderating the positive effect of family-controlled firms on leverage at lower levels of ownership, and vice versa at higher levels of family ownership.

We contribute to the current state of the art on family ownership and the role of an effective and gender diverse board in several ways. First, based on the SEW perspective, we tailor the willingness of family owners to take leverage at different levels of ownership that reflects whether the family's SEW is above or below the referent point. While previous research has studied the connection between family firms and leverage (Keasey et al., 2015), we further our analysis based on the non-financial motives of family firms (i.e., preserve family control) incentivized by their corporate ownership, indicating a non-linear relationship between leverage and family ownership. In addition, while Schmid (2013) and Chen, Dasgupta, and Yu (2014) focus on the role played by external corporate governance mechanisms in the capital structure of family firms, such as creditor monitoring and analyst coverage, respectively, we rely on the role played by the quality of the board of directors as an internal corporate governance mechanism. This extends the work of González et al. (2013) that delves into the family fear for losing control, which leads to higher debt levels, by providing an understanding on the internal mechanisms that can be useful to alleviate this fear and therefore, reduce leverage.

Second, we integrate the agency and resource dependence theories that explain the monitoring and advisory role of the board of directors, respectively. Both roles are needed for the effectiveness of the board as a good corporate governance mechanism that, in our context, its quality moderates the preferences of family firms for leverage, looking for the optimal level that allows firm's value maximization. Therefore, our analysis highlights that the quality of the board that encompasses monitoring and advising abilities enhances a board's decision-making process aligning board decisions and firm's outcomes (Güner, Malmendier, & Tate, 2008). Third, in light of Poletti-Hughes and Briano-Turrent (2019), we distinguish the role of female directors in the theory of boards of directors in family firms. That is, the power and legitimacy motives of family-affiliated-female directors and independent female directors influence their ability and efficacy for decision-making in the boardroom (Cruz, Justo, Larraza-Kintana, & Garcés-Galdeano, 2019). Therefore, we fill a gap in the knowledge and integrate the literature of gender diversity and the pivotal role of inside and outside directors' roles in the boardroom by considering that the heterogeneity of female directors is relevant to regulate corporate decisions in family firms (i.e., non-optimal leverage).

The rest of the paper is structured as follows. In the next section we explain our theoretical background and hypotheses. Second, we present the methodology. Third, we show the main results. Fourth, a conclusion and discussion section is presented. Finally, the last section contains some practical implications.

2 | THEORY AND HYPOTHESES DEVELOPMENT

2.1 | Leverage in family firms

Businesses have two main sources of financing: debt and equity. In a public company, the source of financing that represents the highest loss of control to the firm's shareholders is the issue of equity, since it leads to the dilution of their ownership. Thus, firms that are more averse to lose their control will prefer to be more leveraged. In this setting, financing firm's operations through debt as opposed to equity because of self-interest reasons is a way of expropriation of minority shareholders, which is predominant when there is separation of ownership and control (Shleifer & Vishny, 1997).

Family firms might use more debt than non-family firms with the purpose of growing the firm without diluting their ownership (Croci, Doukas, & Gonenc, 2011; Setia-Atmaja, Tanewski, & Skully, 2009). The aversion to lose control accentuates with SEW incentives. That is, family firms tolerate a loss in financial performance to achieve non-financial aims, such as the preservation of family control over the firm (Gómez-Mejía, Cruz, Berrone, & De Castro, 2011). Family businesses are less willing to dilute their ownership, which leads to a higher leverage, for several reasons. First, family firms usually invest their personal wealth in the business, thus they have an emotional connection that make family members have a longer horizon (Miller, Le Breton-Miller, & Scholnick, 2008) compared to other shareholders (e.g., institutional investors) and lead them to the desire of maintaining the family legacy over time. Second, family firms have greater *psychological ownership* (Liu, Wang, Hui, & Lee, 2012) and socioemotional endowment (Gómez-Mejía et al., 2007) than non-family firms, given their greater involvement, self-investment and knowledge over the firm. Third, family firms differentiate from non-family firms in their shareholder composition. Family companies represent a unique class of shareholders with undiversified portfolios (Anderson, Mansi, & Reeb, 2003) leading the family to higher commitment to

the company. Finally, family firms are characterized by the existence of dual-class stock and pyramidal ownership structures (Villalonga & Amit, 2010), which create a divergence between cash flow and voting rights and increases the power of the family to obtain its personal goals. Thus, the aversion to forfeit control (Mishra & McConaughy, 1999) relates to the commitment of the family to the business.

Family businesses can use their control position to pursue their own objectives, such as the appointment of a family member in a top management position, increase of their salary, diversion of resources to the family, continuation of the family legacy, etc. To maintain the family legacy, the family may be reluctant to dilute their ownership and use debt as their main source of financing. Long-term relationships and close ties of the controlling family with banks might also facilitate access to low cost of debt (Anderson et al., 2003). Family shareholders are characterized by connectedness and cohesiveness which impulses the collectivist as opposed to the individualist values (Falicov, 2001). The commune actions from family members centralizes control and limits negotiation with minority investors (Schneider, 2009), which consequentially aggravates the optimization of financing decisions in detriment of the firm's wealth maximization.

Hypothesis 1 Family control has a positive effect on leverage.

Companies with controlling shareholders with relatively small ownership have lower willingness to dilute control with the issue of equity, given their high commitment to the firm, as explained by the "non-dilution entrenchment effect" (Du & Dai, 2005). Under the SEW framework, the alternative of issuing debt versus equity depends on the preservation of firms' control in the family (Gómez-Mejía, Makri, & Kintana, 2010). Therefore, it follows that family-controlled firms with large ownership might choose financing decisions differently (Du & Dai, 2005), as the objectives of wealth maximization of the family and those of the firm align towards achieving an effective organizational structure (Anderson & Reeb, 2003). When the threat of losing control has been overcome through a large ownership stake (gain frame), family owners become conservative towards debt by issuing equity as it decreases the likelihood of financial distress (Mishra & McConaughy, 1999) and avoids bank scrutiny that disciplines borrowing through liquidation or renegotiation of loan contract terms (Fama & Jensen, 1983). Therefore, the incentives of family-controlled firms to use leverage reduce as ownership increases. This suggests a non-linear relationship between family ownership and leverage which intersects once the family moves from the loss to the gain frame. That is, family shareholders become less risk-seeking (lower leverage) when operating in a gain frame (when their desire level of SEW is above the reference level), leading to the following hypothesis:

Hypothesis 2 There is an inverted U-shape relationship of family ownership and leverage.

2.2 | The board of directors as a moderator of financing decisions in family firms

The increase in leverage for non-economical rather than optimal reasons that arises when family firms are loss averse intensifies the agency problem between majority and minority shareholders. The family business maintains higher leverage for self-interest reasons if three conditions hold: i) a motivation to issue debt instead of equity; ii) good access to debt; and iii) power to execute family decisions. The first and the second condition hold, as a result of the incentives of family business to maintain their stake in the business, and their access to debt at lower costs (Anderson et al., 2003; Pindado, Requejo, & de La Torre, 2015). However, the power of the family to expropriate minority shareholders and deviate from the optimal policy could be limited with effective corporate governance mechanisms (Boubaker, Nguyen, & Rouatbi, 2016).

The board of directors is one of the most useful internal corporate governance mechanisms (Denis & McConnell, 2003) to control the actions of the dominant shareholders, which in turn might reduce agency conflicts between minority and majority shareholders. Therefore, the relevance of the board of directors in strengthening the governance structure (Adams et al., 2010) is evident as a solution to discipline the actions of family-controllers.

2.2.1 | Board experience and expertise (directors' quality)

Resource dependence theory contends that the provision of resources is a function of board capital (Pfeffer & Salancik, 1978). Directors have different backgrounds that contribute to the value of their input in boards including both human and relational capital through their experience, education, reputation, expertise and networks (DeFond, Hann, & Hu, 2005; Ferris et al., 2003; Güner et al., 2008). The integration of agency and resource dependence theory is important since inside

directors may align their role to the family aims of retaining firms' control while outside directors might outsource the value of their human capital (Hillman & Dalziel, 2003). In other words, according to resource dependence theory, board capital is enhanced by boards' ability to monitor as opposed to boards' incentives to monitor. Therefore, by considering that both theories interact together, board capital is likely to moderate financing decisions in family firms as it impacts on both monitoring and the provision of resources.

Since directors' role is to safeguard shareholders' wealth, it follows that the integrity and quality of the directors is relevant to achieve an effective outcome in parallel with other aspects such as CEOs' influence and corporate ownership (Fairchild & Li, 2005). Literature has highlighted that directors' reputation signals quality, which is intrinsically indicated by directors' experience and connectedness (Ferris et al., 2003; Keys & Li, 2005). Likewise, multiple board appointments have been regarded as an indicator of directors' quality as serving on multiple board increases directors' experience (Fama & Jensen, 1983; Masulis & Mobbs, 2011). Hence the value of board capital is increased because of the link between directorships and experience.

Previous literature has highlighted that the effectiveness of the board of directors is mirrored by the directors' quality (Almeida, 2009). Therefore, the quality of the board is a corporate governance mechanism that aligns to the objectives of corporate wealth maximization (Denis & McConnell, 2003; Jensen & Meckling, 1976) which might moderate the family aversion to dilute control. Therefore, greater board quality will inversely moderate the effect of family ownership on leverage, leading to the following hypothesis:

Hypothesis 3 Board quality inversely moderates the effect of family ownership on leverage.

2.2.2 | Gender diversity

The economic benefits from gender diversity on boards of directors have been highlighted and explained through agency, resource dependence and human capital theories (Hillman, Withers, & Collins, 2009). In terms of these theories, it has been argued that the presence of female directors on the board increases the set of information and debate on decision-making (Francoeur, Labelle, & Sinclair-Desgagné, 2008); increases transparency through public disclosure (Gul, Srinidhi, & Ng, 2011); improves managerial monitoring which consequently impacts on financial performance and earnings quality (Sarhan, Ntim, & Al-Najjar, 2019; Srinidhi, Gul, & Tsui, 2011); and, increases market penetration as a result of greater understanding of the diverse range of customers and employees (Brammer, Millington, & Rayton, 2007; Campbell & Mínguez-Vera, 2008). These benefits are more relevant in countries where external corporate governance mechanisms are less developed and shareholders' protection is weak (Chong & Lopez de Silanes, 2007). In this setting, gender is significant for corporate decisions because a more diverse board is a better monitor of management and less likely to undermine the interest of shareholders (Carter, Simkins, & Simpson, 2003). Gender diversity on boards decreases the likelihood of value-destroying decisions made by overconfident directors (Huang & Kisgen, 2013) and drives growth by influencing the amount of capital to be allocated for investment opportunities at the time of an IPO (Badru, Ahmad-Zaluki, & Wan-Hussin, 2019). Therefore, since corporate decisions are made in the best interests of shareholders and female intervention has been found to positively moderate such decisions, it could be expected that the female directors on the board would improve the targets of financing to align them to those that bring the largest benefit. This effect is of particular importance in family firms because leverage levels may be influenced from ownership and compensation incentives (Berger, Ofek, & Yermack, 1997; Burkart, Panunzi, & Shleifer, 2003), encouraging family firms to prefer more leverage than optimal with the aim of protecting their undiversified wealth and reducing any prospect of a takeover (Harris & Raviv, 1988; Stulz, 1988).

Considering that the presence of independent directors is associated with a reduction of blockholder appropriation (Grosman, Aguilera, & Wright, 2019) and in light of the SEW framework of family firms, the roles of female directors differ accordingly to their involvement in the family objectives, distinguishing the benefits of independent and family-related female directors for board effectiveness (Poletti-Hughes & Briano-Turrent, 2019). As the attributes of female directors are relevant in exploring corporate strategic decisions (Bennouri, Chtioui, Nagati, & Nekhili, 2018) and the characteristics, qualifications and affiliations that these directors bring to the boardroom differ according to whether female directors are family-affiliated or independent (Ruigrok, Peck, & Tacheva, 2007), ceteris paribus their moderating impact on the relationship between family-controllers and leverage would differ. That is, supporting the interests of the controlling family through monitoring management vs. identifying effective actions to maximize value.

Therefore, in family-controlled firms, independent female directors are more likely to mediate leverage decisions; whereas non-independent female directors (family-affiliated) may align financing decisions to those of the family to preserve family ownership as explained by the SEW theory (Berrone, Cruz, & Gómez-Mejía, 2012).

This rationale is in line with Saeed, Mukkaram, and Belghitar (2019), who argue that the influence of board gender diversity on corporate outcomes develops according to contextual features, recognizing the importance of distinct institutional pressures (i.e., socio-cultural norms).

Based on the above discussion, leverage might be moderated by gender diversity on boards. The higher the family engagement is, the higher the likelihood of the family to pursuing its own goals resulting on an entrenchment effect accrued as private benefits of control at the expense of minority investors (Claessens, Djankov, Fan, & Lang, 2002). However, a gender diverse board would act as a corporate governance mechanism in moderating such agency problem, but for family-controlled firms, the significance of its impact would depend on whether the female director is independent or not, leading to the following hypotheses:

Hypothesis 4a Board gender diversity inversely moderates the effect of family ownership on leverage.

Hypothesis 4b In family-controlled firms, independent female directors are more effective in moderating the relationship of family ownership on leverage.

3 | METHODS

3.1 | Data and sample

Data on the board of directors' characteristics were gathered from Boardex and corresponds to all the available information of directors on boards for non-financial firms from Latin American countries with more than one firm available over the period of 2005–2016 (4,153 directors/18,767 observations). At a firm level, this data results in an unbalanced sample of 261 firms/ 1,553 observations. Data on the shares held by the family and firm's age were obtained manually from each firm's financial report and official website for each year. We match these firms with financial and market information available from DataStream, which reduces our sample to 187 firms/1,108 observations: Argentina (13), Brazil (91), Chile (19), Colombia (10), Mexico (49) and Peru (5). The number of companies included is significant to the size of the markets and is in line with other studies from the same region (Husted & de Sousa-Filho, 2019; Poletti-Hughes & Briano-Turrent, 2019).

3.2 | Model and variables

Following Flannery and Rangan (2006), we develop a partial adjustment model of leverage, where β_1 represents the adjustment coefficient, ranging from zero to one. A value of one would only happen in a perfect market and means that the business is totally adjusted to its target leverage. Our baseline model to test Hypothesis 1 is expressed in Equation 1:

$$Leverage_{it} = \beta_0 + \beta_1 Leverage_{i,t-1} + \beta_2 Family\ control_{i,t} + \varphi Control_{i,t} + Country_j + Industry_j + \eta_i + u_i + \varepsilon_{i,t} \quad (1)$$

Our main dependent variable is $Leverage_{it}$ defined by the book value of long-term debt to total assets. In this study, we implement multiple criteria to identify family firms. Following Khan, Muttakin, and Siddiqui (2015), $Family\ control_{i,t}$ is a dummy variable that takes value of one when at least 20% of the shares are controlled by a family (La Porta et al., 1999) and there is at least one family member who serves on the board as director, CEO or chairman. To determine whether family members are involved in the firm, we identify the founder for each of our companies from annual reports and establish whether the founder or his/her descendants are the CEO, Chairman or director of the board (Anderson & Reeb, 2003). We include in the model several control variables previously used in the literature (Flannery & Rangan, 2006; Keasey et al., 2015; Korajczyk & Levy, 2003; Rajan & Zingales, 1995). $Size_{i,t}$ is the log of total assets. $Tangibility_{i,t}$ is measured by fixed assets to total assets. Roa_{it} represents return on assets, defined as net income to total assets. $Market\_to\_book_{i,t}$ is the sum of market value of equity and book value of total debt divided by total assets. We also include $Volatility_{i,t}$, which is the volatility of returns and $Age_{i,t}$ which is the log of firm's age.

To test for the non-linear relationship between family control and leverage, as stated in Hypothesis 2, we introduce a continuous variable and its square. This model is expressed in Equation 2:

$$Leverage_{it} = \beta_0 + \beta_1 Leverage_{i,t-1} + \beta_2 Family\ share_{i,t} + \beta_3 Family\ share_{i,t}^{\ 2} + \varphi Control_{i,t} + Country_j + Industry_j + \eta_i + u_i + \varepsilon_{i,t} \quad (2)$$

$Family\ share_{i,t}$ is a continuous variable that represents the percentage of firm's shares held by a family. As robustness, we also include a second restrictive definition, $Family\ control_{i,t}$ that represents the family shareholdings only for companies where the family has effective control over the firm, that is, when $Family\ control_{i,t}$ takes value of 1.

TABLE 1 Summary statistics and correlation matrix

	M	*SD*	1	2	3	4	5	6	7	8	9	10
1. $Leverage_{it}$	0.23	0.15										
2. $Family\ share_{it}$	0.31	0.28	0.15***									
3. $Board\ experience_{it}$	20.75	4.50	0.04	0.31***								
4. $Board\ expertise_{it}$	4.92	0.89	0.04	−0.15***	0.08***							
5. $Females\ in\ board_{it}$	0.06	0.09	−0.02	0.06**	−0.14***	−0.12***						
6. $Size_{it}$	14.95	1.82	0.21***	−0.03	0.12***	0.14***	0.04					
7. $Tangibility_{it}$	0.37	0.23	0.23***	0.04*	−0.00	0.02	0.03	0.09***				
8. Roa_{it}	0.03	0.19	−0.05*	0.00	0.02	0.07**	0.05*	0.07**	−0.01			
9. $Market\_to\_book_{it}$	1.42	1.37	−0.21***	−0.01	−0.06**	0.19***	0.07***	−0.12***	−0.16***	0.18***		
10. $Volatility_{it}$	0.10	0.07	0.00	0.01	−0.10***	−0.10***	0.05*	−0.29**	−0.03	−0.26***	−0.07***	
11. Age_{it}	3.52	0.85	0.08***	0.05**	0.33***	−0.0	0.03	0.23***	0.07**	0.09***	−0.12***	−0.14***

Note: ***, ** and * denote coefficients that are significant at the 1, 5 and 10% level, respectively.

Parting from Equation 2, we develop the following model to test Hypotheses 3 and 4:

$$\begin{aligned} Leverage_{it} = {} & \beta_0 + \beta_1 Leverage_{i,t-1} \\ & + Family\ share_{i,t} * (\beta_2 + \beta_3 * moderator_{i,t}) \\ & + Family\ share_{i,t}{}^2 * (\beta_4 + \beta_5 * moderator_{i,t}) \\ & + \beta_6 moderator_{i,t} + \varphi Control_{i,t} + Country_j \\ & + Industry_j + \eta_i + u_i + \varepsilon_{i,t} \end{aligned} \tag{3}$$

For Hypothesis 3, $moderator_{i,\ t}$ is a variable that accounts for board quality, measured by board experience or expertise. These variables are obtained from a factor analysis explained in Appendix A. For Hypothesis 4a, $moderator_{i,\ t}$ is the ratio of the number of female directors on the board to total number of directors. This variable represents gender diversity of the board which increases in line with the increase of female directors. For Hypothesis 4b, $moderator_{i,\ t}$ can be the number of independent females to total number of directors; or the number of dependent females to total number of directors in the board.

We estimate the model by using a dynamic generalized method of moments (system GMM) to deal with endogeneity problems resulting from unobservable heterogeneity, simultaneity and dynamic endogeneity (Khan et al., 2019). The latter requires the inclusion of the lagged dependent variable to account for the possibility that contemporaneous ratios of female directors on the board are a function of past leverage (Wintoki, Linck, & Netter, 2012). System GMM enables to control for the individual effect (η_i) and for time heterogeneity (u_i). The second-order serial correlation tests (m2) indicates the absence of correlation between the residuals in first differences. The Hansen test indicates the absence of correlation between the instruments and the random disturbance. We present Wald tests under the null hypothesis of no joint significance of the explanatory variables (z1), the time dummy variables (z2), the country dummy variables (z3) and industry dummy variables (z4).

4 | RESULTS

Table 1 contains the main statistics of the variables included in the model and the correlation matrix. We find that on average families hold 31% of the companies' shares, the leverage ratio is 23% and boards have an average of 6% of female directors. As we can observe from the correlation matrix, correlations among the explanatory

TABLE 2 Differences of means tests

	All firms	Family-controlled	Non–family-controlled	t-statistic
No. Obs.	1,108	499	609	
$Leverage_{it}$	0.23	0.25	0.22	−3.13***
$Board\ experience_{it}$	20.75	22.88	19.00	−15.79***
$Board\ expertise_{it}$	4.92	4.86	4.98	2.19**
$Female\ directors_{it}$	0.06	0.06	0.06	−0.47
$Female\ independent\ directors_{it}$	0.02	0.01	0.02	5.24***
$Female\ dependent\ directors_{it}$	0.04	0.05	0.03	−3.98***
$Size_{it}$	14.95	14.91	14.99	0.74
$Tangibility_{it}$	0.37	0.38	0.37	−0.85
Roa_{it}	0.03	0.02	0.03	0.67
$Market\_to\_book_{it}$	1.42	1.34	1.50	1.93*
$Volatility_{it}$	0.10	0.10	0.09	−1.43
Age_{it}	3.52	3.61	3.44	−3.25***

Note: *** and * denote coefficients that are significant at the 1 and 10% levels, respectively.

variables are not very high. Furthermore, the variance impact factor is lower than 5 for all the explanatory variables, so the existence of multi-collinearity problems in our model is unlikely.

In Table 2 we present the differences of means of the main variables between family-controlled (45.04% of the observations) and non-family-controlled firms (54.96% of the observations). We find that family-controlled businesses have more leverage. This is in line with our theoretical arguments that establish that family firms are usually more attached to the business given their SEW and have greater motivation to finance with debt. We also find that family-controlled firms are older and have less growth opportunities, measured by the market to book ratio than non-family-controlled firms. With regards to the quality of the board, boards in family-controlled firms have lower expertise but higher experience. Finally, we observe that while there is no significant difference with regards to their gender diversity, when we split female directors by dependent and independent, family-controlled companies have more dependent but less independent female directors than non-family-controlled firms. Although, the ratios of female directors on boards are low, the percentage of companies with female directors at any time period are higher, which stand at 58.3% and 27.8% of the total of companies in our sample (i.e., 187) for female directors and independent female directors, respectively.

In Column 1 of Table 3, we obtain the results for Hypothesis 1 and find that the effect of family control on leverage is positive (0.051). Thus, we find support for H1 which establishes that family firms are less willing to dilute their ownership and prefer increasing their debt financing. In Column 2 we test Hypothesis 2, including the shares held by the family and its square. We find that while family owners have preference for debt at lower levels of ownership (0.269), for higher levels they change their aversion to issue equity to optimize the firm's leverage level (−0.210). That is, family owners increase leverage until they reach 64% of shares, and beyond this threshold they reduce it. In Column 3 we obtain the same results when we change the family's shares by the shares held only when the family has significant control over the business, with an inflection point of 89%.

Regarding the control variables, we find that leverage is positively related to size and Roa, since larger and more profitable firms are better able to obtain debt. Tangibility also increases leverage because companies with more tangible assets can use them as collateral and reach higher debt. Market_to_book is used as a proxy for investment opportunities and is negatively related to leverage, since companies with more opportunities to invest are more willing to issue equity. Finally, we find that more volatile and older companies are less leveraged. More volatile firms may find debt financing more costly, and firms in a younger life cycle stage may prefer to retain control and finance their investments with debt. In general, the sign and significance of the control variables remain unchanged for all the analyses.We test Hypothesis 3 in Table 4. We consider two measures of board quality, board experience and board expertise. The former includes the average age, time in the company and time in the board of all board members in a given company and year. Board expertise includes the average number of qualifications, directors who serve on other quoted boards and network size of all board members in a given company

TABLE 3 H1 and H2 family control and leverage

Dep. Var.: $Leverage_{i,t}$	H1	H2	H2
$Leverage_{t-1}$	0.766*** (0.021)	0.749*** (0.014)	0.746*** (0.018)
Family control dummy	0.051*** (0.003)		
Family share		0.269*** (0.023)	
Family share ^2		−0.210*** (0.030)	
Family control			0.141*** (0.014)
Family control ^2			−0.079*** (0.017)
Size	0.003*** (0.001)	0.003*** (0.000)	0.003*** (0.000)
Tangibility	0.029** (0.012)	0.031** (0.012)	0.046*** (0.007)
Roa	0.072*** (0.003)	0.074*** (0.004)	0.073*** (0.003)
Market_to_book	−0.002** (0.001)	−0.002** (0.001)	−0.001* (0.001)
Volatility	−0.067*** (0.024)	−0.039** (0.017)	−0.043** (0.016)
Age	−0.001 (0.001)	0.000 (0.001)	−0.001 (0.001)
Constant	−0.000 (0.015)	−0.037*** (0.011)	−0.010 (0.016)
Inflection point		64%	89%
z_1	896.19 (8)	761.52 (9)	1,302.47 (9)
z_2	7.12 (10)	8.09 (10)	8.33 (10)
z_3	11.49 (5)	30.07 (5)	17.19 (5)
z_4	4.91 (8)	12.20 (8)	5.22 (8)
m_2 (p-value)	(.822)	(.920)	(.842)
Hansen (p-value)	(.218)	(.463)	(.402)

Note: This table presents the coefficients (robust standard deviations) of the variables of the models, estimated by the system GMM. The dependent variable is leverage. Time, country and sector dummies are included but not reported. Standard errors are in parenthesis. z_1, z_2, z_3 and z_4 are Wald tests of the joint significance of the explanatory variables, the time, country and sector dummies, respectively, under the null of no relation, with the degrees of freedom in parenthesis. m_2 is a *second*-order serial correlation test using residuals in first differences, asymptotically distributed as N(0,1) under the null of no serial correlation. Hansen is a test of the over-identifying restrictions, asymptotically distributed as χ^2 under the null of no correlation between the instruments and the error term. ***, ** and * denote coefficients that are significant at the 1, 5 and 10% levels, respectively.

and year. These variables are defined in detail in Appendix A. In columns 1 to 3 we use board experience, while board expertise is considered in columns 4 to 6. In Column 1 we observe that the positive effect of family ownership on leverage (0.191) is reduced when the firm has a more experience board (0.185 = 0.191–0.006). In Column 2 we account for the non-monotonic effect of family ownership on leverage and the moderating role of board experience. We find that an experienced board lowers the motivation of family owners to increase leverage when they present lower levels of ownership (0.463 = 0.4777–0.014). In addition, for higher levels of ownership the conservative tendency of the family to reduce leverage is also balanced by an experience board who aims to find

the optimum financing level (−0.342 = −0.351 + 0.009). Therefore, board quality inversely moderates the relationship of family ownership and leverage, supporting Hypothesis 3. We obtain the same results when we consider board expertise in the model (columns 4 and 5). In columns 3 and 6 we substitute the variable family share

TABLE 4 H3 family control, board quality and leverage

Dep. Var.: $Leverage_{i,t}$	Board experience			Board expertise		
$Leverage_{t-1}$	0.814*** (0.014)	0.783*** (0.007)	0.791*** (0.009)	0.798*** (0.012)	0.787*** (0.006)	0.787*** (0.008)
Family share	0.191*** (0.018)	0.477*** (0.057)		0.070* (0.042)	0.544*** (0.061)	
Family share * board quality	−0.006*** (0.000)	−0.014*** (0.002)		−0.003 (0.008)	−0.068*** (0.011)	
Family share ^2		−0.351*** (0.061)			−0.664*** (0.072)	
Family share ^2 * board quality		0.009*** (0.002)			0.102*** (0.014)	
Family control			−0.049 (0.040)			0.468*** (0.048)
Family control * board quality			0.006*** (0.002)			−0.076*** (0.008)
Family control ^2			0.274*** (0.045)			−0.622*** (0.071)
Family control ^2 * board quality			−0.015*** (0.002)			0.119*** (0.013)
Board quality	0.000 (0.000)	0.001*** (0.000)	−0.001** (0.000)	−0.000 (0.002)	0.004** (0.001)	−0.000 (0.001)
Size	0.004*** (0.000)	0.005*** (0.000)	0.003*** (0.000)	0.003*** (0.000)	0.001*** (0.000)	0.002*** (0.000)
Tangibility	−0.008 (0.009)	0.014** (0.005)	0.037*** (0.004)	0.010 (0.009)	0.018*** (0.005)	0.034*** (0.004)
Roa	0.075*** (0.003)	0.078*** (0.002)	0.073*** (0.002)	0.073*** (0.003)	0.078*** (0.002)	0.079*** (0.002)
Market_to_book	−0.002** (0.000)	−0.003*** (0.000)	−0.001** (0.000)	−0.001 (0.001)	−0.001*** (0.000)	−0.002*** (0.000)
Volatility	−0.041** (0.018)	−0.045*** (0.013)	−0.036*** (0.010)	−0.029** (0.014)	−0.039*** (0.007)	−0.031*** (0.008)
Age	0.002 (0.001)	0.000 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	−0.002** (0.000)
Constant	−0.031* (0.016)	−0.068*** (0.013)	0.021** (0.008)	0.010 (0.018)	−0.013 (0.008)	0.026** (0.010)
z_1	790.66 (10)	3,108.90(12)	5,142.09(12)	1,621.67(10)	3,503.15(12)	10,369.45(12)
z_2	13.06 (10)	51.47 (10)	40.00 (10)	20.66 (10)	58.54 (10)	49.20 (10)
z_3	11.66 (5)	31.66 (5)	26.87 (5)	21.90 (5)	55.42 (5)	28.82 (5)
z_4	10.89 (8)	13.98 (8)	11.02 (8)	8.20 (8)	28.71 (8)	9.50 (8)
m_2 (p-value)	(0.872)	(0.889)	(0.896)	(0.857)	(0.898)	(0.800)
Hansen (p-value)	(0.716)	(0.639)	(0.747)	(0.735)	(0.548)	(0.657)

Note: This table presents the coefficients (robust standard deviations) of the variables of the models, estimated by the system GMM. The dependent variable is leverage. Time, country and sector dummies are included but not reported. Standard errors are in parenthesis. z_1, z_2, z_3 and z_4 which are Wald tests of joint significance, m_2 and Hansen test are explained in Table 3. ***, ** and * denote coefficients that are significant at the 1, 5 and 10% levels, respectively.

TABLE 5 Robustness H3 family control, board quality and leverage

Dep. Var.: $Leverage_{i,t}$	Age	Time in company	Time in board	Qualification	Number quoted boards	Network size
Leveraget-1	0.791***	0.763***	0.778***	0.750***	0.787***	0.754***
	(0.008)	(0.008)	(0.009)	(0.008)	(0.009)	(0.007)
Family share	0.005	0.257***	0.304***	0.622***	0.394***	0.359***
	(0.103)	(0.013)	(0.019)	(0.045)	(0.021)	(0.092)
Family share * board quality	0.004	−0.014***	−0.025***	−0.187***	−0.077***	−0.018
	(0.001)	(0.002)	(0.002)	(0.023)	(0.007)	(0.015)
Family share ^2	0.113**	−0.181***	−0.270***	−0.559***	−0.403***	−0.440***
	(0.109)	(0.018)	(0.022)	(0.052)	(0.024)	(0.099)
Family share ^2 * board quality	−0.005***	0.008***	0.022***	0.183***	0.096***	0.041**
	(0.001)	(0.002)	(0.003)	(0.028)	(0.008)	(0.016)
Board quality	−0.001***	0.003***	0.004***	0.028***	0.003***	−0.000
	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)	(0.002)
Size	0.005***	0.004***	0.005***	0.003***	0.001***	0.004***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tangibility	0.011**	0.026***	0.028***	0.042***	0.027***	0.017***
	(0.005)	(0.008)	(0.006)	(0.006)	(0.006)	(0.006)
Roa	0.077***	0.079***	0.078***	0.078***	0.077***	0.079***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Market_to_book	−0.001*	−0.003***	−0.002***	−0.001**	−0.002***	−0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Volatility	−0.027***	−0.056***	−0.053***	−0.061***	−0.045***	−0.025***
	(0.010)	(0.011)	(0.012)	(0.009)	(0.010)	(0.009)
Age	0.001	−0.001	−0.000	−0.001**	0.000***	0.000
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.000)
Constant	0.024	−0.037***	−0.067***	−0.073***	0.004	−0.034*
	(0.018)	(0.007)	(0.010)	(0.008)	(0.006)	(0.018)
z_1	2,268.37(12)	5,345.83(12)	6,578.14(12)	2,675.47(12)	5,112.58(12)	3,229.88(12)
z_2	53.29 (10)	31.10 (10)	23.64 (10)	38.47 (10)	39.47 (10)	41.48 (10)
z_3	29.38 (5)	24.74 (5)	14.57 (5)	31.11 (5)	59.83 (5)	77.91 (5)
z_4	25.89 (8)	15.94 (8)	19.85 (8)	19.50 (8)	36.88 (8)	21.31 (8)
m_2 (p-value)	(0.962)	(0.894)	(0.900)	(0.926)	(0.895)	(0.898)
Hansen (p-value)	(0.498)	(0.762)	(0.587)	(0.402)	(0.583)	(0.395)

Note: This table presents the coefficients (robust standard deviations) of the variables of the models, estimated by the system GMM. The dependent variable is leverage. Time, country and sector dummies are included but not reported. Standard errors are in parenthesis. z_1, z_2, z_3 and z_4, which are Wald tests of joint significance, m_2 and Hansen test are explained in Table 3. ***, ** and * denote coefficients that are significant at the 1, 5 and 10% levels, respectively.

by family control, for the model with board experience and board expertise, respectively. While we do not find a quadratic effect for board experience, the non-monotonic relationship is supported for board expertise. To investigate further, we measure the individual impact of each of the six board characteristics independently in Table 5 and find that time in company, time in board, qualifications, and number of quoted boards support Hypothesis 3.

In Columns 1 and 2 of Table 6 we present the results to test Hypothesis 4a and find support for this hypothesis since when the representation of female directors increases, the effect of family control on leverage is moderated by female directors for lower levels of family ownership (0.245 = 0.249–0.004) and higher levels of ownership (−0.179 = −0.182 + 0.003). In columns 3 and 6 we find support for Hypothesis 4b. When the firm is controlled by the family, independent female directors inversely moderate the

TABLE 6 H4 family control, female directors and leverage

Dep. Var.: $Leverage_{i,t}$	Female	Female	Female independent	Female independent	Female dependent	Female dependent
$Leverage_{t-1}$	0.763*** (0.013)	0.750*** (0.007)	0.752*** (0.007)	0.748*** (0.011)	0.756*** (0.007)	0.767*** (0.004)
Family share	0.111*** (0.009)	0.249*** (0.008)	0.248*** (0.011)		0.261*** (0.008)	
Family share * female variable	−0.002*** (0.000)	−0.004*** (0.000)	−0.001 (0.001)		−0.000 (0.000)	
Family share ^2		−0.182*** (0.011)	−0.190*** (0.012)		−0.179*** (0.009)	
Family share ^2 * female variable		0.003*** (0.000)	−0.002 (0.001)		−0.001* (0.000)	
Family control				0.190*** (0.010)		0.115*** (0.008)
Family control * female variable				−0.014*** (0.002)		0.001* (0.000)
Family control ^2				−0.125*** (0.012)		−0.055*** (0.010)
Family control ^2 * female variable				0.014*** (0.003)		−0.001** (0.000)
Female variable	0.0004*** (0.000)	0.0004*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	−0.000 (0.000)	−0.0007*** (0.011)
Size	0.004*** (0.000)	0.003*** (0.000)	0.005*** (0.000)	0.005*** (0.000)	0.001*** (0.000)	0.000*** (0.000)
Tangibility	0.024** (0.010)	0.024*** (0.008)	−0.002 (0.007)	0.003 (0.006)	0.063*** (0.006)	0.057*** (0.004)
Roa	0.073*** (0.003)	0.075*** (0.002)	0.076*** (0.001)	0.076*** (0.002)	0.076*** (0.002)	0.075*** (0.001)
Market_to_book	−0.003*** (0.000)	−0.004*** (0.000)	−0.004*** (0.000)	−0.003*** (0.000)	−0.001** (0.000)	−0.001 (0.000)
Volatility	−0.029 (0.018)	−0.047*** (0.011)	−0.038*** (0.008)	0.003 (0.013)	−0.056*** (0.012)	−0.066*** (0.011)
Age	−0.002* (0.001)	−0.000 (0.001)	−0.001* (0.000)	−0.002** (0.001)	−0.001 (0.001)	−0.003*** (0.000)
Constant	−0.011 (0.013)	−0.013 (0.008)	−0.026*** (0.006)	−0.014 (0.012)	−0.017* (0.010)	0.005 (0.008)
z_1	1,079.71(10)	3,231.22(12)	2,755.92(12)	2,323.02(12)	11,997(12)	5,28.69(12)
z_2	16.07 (10)	29.89 (10)	51.96 (10)	26.38 (10)	42.22 (10)	86.21 (10)
z_3	19.05 (5)	59.50 (5)	20.04 (5)	36.84 (5)	53.99 (5)	48.80 (5)
z_4	8.16 (8)	18.13 (8)	68.14 (8)	23.65 (8)	33.56 (8)	15.12 (8)
m_2 (p-value)	(.856)	(.898)	(.903)	(.834)	(.906)	(.789)
Hansen (p-value)	(.802)	(.849)	(.656)	(.663)	(.904)	(.743)

Note: This table presents the coefficients (robust standard deviations) of the variables of the models, estimated by the system GMM. The dependent variable is leverage. Time, country and sector dummies are included but not reported. Standard errors are in parenthesis. z_1, z_2, z_3 and z_4 which are Wald tests of joint significance, m_2 and Hansen test are explained in Table 3. ***, ** and * denote coefficients that are significant at the 1, 5 and 10% levels, respectively.

relationship between family owners and leverage, whereas dependent-female directors seem to increase the effect of the family control on leverage acting on the interests of the family firm. Therefore, independent female directors balance the power of the family to control the firm's financing decisions. However, when females are insiders (dependent), they

collude with the family in decision-making.Finally, to test the robustness of the results two additional tests are run. First, we build our dependent variable, leverage, by the long-term debt divided by total capital. Second, we include as control variables board size, which is measured by the number of directors in the board; and board independence, measured by the number of non-executive directors to total number of directors in the board. Additionally, we repeat all the regressions by winsorizing all continuous variables of financial data to deal with the presence of outliers (Bharath & Shumway, 2008). Overall, the results support our hypotheses and are available from the authors upon request.

5 | DISCUSSION AND CONCLUSION

Corporate governance research has suggested that the board of directors is an effective internal mechanism to safeguard the interests of all shareholders in support of firms to realize their intended outcomes (Adams et al., 2010; Dominguez-Martinez et al., 2008; Ferrero-Ferrero et al., 2012; Kroll et al., 2008; Shleifer & Vishny, 1997). Therefore, by considering that corporate governance is a system of interdependent elements that complement (undermine) each other (Aguilera, Filatotchev, Gospel, & Jackson, 2008) and that culture and traditions influence the behaviour of family firms (Gómez-Mejía et al., 2007), we consider agency theory (Jensen & Meckling, 1976) and resource dependence theory (Hillman et al., 2009) to study the moderating effect of the board of directors on family firms when making financing decisions. In particular, the central premise of this framework in the context of family firms is that family-controllers have non-economic aims different from the purely economic ones of other shareholders, which might exacerbate the benefits of control (i.e., expropriation of resources from minority investors). From the agency and SEW theory perspective, our argument is that family firms avoid diluting control to preserve their SEW and consequently increase debt. In such scenario, family owners become risk-seeking and the optimal financing decision (i.e., debt vs. equity) might be bias towards increasing leverage despite of the risk of financial distress (Céspedes, González, & Molina, 2010; Romano, Tanewski, & Smyrnios, 2001). Our first hypothesis (H1) supports that family firms take more leverage. This finding is in line with the argument that family firms are loss adverse (Croci et al., 2011; Keasey et al., 2015) because of their particular aim to preserve the family entity for future generations (Gómez-Mejía et al., 2007), highlighting that financing decisions might be biased towards such family aim. This behaviour is particularly relevant in the Latin American setting where, family control is common and the strength of family tradition prevails as a rational means to safeguard a firm's resources by passing them on to future generations. This encourages family firms to willingly influence firm's strategic decisions with a non-financial objective despite increasing the risk of low target performance (Poletti-Hughes & Williams, 2019). From the SEW perspective, we find that family owners change their attitude towards risk based on the frame of problems. They are willing to reduce leverage when their SEW objectives have been achieved (gain frame) and take conservative decisions that reduce the level of debt financing. Therefore, we find that family owners increase leverage when they are in a loss frame, that is, for low levels of ownership, and reduce it when they are in a gain frame, that is, when the family has high levels of ownership in support of H2. This is true when family control has been considered in the model. Additionally, in comparison with Anglo-Saxon and developed countries, Latin American corporate governance structures are less developed and investor protection is weaker (La Porta et al., 1999), influencing the dynamics of boards of directors towards region-specific strategy formulation (Brenes, Mena, & Molina, 2008).

By integrating resource dependence theory in our analysis, we find that boards of directors play a critical role in moderating leverage in family firms. We find that the quality of the board (H3) offsets the financing preferences of family owners, corroborating our stance on directors' ability (i.e., boards' capital as defined in Hillman & Dalziel, 2003) which complements agency issues in explaining financing decisions in family firms. With this in mind, we consider the importance of directors' capital from the strategy and service provision (Zahra & Pearce II, 1990; Zattoni, Gnan, & Huse, 2015) and measure it with directors' experience and expertise. In each case we confirm that directors provide valuable guidance for strategic financing decisions by monitoring and advising management. In addition, leverage is moderated by the proportion of female directors on boards (H4a) because of their contribution to additional expertise that enhances boards' advisory effectiveness (Adams & Ferreira, 2009; Kim & Starks, 2016). Therefore, the role of female directors goes beyond agency theory (Huse & Solberg, 2006) and exposes a practical impact on firms' outcomes, stressing that board gender diversity assist to the pool of knowledge and skills that increases its effectiveness (Hillman & Dalziel, 2003). As female directors provide different and unconventional professional capabilities and backgrounds, decision-making is enhanced (Singh, Terjesen, & Vinnicombe, 2008) enabling the board to mediate non-optimal leverage decisions. By considering, the legitimacy and authority that goes with the position of director (Cruz et al., 2019), we observe differences in the role played by female directors according to whether they are independent or affiliated to the family controller (Poletti-Hughes & Briano-Turrent, 2019). While independent female directors inversely balance the family financing preferences,

dependent females collude with the family interests. In this context, family control intensifies firms' structural forces and influences self-compliance of dependent-female directors to adhere to the family interests (Boulouta, 2013).

Our study has relied on robust techniques of analysis (i.e., system GMM) by considering that the characteristics of boards of directors are endogenously related to the firm (Hermalin and Weisbach, 2003) because governance structures are selected in response to governance issues that firms face (Adams et al., 2010).

6 | PRACTICAL IMPLICATIONS

The implication of our study for practitioners is clear, the composition of boards of directors is directly concerned to their effectiveness (Baysinger & Butler, 1985) but more importantly different kinds of boards are required in different situations to optimize financing decisions (e.g., family firms in Latin America).

From a theoretical point of view, we propose that level of the family's SEW, measured by their family ownership, explain their leverage preferences. In addition, we propose that both theories, agency theory and resource dependence theory, are needed to understand the role played by the board of directors in the decision-making process of family firms, and particularly, their financing decisions. Therefore, it is important having efficient boards that do not only serve their role as controllers, as explained by the agency theory, but also offer experience and expertise that help to properly assist the management on behalf of firm's value maximization.

ACKNOWLEDGEMENTS

This paper has received financial support from the Spanish Ministry of Economy and Competitiveness (ECO2016-77631-R [AEI/FEDER, UE]) and the Spanish Ministry of Science and Innovation (PID2019-104304GB-I00). We thank Ignacio Requejo, Yili Lian and participants from the Paris Financial Management Conference for their valuable suggestions to improve this manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from Datastream and Boardex databases. Restrictions apply to the availability of these data, which were used under license for this study. Data are available at http://datastream.thomsonreuters.com/ and https://corp.boardex.com/ under license.

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How to cite this article: Poletti-Hughes J, Martínez Garcia B. Leverage in family firms: The moderating role of female directors and board quality. *Int J Fin Econ*. 2020;1–17. https://doi.org/10.1002/ijfe.2147

APPENDIX A.: Principal factor analysis and board quality

Board quality is gauged by six board characteristics. First is qualifications, which is measured by the total number of academic and professional qualifications divided by total number of directors. The baseline of qualifications is one, representing either a graduate degree or less. A unit is added for each additional qualification. Second is the average age of the directors in the board. Third is the average of number of quoted boards that directors have been to the current date. Fourth, the board network measured by the log of the number of individuals that are connected to all directors in the board (e.g., through studying or working together at some point) divided by the total number of directors in the board. Fifth, the board average of number of years that directors have been in the company. Finally, the board average of number of years that directors have been in the board.

The results for the extraction of component factors can be found in Table A1. We obtain two factors that account for almost 67.18% of the variance. We rotate the first matrix using an orthogonal varimax rotation method, but we also use as robustness tests other rotation methods such as quartimax, equamax and parsimax, and the results remain the same. In Table A2, we can see the factor loadings of the unrotated factor matrix and the orthogonal varimax matrix, and the communalities of each variable. The communalities, which is the Uniqueness − 1, gives the proportion of variance that each variable remains after the factor extraction. The variables with less communalities are qualifications and average age, but still with acceptable levels. We consider those loadings that are practically significant, this is, equal or greater than ±0.50. Following these criteria, we do not find problems such as: a variable has no practical significant loadings, a variable's communality is deemed too low, or a variable has cross-loading, this is, significant loadings for more than one factor.

Therefore, Factor 1 is positively associated with average age, time in company and time in board, which represents the board's experience. While Factor 2 is positively associated with qualifications, quoted boards to date and network size, this factor represents the board's expertise.

All test including the correlation matrix, the Bartlett test of sphericity, the Kaiser Meyer Olkin test, and the anti-image correlation matrix are satisfactory, so we can conclude all these variables can be introduced in the factor analysis. Finally, we assess the validity, dimensionality and reliability of the two factors we have obtained. We randomly split the sample and do the analysis for both samples. Interpretations of the results are the same, which proves the validity of the analysis. The dimensionality of each factor is supported given that each variable has a high loading only in one factor. In terms of reliability or internal consistency of the factors, the item to total correlation and inter-item correlation are satisfactory and the Cronbach's alpha for the first and second factor are 0.81 and 0.57, respectively.

TABLE A1 Results for the extraction of component factors

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	**2.38662**	**0.74254**	**0.3978**	**0.3978**
Factor 2	**1.64408**	**0.82881**	**0.2740**	**0.6718**
Factor 3	0.81527	0.15298	0.1359	0.8077
Factor 4	0.66229	0.23159	0.1104	0.9180
Factor 5	0.43070	0.36965	0.0718	0.9898
Factor 6	0.06105	-	0.0102	1.0000

TABLE A2 Factor loadings of the unrotated factor matrix and the orthogonal varimax matrix, and the communalities of each variable

	Unrotated loadings		Varimax rotated loadings		
Variable	Factor 1	Factor 2	Factor 1	Factor 2	Uniqueness
Qualifications	−0.3080	0.5912	−0.3604	**0.5608**	0.5557
Average age	0.6408	−0.0381	**0.6416**	0.0202	0.5879
Quoted to date	0.3519	0.7358	0.2836	**0.7647**	0.3348
Network	0.0498	0.8640	−0.0288	**0.8650**	0.2510
Time in company	0.9260	−0.0449	**0.9263**	0.0394	0.1404
Time in board	0.9472	−0.0569	**0.9485**	0.0294	0.0995