

Controlling shareholders and the composition of the board: special focus on family firms

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Abstract This article analyses the relevance of the agency problems that exist between shareholders and managers (type I agency problems) and between majority and minority shareholders (type II agency problems), in determining the composition of the board of directors, differentiating between family owned and non-family owned firms. The hypotheses are tested on a sample of 173 Spanish listed companies for the period 2004–2011. The results of our study indicate that, on one hand, as type I agency problems increase, firms increase their percentage of outside directors and, on the other, as type II agency problems increase, firms increase the ratio of independent to nominee directors. Whether the company is a family firm or not does moderate the influence of insider ownership over the composition of the board. Generally speaking, our findings support the view that firms configure their board of directors in such a way as to best signal to the market both efficient management and a balance of the interests of all shareholders. Likewise, these results could be taken into account when formulating recommendations on the composition of the board of directors.

Keywords Ownership concentration · Board of directors · Family firms · Agency problems in family firms · Expropriation risks in family firms

JEL Classification G32 · G34

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1 Introduction

International literature on corporate governance has addressed the relationship between the ownership structure and the composition of the board of directors as alternative mechanisms of corporate control in listed firms (Li 1994; Bathala and Rao 1995; Denis and Sarin 1999; Mak and Li 2001; Bettinelli 2011; Peasnell et al. 2003; Lasfer 2006; Boone et al. 2007; Coles et al. 2008; Linck et al. 2008; He and Sommer 2010; Baglioni and Colombo 2013). Many of these studies have been carried out in an Anglo-Saxon context and have largely focused on the control function of the board over the managers of the firm.

In contexts of concentrated ownership, like Spain and the majority of continental European countries, the board of directors must be configured in the most appropriate way to resolve the agency problems, not only between shareholders and managers (type I agency problem), but also between majority and minority shareholders (type II agency problem).¹ Both problems exist in all listed companies, however their relative importance varies depending on ownership structure and the nature of the principal shareholder (Chrisman et al. 2004). In this respect, family businesses, in addition to playing an important role in the economy,² have their own unique idiosyncrasies that give rise to special governance needs (Corbetta and Salvato 2004; Gómez-Mejía et al. 2001; Siebels and zu Knyphausen-Aufseß 2012) and special agency costs (Chrisman et al. 2004).

Villalonga and Amit (2006) suggest that in situations in which the major shareholder is an individual or a family, there will be greater incentives both for monitoring the manager and for expropriating minority shareholders, which can result in a type II agency problem being superimposed on a type I agency problem. Unlike other large shareholders, family investors tend to maintain their ownership stakes for several generations, have a majority of their wealth invested in a single firm and are often senior executives in that firm (Mackie 2001). At the same time, families are in exceptional positions of control to pursue their private interests in detriment to outside shareholders (Anderson and Reeb 2004; Schulze et al. 2001; Gómez-Mejía et al. 2003; Braun and Sharma 2007).

In line with authors such as Hermalin and Weisbach (1988, 1998), Bathala and Rao (1995) or Lehn et al. (2009), among others, that indicate that the composition of the board of directors should be tailored to the specific needs of each company, in this article we analyze how the ownership structure variables (taken as a proxy for

¹ Villalonga and Amit (2006) define a type I agency problem as the classic owner-manager conflict described by Berle and Means (1932) or Jensen and Meckling (1976). A type II agency problem refers to a second type of conflict that appears when large shareholders can use their controlling position in the firm to extract private benefits at the expense of the small shareholders.

² In Spain family businesses make up more than 85 % of the total number of companies, 70 % of the GDP (Gross Domestic Product) and 70 % of private sector employment according to the information published on the Spanish Family Business Institute website. Family businesses also account for 60 and 95 % of the total number of companies in the European Union and the United States respectively, which justifies the interest of their study. Likewise, as Mitter et al. (2014), Ampenberger et al. (2013) and Kraus et al. (2012) note, family firms constitute the vast majority of enterprises worldwide. We refer the reader to IFERA (2003) and Siebels and zu Knyphausen-Aufseß (2012) for general data about family businesses in the world.

the agency problems that exist within the firm) influence the composition of the board of directors, differentiating between family owned and non-family owned firms.

Our paper builds on previous studies (Anderson and Reeb 2004; Setia-Atmaja et al. 2009) which have examined the impact of family ownership on the boards of directors in other contexts characterized by strong legal shareholder protection. Baglioni and Colombo (2013) analyze the influence of ownership structure and family ownership on the composition of the boards of directors in Italy, whose legal system, like that of Spain, is characterized by a weaker legal protection for minority shareholders. However, they do not make a clear distinction between the type I and type II agency problems.

Furthermore, an issue that has seldom been justified in the studies when posing this type of analysis, but which we treat in depth, is the following: How do we measure the composition of the board of directors? When analyzing the composition of the board in a Spanish context, it is very important to distinguish between outside and independent directors, contrary to the Anglo-Saxon context where these two terms are used interchangeably. On Spanish boards, outside directors are those board members who are not executives of the company and whose primary mission is to supervise the management team. Outside directors are classified as either nominee or independent directors. Nominee directors represent significant shareholders,³ whereas independent directors do not have any type of relationship with the organization and their primary mission is to defend the interests of the minority shareholders.

The Spanish model of corporate governance is embodied in a series of recommendations (*Código Unificado de Buen Gobierno*—Unified Good Governance Code) rather than in mandatory legislation. Although Article 243 of the Corporate Enterprise Act (Royal Decree 1/2010 of July 2) mandates a system of proportional representation of shareholders on the board,⁴ in practice this system is rarely applied, with the board itself endogenously determining its structure and composition. The Unified Code basically makes three recommendations regarding board composition: (1) outside directors should occupy an ample majority of seats on the board; (2) the ratio of nominee to independent directors on the board should reflect the percentage of capital represented by the nominee directors and the free float; (3) at least one-third of the total should be independent directors. Although compliance with these recommendations is voluntary, the principle internationally known as “comply or explain”⁵ applies.

³ The Spanish National Stock Market Commission (Comisión Nacional del Mercado de Valores) defines significant shareholdings as those exceeding 5 % of the capital.

⁴ In a corporation, the shares that are voluntarily pooled so as to constitute an amount of capital equal to, or greater than, the result of dividing the total share capital by the number of Board members shall be entitled to appoint the whole number of directors deriving from that division, excluding fractions.

⁵ The principle “comply or explain” means that organizations are free to comply or not the recommendations put forth in the good governance codes. However, when organizational practices deviate from the recommendations, the reasons that have motivated the non-compliance must be explained.

Based on the precepts of the Agency Theory and the recommendations of the Spanish Unified Good Governance Code, we formulate the hypotheses that the greater the type I agency problems, the greater is the need for management oversight by outside board members. To address the type II agency problems, it is expected that companies will decide to increase the ratio of independent to nominee directors, sending a signal to the market that the interests of minority shareholders are properly safeguarded and that they will not be expropriated by majority shareholders.

We analyze a sample of 173 Spanish listed companies from 2004 to 2011. The results of the study indicate that as insider ownership increases, the proportion of outside directors decreases, which indicates that there is less need for management oversight by the board in these companies. On the other hand, our findings indicate that firms adjust the composition of the group of outside directors, increasing the weight of independents, when a high level of ownership concentration increases the risk of expropriation of small shareholders. These results support the vision of the board of directors as a tool to control agency costs.

The family nature of a business does not in and of itself influence the composition of the board, but rather acts as a moderator of the influence of the insider ownership variable. In this sense, a higher level of insider ownership leads to a reduced presence of outside directors and to a higher ratio of independent to nominee directors more pronounced in family firms than in non-family companies.

In view of the results of the study the primary academic contribution of the paper is the confirmation of the importance of taking into consideration the types of controlling shareholders when analyzing the influence of the ownership structure on the composition of the board. It also verifies that the mere fact that a company is a family business is not in itself sufficient to produce a reduction in type I agency problems and an increase in type II agency problems. This depends on the level of insider ownership as well.

The paper is structured as follows. The following section provides a review of the literature and presents the hypotheses to be tested. Subsequently, we describe our sample, the variables used in the study and the methodology, continuing in the next section to analyse the principal results obtained. Finally, the article closes with a discussion and conclusions section.

2 Theoretical background and hypotheses

As indicated in Lazarides et al. (2009), the agency problems between shareholders and managers on one side (type I agency problems) and between majority and minority shareholders on the other (type II agency problems), are present in all corporate governance systems; what varies is the relative importance of each. Coming down to the corporate level, in our study we argue that the ownership structure determines the relevance of the two problems and influences the composition of the board.

When formulating our hypotheses we assume that organizations design their board of directors in a way that allows them to minimize agency costs, as indicated

by numerous recent empirical studies (Boone et al. 2007; Coles et al. 2008; Linck et al. 2008; Baglioni and Colombo 2013).

Moreover, given that our study refers to Spain, when analyzing the composition of the board we take into consideration the different types of directors that exist in Spain. As is done in the majority of the countries in our surroundings, the board members should be grouped into two categories: executive or inside directors, that is, members of the company's management team, and outside directors that do not form part of the management team. The role of the non-executive or outside directors is to act as arbitrators in those situations in which there are conflicts of interest between shareholders and managers, thereby contributing to the resolution of agency problems of type I. Nevertheless, in Spain, within the group of outside directors, a distinction can be made between the independent board members and the nominee board members. Independent board members are defined as renowned professionals that are affiliated neither with the management team, nor with the core investors that exert influence over them. They are primarily responsible for protecting and defending the interests of minority shareholders, or the free float, on the board of directors (Unified Good Governance Code and Spanish National Stock Market Commission). On the contrary, nominee directors are linked to significant shareholders. Therefore, maintaining the appropriate balance between the two types of directors (independents and nominees), contributes to the solving of type II agency problems.

From here, our hypotheses relate the agency problems of type I with the percentage of outside board members and agency problems of type II with the proportion of independent directors to nominee directors. Both agency problems are approximated by ownership structure variables.

2.1 Agency problem I: the effect of ownership structure on board composition

The separation of the ownership from the control in large companies is associated with the appearance of the so-called type I agency problem (Villalonga and Amit 2006), which refers to the conflicts of interest between shareholders and managers.

How organizations control the agency problem caused by this separation of ownership and control has been of great concern to researchers from Smith (1776) and Berle and Means (1932) to Jensen and Meckling (1976) and Fama and Jensen (1983a, b). Managerial ownership (Jensen and Meckling 1976) and blockholder ownership (Kaplan and Minton 1994) are two of the major governance mechanisms that help control type I agency problems.

Jensen and Meckling (1976) suggest that when managers own a stake in their firm, they are less likely to deviate from shareholder wealth maximization by consuming perquisites. The manager and risk-bearer functions are merged and more of the wealth consequences of the manager's decisions are internalized. Given that, as insider equity ownership increases, managerial and shareholder interests converge and conflicts between them are likely to be resolved. Empirical evidence, although indirect, supports this view. For example, Morck et al. (1988) and McConnell and Servaes (1990) find that firm performance and managerial ownership are positively related up to moderate levels of managerial ownership.

On the other hand, when the owner and manager functions are not merged (low levels of managerial ownership), outside controlling owners, if they exist, help to control type I agency problems (Shleifer and Vishny 1997). Conflicts of interests between owners and managers are accentuated in those companies with a dispersed ownership structure. On the contrary, if the ownership is concentrated, the owners are in a better position to monitor the managers and large shareholders have greater incentives to become actively involved in the management of the company given their significant economic stakes (Shleifer and Vishny 1986; Holderness 2003). Previous studies suggest that blockholder ownership improves corporate governance by facilitating takeovers (Shivdasani 1993), removing managers that do not maximize stockholder wealth (Kaplan and Minton 1994) or by obtaining better information on managerial performance (Berle and Means 1932).

If we assume that each firm chooses an optimal board composition depending on the other alternative mechanisms employed by the firm to control agency conflicts (Bathala and Rao 1995), theory predicts that the demand for monitoring by outside directors will be high when managerial stock ownership is low and when stockholding is dispersed (Jensen and Meckling 1976; Fama and Jensen 1983a; Jensen 1993; Peasnell et al. 2003).

Nevertheless, if we take into account the composition of the boards of directors in Spain, the influence of the degree of ownership concentration on the percentage of outsiders on the board is not easily predictable. On the one hand, it is to be expected that in companies where ownership is more concentrated, large shareholders have greater incentives to monitor management behavior thereby requiring less supervision by the board and predictably fewer outsiders. On the other hand, however, an increase in the degree of ownership concentration may also mean a greater presence of nominee directors on the board and, since these form part of the group of outsiders, the percentage of outsiders could increase.

This gives rise to the following hypotheses concerning the type I agency problem and its influence on the composition of the board of directors:

H1.1 There is a negative relation between insider ownership and the proportion of outside directors on the board.

H1.2 There is no relationship between blockholder ownership and the proportion of outside directors on the board.

When analyzing the ownership structure, it is necessary to distinguish among different types of controlling shareholders. Sánchez et al. (2013) indicate that, in the Spanish context, we can distinguish between two different groups. The first group includes those companies that are controlled by external shareholders (corporations, financial institutions and institutional investors), whereas the second group consists of those companies controlled by individuals and/or families.

In family business research, governance topics focus on how family involvement affects the structure and role of the governance system (Xi et al. 2013). Family firms have idiosyncrasies that stem from the direct influence that the family group exerts on the governance, the management and the control of the organization that set them

apart from companies controlled by external shareholders (Gómez-Mejía et al. 2010).

In listed companies a common feature of family firms that differentiate them from other companies is the simultaneousness between family members, the management team and senior management (Chrisman et al. 2004). The owner-managers' personal involvement in the ownership of the firm discourages them from expropriating shareholder wealth through the consumption of perquisites and misallocation of resources.

Additionally, because a major part of their wealth is often vested in the success of the firm, family shareholders exert stronger control within the board and have a strong incentive to monitor management in order to protect family wealth (Barontini and Caprio 2006).

Family owners are also concerned with the long-term continuity of the company, which is viewed as a legacy to be passed on from generation to generation, leading them to focus more on the long term than the other shareholders (Gallo and Vilaseca 1996).

Consequently, agency costs arising from the separation of ownership and management (type I agency problem) are lower in family firms (Florackis and Ozkan 2009; Jaggi et al. 2009; Bammens et al. 2011) and some authors as Daily and Dollinger (1992) argue that family firms require comparatively lower investments in control mechanisms.

Therefore it is to be expected that for family firms, less supervision by the board, and fewer outsiders, are required.

H1.3 *Ceteris paribus*, the proportion of outside directors on the board will be lower in family firms than in non-family firms.

2.2 Agency problem II: the effect of ownership structure on board composition

Up to this point, the agency problem analyzed is the type I agency problem concerning the existence of a conflict of interests between owners and managers. As discussed previously, as insider ownership and blockholder ownership increase, the type I agency problem is reduced. On the contrary, an increase in the power of either the inside shareholders or the outside shareholders may give rise to conflicts between the large shareholders and the minority shareholders (type II agency problem).

As managerial ownership increases, the incentive-alignment effects of equity ownership will reduce type I agency problems. Nevertheless, significant insider ownership has offsetting costs, as stressed by Fama and Jensen (1983a). High levels of managerial stock ownership might be costly to other stockholders (Peasnell et al. 2003). For example, they may have incentives to take value reducing decisions (excessive salaries, consuming perquisites, avoidance of risky projects, etc.) at the expense of minority stockholders (Bebchuk and Jolls 1999) and this gives rise to the entrenchment hypothesis and the appearance of the type II agency problems.

The board should expand the scope of its supervisory function to safeguard the interests of small shareholders. As managerial ownership increases, we can expect

that the number of nominee directors decreases given that, as indicated by Demsetz and Lehn (1985), when managerial ownership is high, blockholding is small as the number of shares available in the market is low. If managers try to signal in a credible fashion that they will not expropriate the cash flows of minority shareholders (Peasnell et al. 2003), we can expect that they include more independent directors. Considering both effects may be expected that increasing managerial ownership, an increase occurs in the proportion of independent directors to nominee directors.

With regard to external blockholders, the so-called monitoring hypothesis indicates that ownership concentration reduces the type I agency problem, given that large shareholders have greater incentives to monitor management behavior (Shleifer and Vishny 1986). However, once the ownership concentration reaches a certain level, large shareholders can use their status to obtain private benefits at the expense of minority shareholders when the interests of the two do not coincide (Shleifer and Vishny 1997; La Porta et al. 2000; Dyck and Zingales 2004; Villalonga and Amit 2006). This gives rise to the expropriation hypothesis and the appearance of the type II agency problem.⁶ As indicated by Lazarides et al. (2009) the problem of corporate governance in Continental European countries is maintaining a balance between major and minor shareholder interests.

In order to achieve the appropriate balance between the interests of majority and minority shareholders, the Spanish Good Governance Code recommends that the ratio of nominee to independent directors on the board reflect the percentage of capital represented by the nominee directors and the free float. However, this recommendation is qualified by another which, to safeguard the interests of minority shareholders in situations of high concentration of ownership, states at least one-third of the board members should be independent directors.

In light of the above, as ownership concentration increases, the proportion of independent to nominee directors can be expected to decrease. However, once a certain threshold of ownership concentration is crossed, companies can be expected to appoint more independent members to the board, sending a signal to the market that the interests of minority shareholders are properly safeguarded and there will be no expropriation by majority shareholders.

All of the above gives rise to the following hypotheses concerning the type II agency problem and its influence on the composition of the board of directors:

H2.1 There is a positive relation between insider ownership and the proportion of independent directors to nominee directors

H2.2 There is a nonlinear U-shaped relation between blockholder ownership and the proportion of independent directors to nominee directors

With respect to the type II agency problem described, the behaviour of family firms must once again be differentiated from the rest. As numerous studies indicate, family firms incur in specific agency costs that set them apart from their non-family counterparts. According to Bammens et al. (2011) four agency issues can be identified for family firms: (1) the owning familýs pursuit of its own economic

⁶ Expropriation can take the form of profit reallocation, assets misuse, transfer pricing, sell bellow market price parts of the firm to other firms that major shareholders own or acquisition of other firms that major shareholders own at a premium (La Porta et al. 2000).

interests; (2) the owning family's pursuit of its own non-economic interests; (3) the parental tendency to act upon altruistic motives and (4) the different nuclear family units' pursuit of their own interests.

In these companies both ownership and management frequently reside with family members, who are also executive directors of the company.⁷ One of the primary concerns is that managers will act in the interest of the controlling family, but not in that of the shareholders in general (Morck and Yeung 2003).

As a consequence of the owning family's pursuit of its own non-economic interests, family firms must grapple with unique agency costs such as nepotism and adverse selection (Chrisman et al. 2007; Schulze et al. 2001). Banalieva and Eddleston (2011) indicate that family leaders may place a greater value on the family's control over the business, protecting family member employment and perpetuating the family dynasty than on generating wealth for the shareholders. Schulze et al. (2001, 2003) maintain that the non-economic motive of parental altruism may cause owner managers to lose their self-control and make decisions that favor their employed children, but may potentially harm the business.

Finally, an intra-family divergence of interests constitutes another source of agency conflicts in family firms that becomes more pronounced over generations (Bammens et al. 2011; Mitter et al. 2014). Each family unit typically has its own idiosyncratic set of economic and non-economic preferences.

In sum, investors may perceive that the risk of expropriation of corporate resources increases in family firms: entrenchment of unqualified family members, the subordination of business interests to family interests, etc. (Braun and Sharma 2007; Nieto et al. 2009). Therefore, family influence needs to be countered by a board structure which limits the threat of the expropriation of firm wealth (Anderson and Reeb 2004; Bammens et al. 2011). Non-family shareholders may therefore demand the appointment of independent board members to protect their financial interests (Fiegener et al. 2000; Chrisman et al. 2004; Bammens et al. 2011).

Therefore, one would expect family firms to have a higher ratio of independent to nominee directors than other companies to provide investors with sufficient guarantees of the no-expropriation by family owners.

H2.3 *Ceteris paribus*, in family firms the proportion of independent directors to nominee directors will be greater than in non-family firms

3 Data

3.1 Sample and data sources

The sample consists of the Spanish companies included in the Corporate Governance Reports of Entities with Securities Admitted to Trading on Regulated Markets, for the years from 2004 (first year that the annual Corporate Governance Reports were published with a consistent format) to 2011, with the final sample consisting of 173

⁷ It is also possible, as Lester and Cannella (2006) indicate, that family firms are likely to recruit executives of other family firms, with whom they share common values, onto their boards of directors.

entities that constitute an unbalanced panel for the 8 years of analysis. Due to missing data, the panel consists of 1,174 observations for the variables regarding boards of directors. The information contained in these reports related to ownership and board structure was completed with the economic and financial information provided by the SABI (System of Analysis of Iberian Balance Sheets) database.

3.2 Variables of the study

3.2.1 *Dependent variable*

In our study, the variable representing board composition is the percentage of outside members to the total number of directors (OUTS/BSIZE) in hypotheses H1.1, H1.2 and H1.3, and the percentage of independents to nominee directors (INDP/NOM) for hypotheses H2.1, H2.2 and H2.3.

The classification of directors is obtained from the Annual Corporate Governance Reports. Each listed company must issue an Annual Corporate Governance Report where they define the board structure and state the category of each board member.

3.2.2 *Independent variables*

The model includes the following variables related to ownership structure and other control variables commonly used in research on the composition of boards of directors:

Insider ownership The sum of the percentage of equity owned by insiders (executive directors). It is included as a proxy of managerial ownership and provides us with information on the separation of the ownership from the control in the company (INS_OWN).

Blockholders The sum of the percentage of equity holdings equal to, or above, 5 %. It is included as a proxy of ownership concentration.⁸ (BLOCK)

Family ownership A dummy variable equal to 1 for those companies where the largest shareholder is an individual or family who holds a stake equal to or above 10 %, ⁹ and zero otherwise. (FAM_OWN)

Level of indebtedness The variable used is the ratio of total debt divided by the total volume of assets. (DEBT)

Leadership A dummy variable is used with a value of 1 when the roles of Chairman and CEO are held by two different people and zero when one person holds both positions. (LEADERSHIP)

⁸ We use the 5 % limit to define this variable since the Spanish National Stock Market Commission defines significant shareholdings as those exceeding 5 % of the capital.

⁹ As Kraus et al. (2011) indicate, there are several definitions of a family business. A common definition includes ownership by the largest single family group related by blood or marriage and self-perceptions of whether the business is a family business (Westhead and Cowling 1997). Other authors, as Mitter et al. (2014) consider jointly the family's share of equity in the firm as well as its influence through governance boards. We use a broad definition of family firm that has been used in Maury (2006), Pindado et al. (2008), Gómez-Mejía et al. (2010) or Sacristán-Navarro et al. (2011), among others, taking as a limit a minimum of 10 % of the company's capital in the hands of the family.

Firm size Firm size is defined as the logarithm of the volume of assets for each period analyzed. (FSIZE)

Diversification For this variable the number of business segments in which the firm operates is used and a dummy variable is defined which has a value of 1 when the firm operates in more than one segment, and a value of zero otherwise. The classification used to define the sectors is the CNAE 93 Rev.1 on a two-digit level. (DIV)

Firm age The number of years since the firm was established as of December 31 is employed for each of the years analyzed. (FAGE)

Industry and year effects A dummy is included to identify the different industrial sectors in the sample as well as a series of variables that were also included to reflect time-related effects. The tests showed that these dummies are significant, therefore they form part of the model.

3.3 Method

Panel data is the methodology used to test the hypotheses, which makes it possible to take into account the unobservable heterogeneity that exists among firms by splitting the error term into three components.¹⁰ To avoid autocorrelation and heteroskedasticity problems we used the Feasible Generalized Least Squares (FGLS) estimator.

We define the following regressions for our two dependent variables. Regression 1 takes (OUTS/BSIZE) as the dependent variable and is used to test hypotheses H1.1, H1.2 and H1.3, while the dependent variable for regression 2 is (INDP/NOM) and it is used to test the hypotheses H2.1, H2.2 and H2.3.

$$\begin{aligned}
 (OUTS/BSIZE)_{i,t} = & \alpha + \beta_1 Ownership\ Variables_{it} + \beta_2 DEBT_{it} + \beta_3 LEADERSHIP_{it} \\
 & + \beta_4 FSIZE_{it} + \beta_5 DIV_{it} + \beta_6 FAGE_{it} + \beta_7 BSIZE_{it-1} \\
 & + \sum_{i=1}^7 \delta_i Dummy\ Industry + \sum_{i=1}^7 \gamma_i Dummy\ Year + \eta_i + \lambda_t + v_{it}
 \end{aligned}
 \tag{1}$$

$$\begin{aligned}
 (INDP/NOM)_{i,t} = & \alpha + \beta_1 Ownership\ Variables + \beta_2 DEBT_{it} + \beta_3 LEADERSHIP_{it} \\
 & + \beta_4 FSIZE_{it} + \beta_5 DIV_{it} + \beta_6 FAGE_{it} + \beta_7 BSIZE_{it-1} \\
 & + \sum_{i=1}^7 \delta_i Dummy\ Industry + \sum_{i=1}^7 \gamma_i Dummy\ Year + \eta_i + \lambda_t + v_{it}
 \end{aligned}
 \tag{2}$$

Regression 1 uses the variables INS_OWN and BLOCK to test hypotheses H1.1 and H1.2. We include these variables (INS_OWN and BLOCK) first separately and then together. To test whether family ownership has a differential effect on the

¹⁰ $U_{it} = \eta_i + \lambda_t + v_{it}$ where η_i represents the individual specific term of the error related to the firm i (unobservable heterogeneity) which includes the unobservable effects that only have an effect on firm i . λ_t represents the impacts for the period t that have an influence on all the firms; and v_{it} is a random disturbance. (García and García 2011).

percentage of outside board members (hypothesis H1.3) the variable FAM_OWN was included, first alone and then multiplying the ownership structure variables. Thus, five versions of the first regression are estimated.

To test hypothesis H2.1, which indicates positive relation between managerial ownership and the percentage of independent to nominee directors, the variable INS_OWN is included in regression 2. Likewise, to test hypothesis H2.2, which indicates a U-shaped relationship between ownership concentration and the percentage of independent to nominee directors, the variables BLOCK and BLOCK² are included in regression 2. We have also estimated a model that includes the variables INS_OWN, BLOCK and BLOCK² together. On the other hand, to test whether family ownership has a differential effect in the percentage of independent to nominee directors (hypothesis H2.3) the variable FAM_OWN is entered, first alone and then multiplying the ownership variables. Five versions of the second regression are also estimated.

In all of the regressions we also include the control variables defined previously. Furthermore, to control for the interdependence between board composition and board size, we include lagged board size as a proxy for board size (BSIZE_{t-1}) in the regressions.

4 Analysis and results

4.1 Descriptive statistics

The principal characteristics of the sample are included in Table 1. It can be seen that outside directors represent approximately 79 % of board members. On average, the ratio of independent to nominee directors approaches 100 %, indicating that within the group of outsiders, there is approximately the same number of independents as nominees, although this variable has a very wide dispersion.

The mean value of variable BLOCK is 60.88 % which confirms the high degree of concentration of ownership in Spanish companies. Executive directors hold, on average, 11.17 % of equity. Regarding the leadership structure, Table 1 shows that in 48 % of the firms the roles of Chairman and CEO are separated. This percentage indicates the absence of a dominant leadership structure among Spanish companies. 38 % of the firms in the sample are present in more than one business segment and the average age of the companies in years is 44. The average board size is 10 members.

Regarding the type of companies in the sample, 38 % are family owned.¹¹ The characteristics of these companies are that they are listed, have an average volume of assets of approximately 188 million euros and an average age of about 37 years. With regards to this, it should be noted that the family firms analyzed in this study

¹¹ These figures are similar to those found by Sacristán-Navarro and Gómez-Ansón (2006), who analyzed a sample of Spanish listed companies, also using an ownership threshold of 10 %, and indicated that 43 % of them are family firms. Menéndez-Requejo (2006), using a sample of both listed and unlisted Spanish companies, observes in her study that family firms constitute 34 % of large Spanish firms, but 63 % of the medium-sized companies.

Table 1 Descriptive statistics (N = 173, T = 8)

Variable	Mean	Median	Standard deviation	Minimum	Maximum	Number of observations
OUTS/BSIZE	78.68	81.50	16.45	0	100	1,174
INDPT/NOM	96.93	60.00	119.605	0	600	1,079
BLOCK	60.88	62.03	24.20	0	100	1,204
FAM_OWN	0.38	0.00	0.48	0	1	1,170
INS_OWN	11.17	0.17	21.09	0	98.48	1,167
DEBT	0.45	0.47	0.26	0.00	1.04	1,293
LEADERSHIP	0.48	0.00	0.5	0	1	1,173
FSIZE	12.67	12.55	2.10	6.15	19.39	1,295
DIV	0.38	0.00	0.49	0	1	1,368
FAGE	43.93	32.25	27.34	0.09	115.89	1,357
BSIZE	10.05	10	4.14	3	24	1,045

do not represent the whole of Spanish family businesses. These companies are larger and older than those observed in other studies, such as Menéndez-Requejo (2006) where for a sample of Spanish family businesses, both large and medium, listed and unlisted, the average volume of assets was approximately 50 million euros and the age of the firms was around 23 years old.

The correlation matrix between the variables is shown in Table 2.

4.2 Regression analysis results

This section presents the results of the regression analyses. Table 3 shows the results of the five estimations to test hypotheses H1.1 and H1.2 (Models 1, 2 and 3) and H1.3 (Models 4 and 5).

According to the results obtained by the first model, hypothesis H1.1 is corroborated. The coefficient of the variable INS_OWN is both negative and significant, indicating that greater ownership by executives (less separation between ownership and control) reduces the number of outsiders.

In model 2, the coefficient of the variable BLOCK is negative and significant indicating, at first glance, that a higher concentration of ownership reduces the need for the presence of outside directors to oversee the management team. Nevertheless, if we analyze the joint effect of these ownership structure variables (Model 3), the coefficient of the variable INS_OWN remains both negative and significant, but the coefficient of the variable BLOCK is not statistically significant. In this sense, the hypothesis H1.2 is corroborated. This result can be considered logical in our context since a higher concentration of ownership reduces the need for the presence of outside directors to oversee the management team but at the same time, may result in a greater number of nominee directors (which are included in the group of outside

Table 2 Correlation matrix

	OUTS	INDPT	NOM	BSIZE	BLOCK	FAM_OWN	INS_OWN	DEBT	LEADERSHIP	FSIZE	DIV	FAGE
OUTS	1											
INDPT	0.149***	1										
NOM	0.556***	-0.628***	1									
BSIZE	0.377***	0.023	0.262***	1								
BLOCK	-0.133***	-0.375***	0.241***	-0.164***	1							
FAM_OWN	-0.288***	-0.004	-0.186***	-0.257***	0.168***	1						
INS_OWN	-0.485***	-0.036	-0.312***	-0.251***	0.239***	0.532***	1					
DEBT	0.009	-0.127***	0.110***	0.253***	0.075***	0.043	0.073**	1				
LEADERSHIP	0.179***	-0.106***	0.196***	-0.125***	0.184***	-0.078***	-0.156***	-0.081***	1			
FSIZE	0.234***	0.138***	0.073**	0.710***	-0.155***	-0.226***	-0.176***	0.404***	-0.198***	1		
DIV	0.126***	0.150***	0.002	0.002	-0.112***	-0.063**	-0.094***	-0.149***	0.078***	-0.060**	1	
FAGE	0.041	-0.145***	0.068**	0.155***	-0.126***	-0.232***	-0.175***	0.162***	-0.104***	0.209***	-0.052*	1

* Statistical significance at 10 percent level

** Statistical significance at 5 percent level

*** Statistical significance at 1 percent level

Table 3 Estimation of the percentage of outside directors

Variable	OUTS/BSIZE (%)				
	Model 1	Model 2	Model 3	Model 4	Model 5
(Constant)	74.38***	71.09***	75.28***	75.12***	75.01***
INS_OWN	-0.29***	-	-0.29***	-0.29***	-0.19***
BLOCK	-	-0.03***	-0.01	-0.01	-0.01
FAM_OWN	-	-	-	0.28	-
INS_OWN* FAM_OWN	-	-	-	-	-0.12***
BLOCK* FAM_OWN	-	-	-	-	0.01
DEBT	-1.05	-3.37***	-1.01	-1.08	-0.96
LEADERSHIP	3.35***	3.74***	3.39***	3.39***	3.27***
FSIZE	0.06	0.11	0.03	0.03	0.06
DIV	0.81*	2.34***	0.82*	0.84*	0.92**
FAGE	-0.02*	-0.00	-0.02*	-0.02*	-0.02**
BSIZE (lagged)	0.67***	0.81***	0.67***	0.67***	0.66***
Industry dummies	Yes***	Yes***	Yes***	Yes***	Yes***
Year dummies	Yes***	Yes***	Yes***	Yes***	Yes***
Wald Chi ²	1,505.32 (20)	372.38 (20)	1,444.18 (21)	1,445.35 (22)	1,413.07 (23)
Prob > Chi ²	0.0000	0.0000	0.0000	0.0000	0.0000
R ²	0.3507	0.2251	0.3519	0.3520	0.3562
Number of observations	989	989	989	989	989

For industry dummies and year dummies the word “Yes” indicates that these dummies have been included in each model. The joint significance level (as a result of a Wald test) for industry dummies and year dummies is shown in each model with ***, ** or * next to “Yes”

Wald test shows the joint significance of the reported coefficients, asymptotically distributed as Chi² under the null hypothesis of no relation

*** Statistical significance at the 1 percent level; ** statistical significance at the 5 percent level, and * statistical significance at the 10 percent level

directors).¹² Both effects are offset and lead to no significant effect of BLOCK variable on the percentage of outsiders in the board (Model 3).

On the other hand, hypothesis H1.3 was tested by models 4 and 5 which indicate that all else being equal, family firms will have a smaller percentage of outside directors as a result of type I agency problems being less relevant in these firms. The variable family business (FAM_OWN) was included in model 4, but its estimated coefficient is not significant. The variable FAM_OWN was included in model 5 multiplying the ownership structure variables to test whether these variables affect the composition of the board differently depending on the nature of the principal shareholder. The concentration of ownership does not have a differential effect on

¹² We have estimated two alternative versions of Model 1 and 3 using the percentage of nominee members to the total number of directors as dependent variable. The results corroborate a positive and significant relation between ownership concentration (BLOCK) and the percentage of nominee members. However, because of space limitations and in order to not confuse the reader, we have not included these alternative models.

the percentage of outsiders on the board in the case of family businesses. However, the variable $INS_OWN * FAM_OWN$ has a negative and significant coefficient. Therefore, the interpretation could be that the reduction of type I agency problems, as a result of increased control of the company's capital by executives, is more significant in family businesses than in the rest of the companies. This leads to a significantly lower presence of outside directors on the boards of family businesses. The justification for this result may be that it is customary in family businesses for the executive positions to be held by family members who, in turn, join the board as executive directors (instead of nominee directors).

With regards to the other variables included in the model, it is interesting to highlight that more diversified and younger firms, and those in which the positions of CEO and Chairman are separated, include a higher proportion of outsiders on the board, as do the firms with larger boards.

On the other hand, to examine the case of the type II agency problem and its influence on the distribution of seats on the board between the two categories of outside directors (independent and nominee), models 6 to 10 were estimated (Table 4).

The results from model 6 corroborate hypothesis H2.1. The variable INS_OWN has a positive and significant coefficient indicating that as the participation of executive directors in the capital increases, the allocation of seats within the group of outside directors shifts in favor of the independents. Although increased INS_OWN reduces type I agency problems as can be seen in the results of Table 3, it may also imply a trade-off; an increase in type II agency problems (agency conflicts between the shareholder-managers and other shareholders) that justifies this relationship.

In relation to hypothesis H2.2, in model 7 the coefficient of the variable $BLOCK$ is negative and significant, while the coefficient of variable $BLOCK^2$ is positive and significant, therefore confirming the existence of a nonlinear relationship (U-shaped) between the degree of concentration of ownership and the ratio of independent directors to nominee directors. As the degree of ownership concentration increases more nominee directors are included in the group of outside directors at the expense of independents. However, once ownership concentration reaches a certain point, the sign of the relationship changes. Given the risk of the perception in the market that small shareholders could be expropriated when the ownership structure is very concentrated, the interpretation could be that companies include more independents in the group of outside directors to signal its commitment to small shareholders to the market.

Both results hold in model 8 in which the ownership variables INS_OWN , $BLOCK$ and $BLOCK^2$ are included jointly.

Models 9 and 10 are used to test whether the proportion of independent to nominee directors is greater in family firms than that observed in other companies (H2.3). The variable FAM_OWN was entered in model 9 but its coefficient turns out to be not significant. The variable FAM_OWN was included multiplying the variables of ownership structure in model 10 to test whether these variables affect the way the seats of the outside directors are distributed when the nature of the principal shareholder is taken into account. Once again a differential effect for the

Table 4 Estimation of the percentage of independent to nominee directors

Variable	INDP/NOM (%)				
	Model 6	Model 7	Model 8	Model 9	Model 10
(Constant)	-31.87	102.08***	90.24***	89.91***	93.26***
INS_OWN	0.51***	-	0.71***	0.74***	0.27
BLOCK	-	-3.44***	-3.74***	-3.78***	-3.86***
BLOCK ²	-	0.02***	0.02***	0.02***	0.02***
FAM_OWN	-	-	-	-0.68	-
INS_OWN* FAM_OWN	-	-	-	-	0.56***
BLOCK* FAM_OWN	-	-	-	-	0.07
BLOCK ² * FAM_OWN	-	-	-	-	-0.001
DEBT	-15.92**	-20.54***	-22.67***	-24.06***	-25.58***
LEADERSHIP	-5.43*	-8.66***	-6.01***	-5.97**	-5.87**
FSIZE	7.61***	8.46***	9.70***	9.97***	9.76***
DIV	8.07**	4.24	4.02	4.15	3.92
FAGE	-0.33***	-0.42***	-0.34***	-0.32***	-0.31***
BSIZE (lagged)	-2.62***	-3.31***	-3.01***	-3.07***	-3.04***
Industry dummies	Yes***	Yes***	Yes***	Yes***	Yes***
Year dummies	Yes***	Yes***	Yes***	Yes***	Yes***
Wald Chi ²	108.40 (20)	380.95 (21)	426.63 (22)	444.81 (23)	458.8 (25)
Prob > Chi ²	0.0000	0.0000	0.0000	0.0000	0.0000
R ²	0.1100	0.1885	0.2141	0.2155	0.2176
Number of observations	915	915	915	915	915

For industry dummies and year dummies the word “Yes” indicates that these dummies have been included in each model. The joint significance level (as a result of a Wald test) for industry dummies and year dummies is shown in each model with ***, ** or * next to “Yes”

Wald test shows the joint significance of the reported coefficients, asymptotically distributed as Chi² under the null hypothesis of no relation

*** Statistical significance at the 1 percent level; ** statistical significance at the 5 percent level, and * statistical significance at the 10 percent level

variable INS_OWN is found for family firms. As can be seen in Table 4, variable INS_OWN loses its significance in model 10, and is only significant when it interacts with the variable FAM_OWN. Therefore, it is only in family businesses where an increase in the equity stake of insiders is associated with an increase in the risk of expropriation for minority shareholders (type II agency problem), which leads family businesses to incorporate a significantly higher ratio of independent to nominee directors on their boards than other companies with similar characteristics.

Finally, with regard to the model's control variables, we observe that those firms that are larger, younger and less indebted have a higher ratio of independent to nominee directors. Finally, those companies with larger boards, and where the positions of Chairman and CEO are separated, incorporate a smaller proportion of independent to nominee directors on their boards.

5 Discussion and conclusions

5.1 Findings and implications

In this paper we have analyzed how the ownership structure variables (taken as a proxy for the agency problems that exist within the firm) influence the composition of the board of directors.

With regard to type I agency problems, the results of the analysis indicate that as management ownership increases (less separation of ownership and control) the percentage of outside directors on the board decreases. However, a substitution effect between the concentration of ownership and the percentage of outside board members as alternative mechanisms of monitoring managers is not observed. This result is explained by the idiosyncrasy of the boards of directors of Spanish companies in which the nominee directors are the category with the largest presence.

On the other hand, in relation to the agency problem between majority and minority shareholders (type II agency problem), the results indicate a nonlinear relationship between the degree of concentration of ownership and the presence of independent directors within the group of outside directors. Therefore, the proportion of independent to nominee directors initially evolves in a way similar to the relationship between free float and the capital held by blockholders, which results a composition of the group of outside directors that truly reflects of the ownership structure of the company. Nevertheless, once a certain threshold of concentration of ownership is surpassed, investors may perceive that the presence of large shareholders, which previously implied monitoring, becomes an expropriation risk, (i.e. that the controlling shareholders take advantage of their power to extract private gain at the expense of the minority shareholders), and companies begin to favor the presence of independent directors over nominees.

Whether the company is a family firm or not does not seem to influence the composition of the board, neither by itself nor multiplying the variable for the degree of ownership concentration. Nevertheless, whether the company is a family firm or not does moderate the influence of insider ownership over the composition of the board. In line with this, the results indicate that as the executives increase their participation in the firm's capital, the decrease in the percentage of outside directors is more pronounced in family than in non-family businesses. Moreover, by differentiating between family and non-family businesses, we detect that an increase in the level of insider ownership causes an increase in the proportion of independent to nominee directors, but in family firms only. Therefore, more independents are included on the boards of the family firms in order to send a credible signal to the market that the interests of minority shareholders are being properly safeguarded, given that independent directors are primarily responsible for defending the interests of the free float.

Our findings support the view of board of directors as a tool to control agency costs. Furthermore, the findings indicate that it is not sufficient for the company to be a family firm for a reduction in type I agency problems and an increase in type II agency problems to take place, this also depends on the level of insider ownership.

In view of the results of the study, the primary academic contribution of the paper is the confirmation of the importance of taking into account the types of controlling shareholders when analyzing the influence of the ownership structure on the composition of the board, with special attention being given to the case of family owned businesses. The study also highlights the need to differentiate between outside and independent board members in empirical studies undertaken in high ownership concentration contexts, even though in Anglo-Saxon cultures these two terms are used synonymously.

As for the practical implications of the study, it should be emphasized that the make-up of the board is a matter of vital importance since investors must perceive that their interests are properly safeguarded for a company to be able to raise money on the capital markets. Consequently, companies should configure their boards of directors in such a way as to best signal both proper management and a balance of the interests of all shareholders. However, the recommendations of the Good Governance Code published in Spain, following the international trend, are more focused on resolving agency conflicts between shareholders and managers than between majority and minority shareholders. It would be opportune for these codes of good governance to put more emphasis on the importance of agency conflicts between majority and minority shareholders, the circumstances under which they are most likely to occur, and how the board should be structured in these cases. Our study sheds some light on this issue by indicating that insider ownership could be considered as a control mechanism to help avoid the type I agency problems. However, at the same time, and to a much greater degree in family firms, insider ownership can be associated with an increased risk of expropriation for the small shareholders.

5.2 Limitations and future research

The limitations of this study open up several lines of possible future research that can be undertaken. First, our data are from only one country, so further research should test our framework and examine whether the findings are applicable in similar contexts of high ownership concentration. Second, due to the many and diverse definitions that exist for the concept of the family firm, it could be interesting to replicate the study taking into account other definitions, with the aim of determining whether or not the findings of our study hold. Furthermore, as Arregle et al. (2012) point out, family firms are heterogeneous; therefore it would be interesting to analyze whether the results differ depending on the peculiarities of the family firm being studied. As was mentioned in the text, the companies analyzed are large listed firms, therefore certain caution must be exercised when interpreting the results since their application may not be generalizable to other companies. One interesting line of future research would be to replicate the study including unlisted companies (both family and non-family) with the aim of determining whether the results differ from those obtained by this study.

In addition, another limitation of the study relates to the way ownership concentration is measured. This study has used equity in the hands of blockholders as a measure of ownership concentration, following the example of authors such as

Mak and Li (2001); Lasfer (2006); Boone et al. (2007); Linck et al. (2008), among many others. The use of this measure instead of others is primarily due to the availability of the data. Nevertheless, in future research it could be interesting to use a concentration index that captures the concept of concentration directly.

From a theoretical point of view, the study also has limitations that could be the subject of future research. The composition of the board could be analyzed from perspectives different than that of the Agency Theory (see Bammens et al. 2011). Stewardship theory, the resource-based view and stakeholder theory constitute theoretical perspectives from which additional support for the results could be obtained. Moreover, considering ability and willingness can lead to better theory, more generalizable empirical findings, and help explain heterogeneity among family firms (Kotlar et al. 2014).

6 Conclusions

As indicated in Hermalin and Weisbach (1988, 1998), Bathala and Rao (1995) or Lehn et al. (2009), among others, the composition of the board of directors should be tailored to the specific needs of each company and should help to solve the agency problems present in each one of them. The relevance of the agency problems between shareholders and managers (type I agency problems) and between majority and minority shareholders (type II agency problems) varies depending on the ownership structure and the types of controlling shareholders (internal versus external controlling shareholders), giving rise to different board configurations. Our research examines the key role that ownership structure plays in determining the composition of the board of directors in Spanish listed companies.

Generally speaking, our findings support the view that in an environment characterized by weak legal protection of minority shareholders and high private benefits of control, the board of directors is a mechanism to control agency costs. Given that the role of the independent directors is to defend the interests of the minority shareholders, the recommendations for good governance should indicate in which situations there is a greater risk of expropriation of minority shareholders and consequently where a greater presence of independent directors is necessary. In this regard, the results of this study indicate that a high degree of insider ownership in family firms may be indicative of the risk of expropriation and therefore the recommendations regarding the incorporation of independent members on the board could be linked to these variables.

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